NATURAL TURF ALLIANCE

Flooding and Sporting Fields: Choosing for the Site

NSW Government guidance gives a clear direction: synthetic turf sports fields should not be located in areas of extreme flood risk. The Government's natural turf guidelines identify best-practice sporting fields as well suited to flood-prone sites. These positions should be central to surface selection, not treated as minor design considerations. [1, 3]

Why This Matters

Many sporting fields occupy creek corridors, floodplains or stormwater detention basins. On these sites, the choice of surface affects more than playing hours: it affects flood resilience, repair liabilities and the potential for pollution to reach surrounding land and waterways.

The NSW Government published natural turf and synthetic turf guidance in 2025. Read together, these documents support a stronger focus on site suitability and provide specific reasons to prioritise best-practice natural turf where flooding is a concern.

A synthetic field described as "all-weather" may drain rainfall quickly, yet still be damaged by floodwater arriving from the catchment. Improved drainage alone does not answer the Government's concerns about flood exposure.

The first question should be whether synthetic turf is appropriate for the flood risk of the site, before considering how it might be installed.

1. The Evidence: NSW Government Guidance

Synthetic turf: avoid areas of extreme flood risk

The Guidelines for Division 5.1 assessments - Addendum for synthetic turf sports fields (May 2025), section 2.1.2, page 12, states: [1]

"Synthetic turf sports fields should not be located in areas of high bushfire and extreme flood risk."

This is explicit NSW Government guidance. Its flood wording refers specifically to extreme flood risk; it should not be represented as a blanket prohibition applying to every flood zone.

1. The Evidence (continued)

Synthetic turf: flood risk may rule out conversion

The Synthetic turf sports fields in public open space - Guideline for decision-makers (May 2025) warns that fields in flood-prone locations or functioning as retention and detention basins may be unsuitable for conversion. It also explains that flood risk can make a synthetic proposal unfeasible. [2]

The assessment addendum notes that floods can disperse synthetic fibres and infill beyond the field, bypassing filters and traps. It calls for flood-risk assessment informed by relevant NSW emergency response agencies and independent expertise. [1]

Natural turf: a surface suited to flood-prone sites

The Best-practice guidelines for sporting fields (January 2025), section 4.3.1, page 30, describes best-practice fields as suitable for flood-prone locations. It links their resilience to amended site soils and appropriate turf cultivars, which help withstand floodwater forces, tolerate sediment and manage weeds deposited by floods. [3]

Page 31 records examples of couch and kikuyu enduring more than ten days of inundation during the 2022 floods. These examples demonstrate resilience; they are not a guarantee of recovery time for every site. [3]

2. Understanding the Issue

Flood-prone land and extreme flood risk are different

A flood-zone label alone does not establish the severity of risk. Councils need qualified assessment of depth, velocity, duration, frequency and consequences, and must explain how the site has been assessed against the Government’s direction on extreme flood risk.

Drainage does not remove catchment flood exposure

A field can drain ordinary rain while still being submerged when a creek rises or its drainage outlet backs up. Engineering measures must address residual flood risk, loss of material and effects on neighbouring land.

The guidance supports a practical sequence: establish flood suitability first, then assess the surface options. Natural turf should be assessed as a contemporary, engineered system.

3. Impacts and Implications

Repair bills and lost playing time

Post-flood costs can include debris removal, drainage repairs, testing, surface reinstatement and waste disposal. For synthetic fields, assess possible damage to carpet, seams, shockpad and infill. For natural turf, assess soil erosion, sediment removal, drainage damage and re-establishment. Compare realistic recovery scenarios for both options.

Pollution beyond the boundary

Floodwater can carry loose material beyond a field. Synthetic turf assessments should address escape of infill and damaged surface material, including downstream clean-up. Natural turf assessments should address sediment and other contaminants. Controls need to suit the flood conditions they are expected to withstand. [1, 4, 8]

Risk transferred to neighbours

An upgrade should not be judged only by whether it protects the playing surface. Changes in levels, barriers or storage may alter flooding elsewhere. Council should make the assessment of these off-site effects available to the community. [7]

Insurance and long-term responsibility

Ask what flood damage is covered, what exclusions and excesses apply, and who funds uninsured repairs. A surface warranty should be checked separately: it is not evidence that flood damage is insured or that the council has no financial exposure.

4. Best Practice Approach

Begin with a site-specific flood assessment by appropriately qualified specialists. Apply the 2025 NSW synthetic turf guidance, including the direction against siting fields in areas of extreme flood risk. Publish how this guidance has been addressed and seek relevant emergency agency and independent expert advice. [1]

Assess best-practice natural turf using the Government’s January 2025 guidelines. Compare flood resilience, recovery, pollution and whole-of-life costs under the same site conditions. Preserve flood-storage and flow functions, and identify risks remaining after any proposed protection works. [3, 6, 7]

NTA recommends prioritising best-practice natural turf on flood-prone sites, supported by independent assessment of sporting needs, flood behaviour and whole-of-life outcomes.

5. Recommendations

1. Apply the NSW guidance. Do not locate synthetic turf sports fields in areas of extreme flood risk. Explain the site's risk assessment and how the 2025 guidance has been addressed. [1]

2. Test the complete design. Assess changes to ground levels, drainage, fencing, retaining structures and flood storage, including effects beyond the oval.

3. Prioritise a suitable natural turf option. Assess an engineered natural turf system against the January 2025 best-practice guidelines, including their flood-resilience guidance. [3]

4. Verify the protection claims. Ask how material-containment measures perform during inundation and what risks remain if they are overwhelmed.

5. Make responsibility clear. Confirm insurance, warranty exclusions, emergency closure arrangements and funding for recovery before approval.

Key Takeaways

NSW guidance should shape the decision

The synthetic turf assessment addendum advises against locations with extreme flood risk.

Natural turf has specific Government support

The natural turf guidelines identify best-practice sporting fields as well suited to flood-prone sites.

Both options need a recovery plan

Natural and synthetic turf have different damage and recovery risks. Assess them explicitly.

Containment must be tested

Alternative infills and boundary controls do not, by themselves, establish flood suitability.

Look beyond the construction price

Ratepayers need to understand repair liabilities and potential interruptions to community sport.

"Flood-prone sporting fields need a surface suited to the site. NSW Government guidance provides a clear basis for putting best-practice natural turf first."

References

1. NSW DPHI. Guidelines for Division 5.1 assessments - Addendum for synthetic turf sports fields. May 2025. Section 2.1.2, p. 12: location guidance for extreme flood risk; section 2.1.1, p. 11: flood impacts.

https://www.planning.nsw.gov.au/sites/default/files/2025-05/guidelines-for-division-5.1-assessments-addendum-for-synthetic-turf-sports-fields.pdf

2. NSW DPHI. Synthetic turf sports fields in public open space - Guideline for decision-makers. May 2025. Environmental considerations: stormwater and flooding.

https://www.planning.nsw.gov.au/the-planning-system/open-space/synthetic-turf-for-sports-fields

3. NSW DCCEEW. Best-practice guidelines for sporting fields. January 2025. Sections 4.1 and 4.3.1, pp. 30-31: suitability and flood resilience.

https://www.water.dcceew.nsw.gov.au/sites/default/files/2025-07/best-practice-guidelines-for-sporting-fields%20%281%29_0.pdf

4. NSW Chief Scientist & Engineer. Independent Review into the Design, Use and Impacts of Synthetic Turf in Public Open Spaces. Released June 2023, p. 23.

https://www.chiefscientist.nsw.gov.au/independent-reports/archive/synthetic-turf-in-public-spaces

5. NSW Department of Planning and Environment. Flood Risk Management Manual. June 2023.

6. NSW Department of Planning and Environment. Flood Function. Guideline FB02, June 2023.

7. NSW Department of Planning and Environment. Flood Impact and Risk Assessment. Guideline LU01, June 2023.

https://www.environment.nsw.gov.au/publications/flood-impact-and-risk-assessment

8. UNSW Water Research Laboratory. Independent Review into the Design and Use of Synthetic Turf in Public Spaces. WRL TR 2022/12, August 2022, section 2.3. Included in reference 4.

NTA Document Library: https://naturalturfalliance.org/document-library/
Revised October 2026. Page references are printed document pages. NTA recommendations are distinguished from the Government's guidance.

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This Fact Sheet has been developed with the support of Lawn Solutions Australia, the nation's largest network of turf specialists.
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Natural Turf Alliance Inc (NTA) is a Registered Association consisting of community groups committed to preserving and developing natural grass open spaces including sporting fields.
Our core focus is engaging with local councils and sporting groups in relation to best practice natural turf construction and maintenance.