

Adventurous spaces

Insights report



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Acknowledgement of Country

We acknowledge the Traditional Owners and Custodians of the lands on which we operate. We pay our respects to the Traditional Owners, Ancestors and Elders, past and present.

We recognise the strength, resilience and contributions of First Nations Peoples, and the eternal and spiritual connection held in the lands, skies and waters through cultural practices and beliefs.

Our team is proud to live, learn and thrive in the place we now call Australia, and we recognise sovereignty has never been ceded by First Nations Peoples of this continent.

As embedded in our values, we are committed to building connected, healthy and resilient communities, and creating purposeful outcomes that reflect our deep appreciation for the peoples and cultures that make us who we are and shape where we are going — together, as one.

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Section 1

Introduction & benefits



1. Background

This Adventurous spaces insights report (this report) provides research into the benefits, barriers, myths, and best practices relating to adventurous spaces for play. It aims to provide the insights needed to address the challenges that are faced by the community, government and industry in the delivery of high-quality open spaces across NSW, including bridging the gap between local councils and community perceptions with regard to risk and play.

1.1 Definitions

Adventurous play

Adventurous play refers to unstructured and free outdoor physical play activities that push boundaries and involve an element of risk.

Examples of adventurous play activities include mountain biking, bicycle motocross (BMX), skateboarding, scootering, rollerblading, roller skating, climbing, and parkour.

Many of these activities are now Olympic sports, including cycling (BMX, mountain biking, track and road cycling), skateboarding and climbing.

Adventurous spaces

An adventurous space is a space planned, designed, delivered, and managed for adventurous play. Adventurous spaces include spaces such as skate parks, pump tracks, climbing walls, mountain bike tracks, parkour and obstacle courses. Having quality, well planned and managed adventurous spaces increases opportunities for participation in adventurous play and reduces risks.

1.2 Purpose

The purpose of this report is to:

- Outline the benefits in providing spaces for adventurous play.
- Understand and “demyth” the perceptions of risks held by the community and local government, and other barriers which may prevent access to or provision of adventurous spaces. Concerns (by scholars, public officials, educators, and others), and excessive risk aversion, has resulted in unwarranted limitation of children’s play opportunities to the detriment of their health, development and wellbeing.
- Qualify the demand for different types of adventurous spaces for people of all ages and backgrounds through community sentiment research.
- Share best-practice learnings of successful adventurous spaces through literature review and interviews with stakeholders.
- Provide insights that can support the increased provision of high quality, well managed and activated adventurous spaces throughout metropolitan, regional and rural NSW.

1.3 Informing research

The insights presented in this report are based on the following quantitative and qualitative research:

- The **Adventurous play literature review**, which provides an overview of the research relating to adventurous play with a focus on understanding the importance, value and benefits of adventurous play and adventurous spaces, understanding various perceptions of risk, hazards, barriers, and needs; and identifying lessons for government stakeholders from the literature that can “myth bust” concerns around adventurous play and encourage the provision of more adventurous spaces within playful cities. (see **Appendix of this report for the Adventurous play literature review**).
- A review of **best practice NSW adventurous spaces case studies** that demonstrate adventurous spaces and activation exemplars. This includes learnings to apply within a NSW context and the benefits they bring to public open spaces. (see **Section 3 of this report for the Adventurous spaces case studies**).
- The **Adventurous play survey 2022**. This survey was conducted by Micromex Research with 1,450 NSW residents. It sought to provide insights into actual and desired participation in adventurous play, to provide clarity around the communities’ attitude to risk in play; and to understand attitudes and barriers to participation in adventurous play activities. The Adventurous play survey 2022 was conducted with people of all ages, abilities and cultural backgrounds across the entire state.
- 10 x **interviews** with metropolitan and regional councils, industry stakeholders, and academics relating to participation in adventurous play, and risks and benefits of adventurous play and adventurous spaces.



2. The value of adventurous play

As identified through the research for this report, adventurous play delivers many benefits.

People want more of it.

Participation in adventurous play is growing and there is increasing demand for adventurous spaces to support these activities.

It's good for skills development and creativity.

Regular adventurous play builds risk negotiation skills, problem solving skills, resilience and self-esteem, and social-emotional learning.

It's social.

Adventurous play is for everyone of all ages, gender, background, and ability, encouraging people to come together, share experiences and participate, which builds social cohesion. These activities also offer many opportunities for volunteering and community involvement to manage and maintain the facilities, increasing community involvement.

It makes us happy.

Adventurous play brings feelings of excitement, joy and freedom, which can have positive effects on mental health and wellbeing.

It's less risky than you think.

Research shows that adventurous play is not dangerous when carried out in well-designed spaces free of hazards.

It's environmentally sensitive.

As an outdoor activity, participation increases environmental awareness and value placed on the environment. Purpose-built adventurous spaces can help to eliminate illegal trail building, and provide opportunities to be outdoors and connect with nature.

It gets us outside.

We live in an increasingly digital world, with only 35% of Australian children playing outside every day compared to 72% percent a generation ago. Adventurous spaces can help to reverse this trend.

It's good for the local economy.

Adventurous spaces are destinations that attract visitors from outside local areas. Apart from local users, visitors spend money in local towns and centres when they visit an adventurous space for the day.

“No play space is risk-free. No matter how much we try to remove the risk of children being hurt, children (and adults) can still get hurt. We can have the super smooth soft fall surfaces in our children's centres and school playgrounds, but when children walk out into the real world the surfaces they come into contact with are anything but that. The greater risk is not providing children with the skills and abilities to identify and mitigate risk when they come across it so they can engage with the big wide world.”

- ACECQA: Talking about practice: Developing a culture of risky play

3. Stakeholder perceptions

Interviews with local government, industry and academics, and outcomes of the Adventurous play survey 2022, identified that adventurous play is predominantly seen as beneficial and important for individuals, communities and quality public open space.

Local government

While representatives from NSW local councils who were interviewed identified that it can be difficult to get new adventurous spaces supported and approved by communities and councils, they understood the many benefits that adventurous spaces bring to public open space and individuals. These include improved health and wellbeing, activating public open spaces with visually exciting and fun adventurous play activities, bringing communities of all ages and abilities together to build social cohesion, and drawing people into an area, which builds economic activity.

“We’ve seen older kids helping younger kids and lots of people visiting our new parks just to view the skating, making our parks more activated and building community.”

- Interview with City of Sydney representative

Industry & academics

Interviews with Parks and Leisure Australia NSW representatives identified that adventurous play is no longer seen as an “extreme” or risky recreational pursuit, but rather is a mainstream activity participated in by all ages, genders and backgrounds. Academics interviewed highlighted the benefits to everyone of increased participation in adventurous play, and indicated that there is a need to reframe how we talk about risks and hazards. Adventurous spaces remove the hazard by providing safe spaces to participate in adventurous play, and place more responsibility on personal duty of care.

“It gradually exposes people to life – to managing issues, becoming mature. When we are closer to nature, we have more exposure to risk. Playgrounds do this in an urban environment.”

- Interview with UTS academic

Community members

The Adventurous play survey 2022 found that 55% of respondents had participated in some form of adventurous play in the past three years (70% for their oldest child under 18 years). 80% of respondents agreed or strongly agreed that more children and adults should engage in more outdoor/adventurous activities than they generally do.

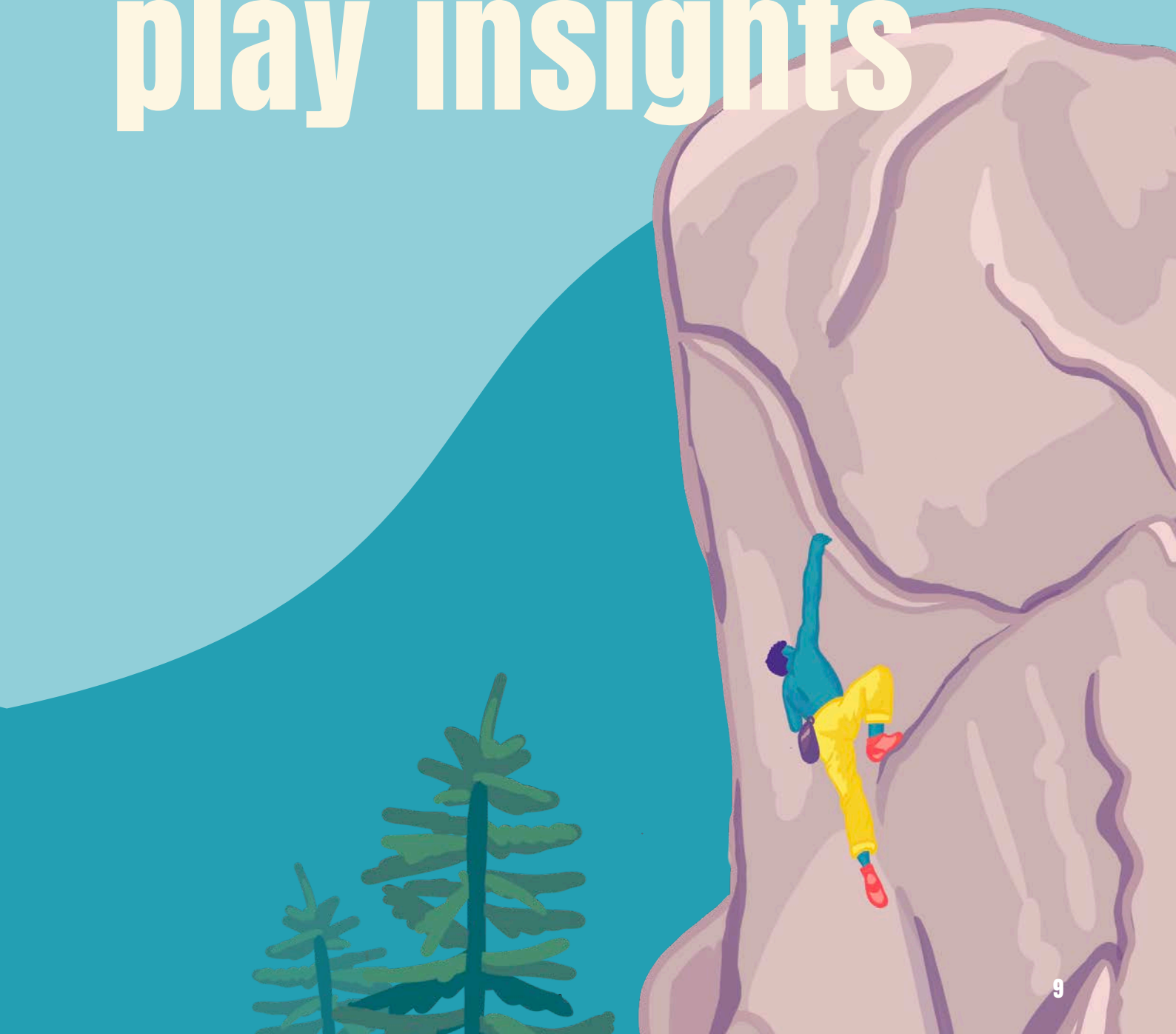
Words respondents used to describe adventurous play were fun, enjoyable, exciting, healthy, socially bonding, rewarding and satisfying.

“Adventurous play promotes feelings of achievement, fulfillment and wellbeing and supports learning through play, being active, exploring and appreciating nature and our surroundings.”

- Adventurous play survey 2022 respondent

Section 2

Adventurous play insights



4. Nine adventurous play insights benefits

This report sets out nine insights about adventurous play that have been identified based on literature review and research, interviews with industry experts, best-practice case studies, and findings from the Adventurous play survey 2022.

- 1. Adventurous play is now a popular mainstream recreation activity, and no longer considered “extreme”.** More people want more opportunities to participate in adventurous play.
- 2. Increasing access to more adventurous spaces across NSW means even more participation.** Where there is greater access to adventurous spaces for adventurous play, there are generally higher rates of participation.
- 3. Gender inclusion is paying off.** Female participation in adventurous play is on the rise.
- 4. Adventurous play brings health and social benefits to participants of all ages.** If people know the benefits they are more likely to participate, and benefits far outweigh the risks of injury.
- 5. Well designed and hazard-free adventurous spaces reduce risk of injury and conflict.** The risk of injury is also not a deterrent to participation.
- 6. Adventurous spaces for adventurous play foster intergenerational participation and connection.** Adventurous spaces that provide for a range of skill levels, from beginner to experienced, can increase participation for all ages and abilities.
- 7. Good planning, including education and community engagement, can mitigate barriers for increased provision of adventurous spaces.** Collaborating and co-designing adventurous spaces with local community and user groups can result in better outcomes.
- 8. Adventurous play builds skills and confidence for participants.** Programs such as learn to skate classes or parkour training groups can build the skills and confidence necessary to participate in adventurous play.
- 9. Tracks and trails for adventurous play can be designed to have minimal environmental impact.** Where adventurous play activities in natural areas are conducted in harmony with nature, social, cultural and environmental values are preserved.

Insight 1:

Adventurous play is now a popular mainstream recreation activity, and no longer considered “extreme”. More people want more opportunities to participate in adventurous play.

While adventurous play has historically been considered high risk and extreme, over the past few years, **participation in adventurous play activities has increased and become more mainstream** with the provision of more high-quality play spaces throughout our cities and regions, the introduction of these sports at the Tokyo Olympics; and a desire to get active outdoors and in nature during the COVID-19 pandemic.

The Adventurous play survey 2022 found that **almost 1 in 2 people participated in adventurous play activities** in the past three years. 74% of the survey participants also indicated they would like more opportunities to participate in adventurous play more frequently.

People are seeking more opportunities to participate in informal play and recreation, and more adventurous spaces in our cities, regions and rural areas can enable this.

For adults 15 years and older, AusPlay data 2021-2022 shows that mountain biking and skateboarding (also referred to as “skate” by AusPlay) are the most popular adventurous play activities, with mountain biking close in popularity to cricket. An AusPlay survey conducted in June 2021 focusing on the ongoing impact of COVID-19 on sport and physical activity finds there has been a surge in mountain biking since the pandemic.

MYTH

Adventurous play isn't as popular as traditional sports.

Not true. According to AusPlay data (2021-2022), almost as many people participate in activities like mountain biking and skating as cricket and netball, and participation has increased since COVID-19, particularly for girls.

According to Ausplay data 2021-2022, for people aged 15 years and over:

3.1%

participate in netball



2.7%

participate in cricket



2.0%

participate in mountain biking



1.1%

participate in skateboarding



1.1%

participate in rock climbing



Insight 2:

Increasing access to more adventurous spaces across NSW means even more participation. Where there is greater access to adventurous spaces for adventurous play, there are generally higher rates of participation.

Outcomes of stakeholder interviews and the Adventurous play survey 2022 indicated that the **main barriers to participation in adventurous play are a lack of time, fear of not being fit enough, and lack of facilities near to home.**

This was even higher for people from culturally and linguistically diverse backgrounds, who were more likely to feel there are not enough facilities near to home, but also that adventurous play equipment is too expensive.

Similarly, **people with disability participated less** because of the associated costs of adventurous play and feeling they will not be fit enough.

NSW Government surveys, however, found that where there is greater access to adventurous spaces, there are generally higher rates of participation. For example, survey data from the NSW Government Recreation Needs of Greater Sydney Research Report identified mountain biking is higher in Western Sydney, where there is a higher provision of parklands, with a participation rate of 51% in the Blue Mountains compared to 8% in Cumberland.

The Greater Sydney Outdoors Study 2019 found that Sydney residents reported that adventurous recreation activities were not always accessible within a reasonable distance, causing large travel times, or that these recreation opportunities are not available.

With increasing demand and participation rates, there is a need for more welcoming and accessible adventurous spaces throughout our cities and regions, including:

- More opportunities in urban areas where there are no natural parklands for outdoor adventurous play.
- Centralise adventurous spaces in regional and rural areas.
- Adventurous spaces that are accessible and welcoming for everyone and consider ability, cultural diversity, gender, ability to pay, and age.

MYTH

People don't participate in adventurous play activities because they think they're too risky.

The Adventurous play survey 2022 suggests that people are most likely to not participate in adventurous play because of **lack of time (38%), not feeling fit enough (35%), and lack of facilities near to home (29%).**



Insight 3:

Gender inclusion is paying off. Female participation in adventurous play is on the rise.

Adventurous play has traditionally been the domain of males, but **female participation is on the rise**, with increasing numbers of girls purchasing skateboards and mountain bikes, particularly since COVID-19. In its latest snapshot of the nation's physical activity, the Australian Sports Commission found most Australians who had taken up skating (119,000) and surfing (196,000) between 2019 and 2021 were female and aged 15 and over.

Women and girls can often feel less welcome to participate in sport and recreation activities. The Adventurous play survey 2022 identified that many females (38%) feel out of place and lack confidence to participate in front of other more experienced adventurous play enthusiasts, compared to only 17% of males. Females were also more likely to feel that adventurous play is risky (30%) compared to males (19%).

Across the globe, there is increasing focus on planning through a gender lens to ensure public open spaces are inclusive, remove barriers, and meet the needs of people of different gender identities and expressions. International research (e.g. from Arup, XYX Lab, TfNSW, and Make Space for Girls, amongst others) around gender mainstreaming indicates that many young women prefer soft entry points to adventurous spaces such as hangout spots, platforms to observe, and round tables. They want recreation areas where they can try and fail without judgement or catcalls.

Targeted programs and events can also encourage participation by people of all genders, such as learn to skate classes and guided mountain bike rides for women, girls and gender-diverse adventurous play enthusiasts.

MYTH

Skateboarding is just for boys

Skateboarding is one of the most equitable activities, with AusPlay data indicating that almost as many girls as boys now participate.



1.3% of all males skate

1% of all females skate

“ I definitely have seen, over the past three or four years, an increasing amount of girls at the skate park, which is really cool... It's more mainstream nowadays, and an Olympic sport. And I think a lot of young girls are seeing other young girls do it, which gives them that little bit of confidence to go and stand on the board.”

- Liv Lovelace, 19,
Olympic Program skater



“ I ran a skate meet-up and we had 10 girls – which is pretty good – who also had never, like me, touched a board. I think that was due to me posting on Instagram and showing that I was skating and these women were like, ‘You know what, I want to have a go!’”

-Mya Arifin,
Sydney representative for
Skater Uktis

“ One day I was just watching these people skate and I thought, ‘You know what? I would love to try that’. I didn’t really have the intention to do it, but I thought I don’t have anything to lose.”

Mya Arifin is a personal trainer and mum of two children who took up skating during the COVID-19 lockdowns. Since then, the South-Western Sydney local has joined Skater Uktis, a global Muslim skater network, and encourages women in her area to learn to skate.

Insight 4:

Adventurous play brings health and social benefits to participants of all ages. If people know the benefits they are more likely to participate, and benefits far outweigh the risks of injury.

From young children to older adults, participation in adventurous play activities has **significant social and health benefits**. Studies evaluating **the health benefits of adventurous play** show these **far outweigh the health risks from injury** (Brussoni et al. 2015). Benefits include improved physical health, such as increased flexibility, coordination and bodily control. With adventurous play said to reduce stress and fears, it also helps to support good mental health.

Adventurous play is social. It brings like-minded people together, providing opportunities to connect with people of all ages and backgrounds – building social cohesion and connectedness, and contributing to community resilience.

As Australian Olympic Program skateboarder, Liv Lovelace, expresses, *“Skating has brought a lot of things to my life. It’s more than just friends; it’s family.”*

Research (Brussoni et al 2012; Little & Eager 2010; NSW Play Australia Committee 2021) indicates that regular outdoor play improves social skills and can help to build risk negotiation skills, problem solving skills, resilience, free-thinking, and social-emotional learning.

The Adventurous play survey 2022 found that people who are aware of the benefits of adventurous play are more likely to participate, and vice versa. Key benefits associated with adventurous play included physical fitness, mental health, improved coordination, self-confidence and reduced stress.

Interestingly, the Adventurous play survey 2022 also found that those who were less likely to know about the benefits of adventurous play did not see the need to encourage adults and children to participate in adventurous play. This highlights the need to **communicate** further about the benefits and to provide opportunities for people to experience adventurous play through programming and events.

“

I reckon out of all the sports in the world, skateboarding is one of the most social sports. If you’ve got a skateboard and someone else has a skateboard, you’re already related to one another.”

- Kai Shimakage, 19, sponsored skateboarder

MYTH

People only participate in adventurous play for fun

People know the social and health benefits of adventurous play.

The Adventurous play survey 2022 found that more than 81% are aware of the physical and mental benefits of adventurous play.

67% of people agreed about the positive health benefits of adventurous activities far outweigh the risks of injury.

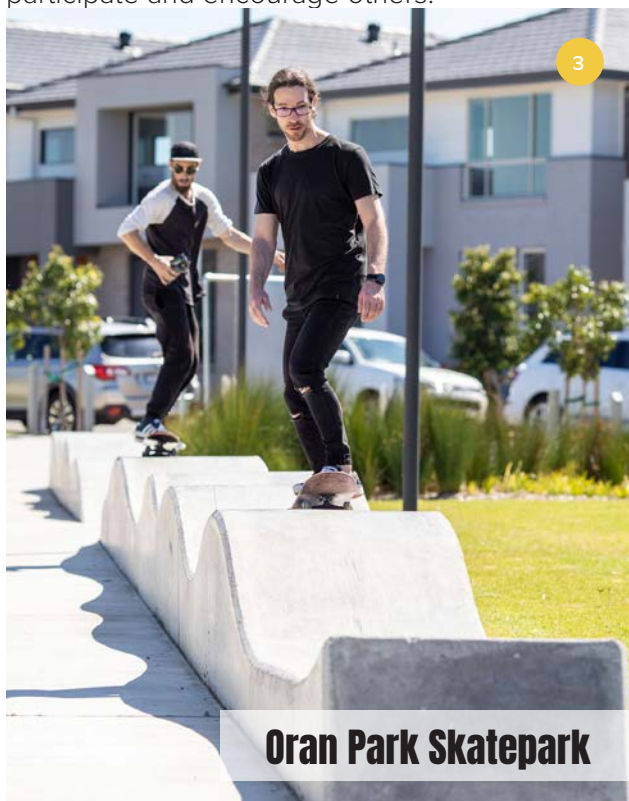
Insight 5:

Well designed and hazard-free adventurous spaces reduce risk of injury and conflict. The risk of injury is also not a deterrent to participation.

Most adventurous play activities, if participated within a well-designed space **free of hazards, have a lower potential of serious injury than more mainstream sports and recreational activities** like football and soccer. It's when adventurous play occurs outside of formalised spaces (for example, on roads and streets with **hazards such as cars, pedestrians and public transport**) that more serious injuries can occur. (Lovejoy S et al. 2021)

Accidents also happen when participants with lower skill levels attempt to use high-skill level spaces.

The risk of injury does not deter people from participating in adventurous play. The Adventurous play survey 2022 indicated that people continue to participate in adventurous play knowing there is a risk of minor injury. 46% said it would have no change on their behaviour, and 39% said it would make them more likely to participate and encourage others.



The difference between hazards and risks

Understanding the difference between a hazard and a risk is fundamental to thinking about providing high-quality public open space for adventurous play.

- A **hazard** is something that is inherently dangerous and has the potential to harm you, such as a climbing structure with sharp edges.
- A **risk** is the likelihood of a hazard causing harm, and is something that is possible to negotiate.

There is a much higher rate of serious injury to skateboarders and cyclists when on roads than within spaces such as skate parks, pump tracks or mountain bike parks.

Three main factors related to critical injury through adventurous play activities include: collisions and incidents with traffic, undertaking activities in inappropriate places (e.g. near roads or water) and not wearing protective gear – particularly helmets (VISS & Monash University 1997).

Literature (see the **Adventurous play literature review at Appendix**) indicates the importance of risk in play for developing risk perception and risk management skills, and the importance of play and risk-taking has been seen as critical for building social skills and preparing children for the changing workforce.

Adventurous play provides opportunities for challenge, testing limits, exploring boundaries, and learning about risk.

Evidence suggests regular and repeated exposure to high-quality outdoor play opportunities is important for fostering creativity, resilience, socio-emotional learning, cognitive development, mental health, physical health, and risk negotiation skills.

MYTH

Adventurous play causes serious injuries

In fact, when adventurous play activities occur in well-designed spaces, serious injuries are much lower than traditional sports like football. It's only when hazards such as cars are introduced that injuries are more serious.

“

Risk is an inherent feature of playtime and there are many acceptable risks as part of a stimulating and challenging learning environment. The solution is not to wrap kids in cotton wool; the standard is all about challenging children and developing important life skills.”

- Professor David Eager, Chairperson of the Technical Committee (Standards Australia 2017, para.8)

A US study (Lovejoy, S., et.al. 2021) indicated that only:

5%

of skateboarding injuries are severe and the majority of these occur from an accident involving a car.



Of all injury-related hospitalisations for children under 18 in NSW:

8%

are from team sports



4%

are from wheeled non-motor sports



Insight 6:

Adventurous spaces foster intergenerational participation and connection. Adventurous spaces that provide for a range of skill levels, from beginner to experienced, can increase participation for all ages and abilities.

Adventurous play is not just for kids and teenagers. AusPlay data 2021-2022 indicates that for skating and mountain biking in particular, participation is common **throughout life stages**, signalling the intergenerational benefits of these activities.

Well-designed adventurous spaces that include a progression for a range of skills levels, from beginner to experienced, can support **intergenerational play**. This is **more inclusive for families and some culturally diverse groups** who prefer gathering in larger groups. The NSW Play Australia Committee suggests that children's outdoor play can also help to improve family wellbeing and connection with the local community, leading to positive impacts on social cohesion.

Providing options for different ages and skill levels to be stimulated and challenged reduces the likelihood of injury. While learners require beginners areas to develop skills and confidence, industry experts recommend more challenging options with "appropriate risk" for more experienced users to avoid boredom, which can lead to inappropriate use of facilities.

Communicating the benefits of adventurous play can also encourage people of all ages and skill levels to participate. The Adventurous play survey 2022 identified that 52% of people think we should be encouraging adults to participate in adventurous play more often. This was similar for children and teenagers, highlighting that adventure play is suitable for all ages.

MYTH

Adventurous play is just for kids

People of all ages participate in adventurous play, with increasing number of kids, parents and families participating together.

AusPlay (2021-22) shows that the largest age group of people who BMX and mountain bike in Australia is:

35-54



“

I’m a professional mountain bike athlete, and I’d be happy to go over there to ride for a fun training session. At the same time, yesterday I took my six-year-old out there on his 20-inch Giant STP, and we did laps on laps on laps, on the same trails.”

- Josh Carlson, Wollongong resident and mountain bike athlete talks about Cringila Hills Mountain Bike Park

5



Cringila Hills Mountain Bike Park

6



Tumbarumba Pump Track

“

Tumbarumba’s pump track provides a great opportunity to develop kids’ bike skills on a professionally-designed track featuring rollers, jumps and sweeping turns. Since its opening, the pump track has been a big hit with local and visiting kids alike.”

- Destination NSW

Insight 7:

Good planning, including education and community engagement, can mitigate barriers for increased provision of adventurous spaces.

As our communities continue to grow and change, planning helps to identify gaps and opportunities to meet shifting community needs. Planning can help compile the evidence to demonstrate a need to decision makers to secure future funding, mitigate risks associated with adventurous play, and coordinate the ongoing management and activation of adventurous spaces.

Local councils can develop strategies to formalise commitments to adventurous play facilities and programs. These can complement other policies and strategies, such as youth engagement strategies and open space and recreation strategies.

Interviews with local council representatives highlighted the importance of **collaborating and co-designing adventurous spaces with local community and user groups**, including children and young people. This enables educating the broader community about the benefits of adventurous play. Collaborating with users is essential for planning and delivering functional facilities that reflect community desires, and ultimately, increase utilisation and participation.

There are a number of barriers that can block the delivery of more adventurous spaces. These include: fear of litigation, noise, fear of antisocial behaviour, funding, cost, and ongoing management, as well as potential environmental and cultural impacts. However, there are **opportunities to mitigate these concerns** via:

- Undertake appropriate risk benefit assessment upfront.
- Engage children and young people, and other stakeholders, in the planning and design process.
- Show leadership and educate the community on the multiple benefits of adventurous spaces to reduce fear and misconceptions.
- Supply adequate options suitable for different ages and abilities to be stimulated and challenged.
- Plan adventurous spaces and parks away from hazards.
- Maintain adventurous spaces to a high quality and activation and eliminate hazards.



“

It's been great that we've been involved in the design process. We've told the builders what we would like, and they've built a great park because of it.”

- Ben, 18, local mountain bike rider, speaks about Boronia Bike Track

Insight 8:

Adventurous play builds skills and confidence for participants.

Participation in adventurous play activities has significant benefits for young children through to older adults, including:

- Improving flexibility.
- Physical and mental health improvements.
- Teaching precision and improving coordination.
- Transferable skills to other recreation activities.
- Teaching consequences, practice and patience.
- Boosting confidence; learning to fall.
- Reducing antisocial behaviour.
- Releasing stress.
- Social connection and bonding; and access to the outdoors and nature.

When evaluating the health benefits of adventurous play, studies show that these far outweigh the health risks from injury (Brussoni et al. 2015).

Programs such as learn to skate classes or parkour training groups can **build the skills and confidence necessary to participate in adventurous play**. This is particularly relevant for women, girls and gender-diverse people, culturally-diverse groups, and people with disability who are less likely to participate in front of other more experienced people.

Local councils, community organisations and sporting groups can develop programs to promote community ownership and management of adventurous spaces. For example, Ku-ring-gai Council established a Trail Care volunteer program that tasks the community with the maintenance of their mountain bike parks. The program includes building the skills and capacity of local children, who have access to an on-site toolbox to use for maintaining the bike trail.

Skills development can also be prompted through the design of adventurous spaces. For example, Boronia Bike Track includes a tool-bench for park users to tune their bikes on the go, encouraging riders to learn the skills to fix their own bikes.



Ben, 18,
local mountain
biker, works on his
bike at Boronia
Bike Track

**Building maintenance skills at
Boronia Bike Track**

“

Although the term ‘risk-taking’ often has negative connotations, the reality is that the willingness to engage in some risky activities provides opportunities to learn new skills, try new behaviours, and ultimately reach our potential. Challenge and risk, in particular during outdoor play, allows children to test the limits of their physical, intellectual and social development.”

- Helen Little “Outdoor play: Does avoiding the risks reduce the benefits?”



Federal Park Skate Park

10



Jubes Mountain Bike Park

“

The community has taken so much ownership in maintaining the site and we’ve been able to take on a support role. It’s been really validating and rewarding for the people involved, especially all the amazing young riders.”

- Jacob Sife, Manager Environment and Sustainability, Ku-ring-gai Council

Insight 9:

Tracks and trails can be designed to have minimal environmental impact.

Adventurous play can help to connect people to the outdoors and build a greater appreciation of nature. In the Adventurous play survey 2022, 63% of respondents agree that adventurous play can provide users and spectators with an appreciation of nature.

Research and experience from the development of Ku-ring-gai Council's Recreation in Natural Areas Strategy clearly identifies that where recreation activities in natural areas are **conducted in harmony with nature, social, cultural and environmental values** are preserved. Bringing parties together (e.g. mountain bikers and Bushcare groups), providing information about the significance of environmental areas, and strong collaboration and partnership can increase understanding between user groups and is central to success.

Provision of dedicated adventurous spaces removes the need for people to build their own facilities, which can occur in environmentally-sensitive areas and in places of significance to First Nations Peoples. Interviews completed for this report with local council representatives highlight how the revitalisation of underutilised sites and the provision of well-designed and dedicated adventurous spaces can help to eliminate illegal rubbish dumping and trail building in bushland, as experienced with Cringila Hills Mountain Bike Park and Jubes Mountain Bike Park.

“I do feel a sense of responsibility. As a community area, we like to keep it as clean as possible, like picking up rubbish. It's a natural environment and you've got to take care of it.”

- Charlie, 19, local mountain bike rider, talking about Boronia Bike Track



Making a jump at Boronia Bike Track

11

“Nature play is, of itself, an intrinsic good and from it flows benefits in health, cognitive, social and emotional development and in the building of resilience and creativity. Experience in nature as a child also leads to environmental stewardship later in life.”

- Nature Play Australia, 2019

MYTH

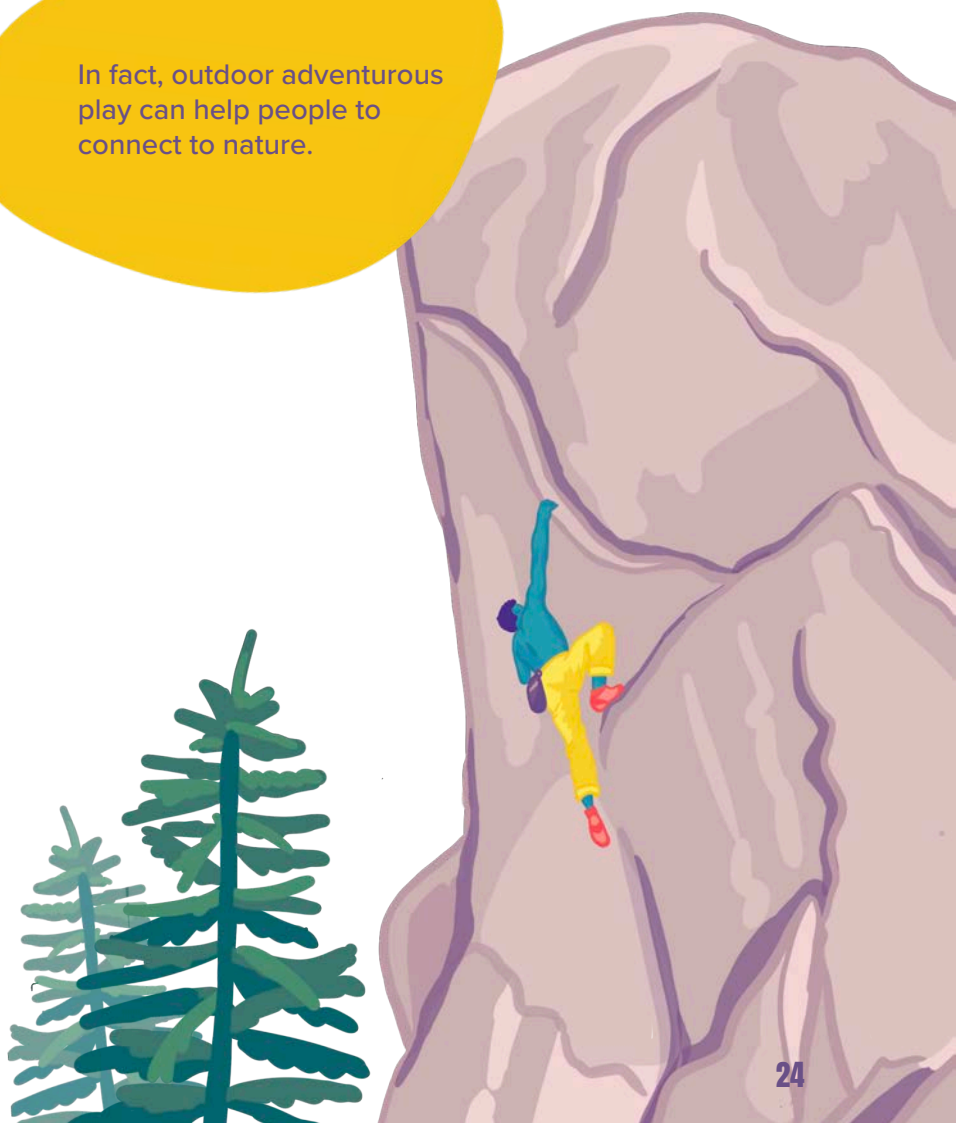
Adventurous play is bad for the natural environment

In fact, outdoor adventurous play can help people to connect to nature.

The Adventurous play survey 2022 indicated:

2 of 3

people agree
adventurous
play increases
appreciation of
nature.



Section 3

Adventurous spaces case studies



5. About the case studies

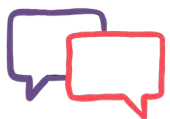
This section provides case studies that demonstrate exemplars of how NSW local government can plan for, engage with, and maintain quality and inclusive adventurous spaces.

Each case study exemplifies good practice in one or more of the following categories:



Planning

Examples of how local government has planned well for adventurous spaces and responded to community needs.



Engagement

Examples of how local government has undertaken comprehensive community engagement and engaged in co-design processes.



Education & capacity building

Examples of adventurous spaces that incorporate educational elements, and local government that undertakes community capacity building.



Inclusion

Examples of adventurous spaces that promote participation from people of all ages, genders, backgrounds, and abilities.



Management

Examples of adventurous spaces that are co-managed with community.

Case studies in this section:

- Boronia Bike Track
- Fairfield Adventure Park
- Jubes Mountain Bike Park
- Julia Reserve Youth Precinct
- Programming Adventurous play
- Cringila Hills Mountain Bike Park
- Mya and Skater Uktis
- Tarcutta bike jump and park track
- City of Sydney skate parks
- Ku-Ring-Gai Council Recreation in Natural Areas Strategy
- City of Ryde Youth Infrastructure Study
- Central Coast Skatepark Action Plan

Boronia Bike Track

Hunters Hill, NSW

Hunter's Hill Council opened a new [three-level course bike track](#) at Boronia Park in December 2021. The custom-designed track has sections for beginner, intermediate and experienced riders, as well as a tool-bench for riders to tune their bikes on the go.

While the development of a new BMX facility had already been identified as an opportunity in the Plan of Management for Boronia Park, it was the uptake in outdoor recreation and increase in unauthorised dirt jumps built illegally in bushland by young people during the COVID-19 pandemic that prompted Council to deliver this new community facility.

Youth Services Australia (YSA) was engaged by Council to design the bike track with input from the local community. One way they engaged with young people and local mountain bike riders was to build a temporary dirt jump at the proposed site. In the afternoons, YSA went down to the site to talk to riders about what bikes they ride, and the type and style of jumps and tracks they would like to see. A key learning from engagement was the need to address a variety of different skill levels.

The outcome of an iterative and meaningful design and consultation process is a bike park that is very functional and very popular. Council are continuing to monitor and improve the site based on feedback from riders.

The track is sympathetic to its bush-adjacent location and has helped to virtually eliminate the problem of unauthorised jumps being built in this sensitive natural environment.

☒	Planning
☒	Engagement
☒	Education
☒	Inclusion
☐	Management

Lessons for local government

- Dedicated adventurous spaces help to reduce illegal bike riding and its associated environmental impacts.
- Continue to engage with riders to understand their needs and improve the site based on feedback.
- Adventurous spaces are more inclusive when they cater to multiple skill levels.
- Additional features, such as tool-benches and mechanics manuals, can promote learning and build capacity.

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“It's been great that we've been involved in the design process. We've told the builders what we would like, and they've built a great park because of it.”

- Ben, 18,
local mountain bike rider



“

I feel proud about this place, and I do feel a sense of responsibility - we like to keep it as clean as possible. It's just a good community.”

- Charlie, 18,
local mountain bike rider



“

It's something that was grassroots and its been a raging success. We will constantly improve the facility and that's really front of mind. But I would have no qualms about doing this sort of facility again because it's given kids the opportunity to ride their bikes, to get out into nature, and to be safe while doing it.”

- Cr Zac Miles,
Mayor of Hunters Hill



Using the maintenance equipment at Boronia Bike Track

Fairfield Adventure Park

Fairfield, NSW

[Fairfield Adventure Park](#) provides Fairfield's diverse community with an active recreation space for people of all ages and abilities, and is a much-loved destination for both residents and visitors. The recreation area includes an obstacle course, human foosball arena, basketball court, walking paths, and adventure playground with giant slides, flying foxes, 11m climbing net and skybridge.

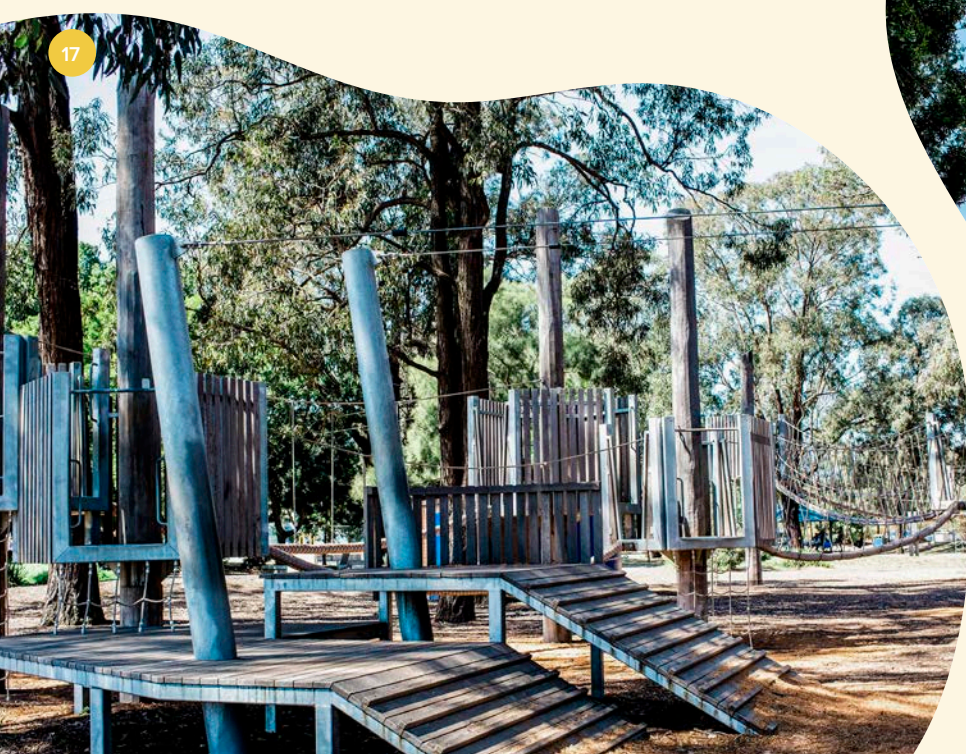
The Adventure Park was designed with both young people and adults in mind. Fairfield City Council's Youth Advisory Committee says that it has been particularly popular with young people because of its proximity to public transport and the city centre. The Committee also highlighted the importance of providing exercise equipment for people who may not be able to afford a gym membership. Council run a free 'Gyms in Parks' program, enabling community members to be active while building social connections.

Since opening in 2015, Fairfield Adventure Park has become a central meeting point for families from the wider south-western Sydney community. Co-locating various facilities in a central location, such as the Fairfield Adventure Park, Fairfield Leisure Centre, and Fairfield Youth and Community Centres, makes it one of the most versatile precincts in Western Sydney and provides entertainment for people of all ages and abilities.

☒	Planning
☐	Engagement
☒	Education
☒	Inclusion
☐	Management

Lessons for local government

- Adventurous spaces near to public transport and other community facilities increases access for young people and lower-income residents.
- Accessible amenities help to make adventurous spaces more inclusive, e.g. accessible toilets, signage and car spaces near facilities.
- Flexible and multipurpose parks provide options for adults, young people and children, and promote intergenerational play.



Jubes Mountain Bike Park

North Wahroonga, NSW

[Jubes Mountain Bike Park](#) is a community-run facility managed by volunteers under the guidance and support of Ku-ring-gai Council. The purpose-built facility includes an off-road skills development area, a pump track, and four jump trails ranging from easy to difficult in skill level.

First constructed in 2011, its original design did not meet community needs and the site, which overlooks sweeping bushland, was left to degrade. Experiencing an increase in unauthorised trails on sites significant to First Nations Peoples, Council resolved to revitalise Jubes Mountain Bike Track in 2021 – this time with guidance from local young people and professional track builders.

Council organised a ‘design day,’ inviting local riders to share their ideas, as well as targeted engagement sessions with local children and young people to understand their ideas for the design and maintenance of the site, which includes an 800-metre long one-way track that zig-zags its way down the hillside. Council also established a Trail Care volunteer program that tasks the community with the site’s maintenance. The program largely consists of local children who have access to an on-site toolbox.

Collaborating with the community from the beginning of the revitalisation process has empowered local riders to take ownership. Ku-ring-gai Council has also adopted this approach at their [Woorimoo Downhill Mountain Bike Park](#) and plan to continue this model through their local government area.

☐	Planning
☒	Engagement
☐	Education
☒	Inclusion
☒	Management

Lessons for local government

- Collaborative partnerships between local government and community can help to build facilities that better meet community needs.
- Community-management models can empower community members to take ownership and maintain upkeep of public open spaces.

“Not only did we need local mountain bike trails to ride, but we also needed to engage the hundreds of kids that are out there building, in the design, the build, and the management.”

- Damian Underwood, local parent and advocate for Jubes Mountain Bike Park



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“The community has taken so much ownership in maintaining the site and we’ve been able to take on a support role. It’s been really validating and rewarding for the people involved, especially all the amazing young riders.”

- Jacob Sife, Manager Environment and Sustainability, Ku-ring-gai Council



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“I love this park because the view is really nice, it’s really close to my school and my house, and the jumps are very big - but once you do them they’re really fun. The people here are really nice, and I’ve made friends through the build crew.”

- Fletcher, 10, local rider and volunteer



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Jubes Mountain Bike Park

Julia Reserve Youth Precinct

Oran Park, NSW

Julia Reserve Youth Precinct is a recreation facility developed by Greenfields Development Company, together with Landcom and Camden Council.

Located in one of Sydney's fastest-growing local government areas, the multipurpose precinct includes a skatepark, parkour facilities, ping pong tables, kick-about area, multipurpose courts, shelters and seating, along with areas to 'watch and learn.' Adjoining the skatepark is the Julia Reserve Community Centre and Youth Precinct, which provides a wide range of facilities, services and programs for young people.

The Youth Precinct is spacious, catering for different user groups and large numbers of people. It embraces less traditional sports and provides opportunities for beginners through to elite level athletes. With its colourful design, it is a focal point that adds character to this newly-developed area.

Julia Reserve was designed with input from students from local schools. One feature conceptualised by a school student and included in the final design is a 'volcano' skate element with a tree inside.

Realised under a Voluntary Planning Agreement, the Julia Reserve Youth Precinct presents a best-practice example of local council and developers working in partnership to deliver on community needs.

☒	Planning
☒	Engagement
☐	Education
☒	Inclusion
☐	Management

Lessons for local government

- Increasing growth and urban density requires more flexible and multi-purpose public open spaces, particularly for young people.
- Build partnerships with developers to deliver quality public open spaces for adventurous play.

“This is a great example of the working partnership between Landcom, Greenfields Development Company and Camden Council. It's also the result of a strong community engagement process, and working with great designers.”

- Mick Owens,
Greenfields Development
Company General Manager





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Programming adventurous play

Councils across NSW are programming adventurous play activities and events. Lismore City Council recently ran mountain bike skills workshops, while Midcoast Council hosted free parkour and skateboarding workshops during Youth Week.

Adventurous play programs can help to build skills and the confidence necessary to make adventurous play less risky.

It's also important for inclusion. Free activities and events provide opportunities for people who may not otherwise have the means to participate.

Targeted programs can also diversify adventurous play and encourage participation by people of all genders, abilities and backgrounds.

Scott Mathis founded [School of Skate](#), a skate education organisation based in Sydney's Northern Beaches. He's noticed many more young female skaters through his business, and due to demand, has created girls only lessons.

Programs and events can also help to visiblise adventurous play and introduce people to new sports, such as the City of Sydney's [The Big Adventure](#), which provided opportunities to try out mountain boarding, parkour, rock climbing and skating.

☐	Planning
☒	Engagement
☒	Education
☒	Inclusion
☐	Management

Lessons for local government

- Programs and events help to encourage participation of people who would not normally participate, such as young women and people with disability.
- Programs that develop the skills and experience of participants can help to minimise risk of injury.
- There are opportunities to partner with local organisations and businesses to deliver programs and events.



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Cringila Hills Mountain Bike Park

Cringila, NSW

Wollongong City Council's [Cringila Hills Mountain Bike Park](#) includes a 12km network of trails, dirt jumps area and a competition-standard pump track. The free facility, located in a culturally-diverse Wollongong suburb with high socioeconomic disadvantage, supports beginner-to-intermediate adventure enthusiasts, while providing more challenging trails for advanced mountain bike riders.

Situated on an old brownfield site with issues of illegal rubbish dumping and motorbike trail riding, the Mountain Bike Park is part of a larger project to transform Cringila Hills into a landmark recreation park.

Council carried out several studies (e.g. needs assessment, amenity assessment and contaminated land mapping) in the development of the site, as well as comprehensive engagement with key stakeholders including First Nations groups and Traditional Owners, the Cardinals Baseball Club, and local schools and community groups in neighbouring suburbs.

Since opening in November 2021, the Park has seen high usage from families and young people; has eliminated illegal rubbish dumping; and reduced illegal motorbike trail riding on the site.

The new Mountain Bike Park has helped to put Cringila on the map, providing opportunities for new services to be established in the area. With increased visitation and foot traffic to the area, local businesses have also benefited from the new Park.

☒	Planning
☒	Engagement
☐	Education
☒	Inclusion
☐	Management

Lessons for local government

- Involve local stakeholders (e.g. schools, environmental groups) in the engagement process to increase community support and ownership.
- Plan for new facilities and amenities that service disadvantaged and vulnerable communities.
- Design adventurous spaces that promote gradual skill development and include beginner levels to encourage participation.

“I’m a professional mountain bike athlete, and I’d be happy to go over there to ride for a fun training session. At the same time, yesterday I took my six-year-old out there on his 20-inch Giant STP, and we did laps on laps on laps, on the same trails.”

- Josh Carlson, Wollongong resident and mountain bike athlete

A full-page photograph showing three mountain bikers riding a dirt trail through a forest. The lead rider is a man with a beard, wearing a red helmet and a black t-shirt with a circular logo. He is followed by a woman in a red t-shirt and a black helmet, and then a third rider in a black t-shirt and a blue helmet. The trail is made of reddish-brown dirt and is surrounded by lush green trees and foliage. The scene is captured from a low angle, emphasizing the riders' movement down the slope.

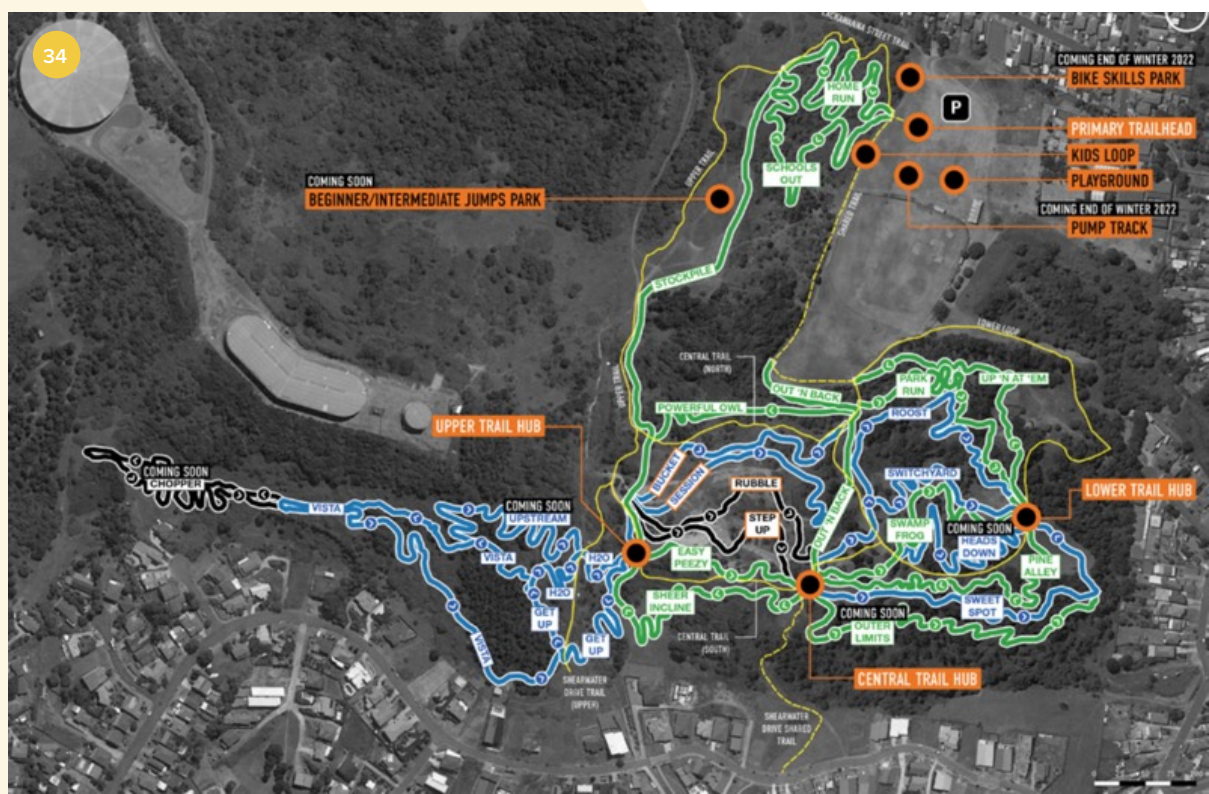
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Cringila Hills Mountain Bike Park

Cringila Hills Mountain Bike Park



- Cr Gordon Bradbery, Lord Mayor
of Wollongong



Mya and Skater Uktis

Skater Uktis is a global network of Muslim female skaters organising skate meet ups and social events in their cities around the world. The organisation aims not only to connect Muslim female skaters, but to develop and empower the next generation to become leaders – as community organisers, activists, politicians, and more.

Mya Arifin, a personal trainer and mum of two who took up skating during COVID-19 lockdowns, recently joined the global network in the role of Sydney representative and has since encouraged women in her area to learn to skate.

The South-Western Sydney local is making an impact in her community. She says: “Ever since I started skating, I had a lot of people message me and say, ‘Oh, a lot of my Muslim friends are really happy,’ and even some of them want to start skating.”

Mya highlights the physical and mental health benefits of skating, including increased confidence. She says that skating provided respite through the COVID-19 pandemic, while also providing a new challenge and helping her to feel a sense of accomplishment.

☐	Planning
☐	Engagement
☒	Education
☒	Inclusion
☐	Management

Lessons for local government

- Collaborate with community champions and local community groups to encourage diverse participation in adventurous play.
- Community networks can help to promote adventurous play and activate spaces, important for fostering social cohesion and creating welcoming and inclusive public spaces.
- Adventurous play has physical and mental health benefits.

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“

Inclusion to me is acceptance of any person regardless what they look like, what they wear, or what religion and background they are.

We may not always agree on everything, but to find common ground in a hobby, your passion and something we do, is [something] that can bring us together.”

-Mya Arifin

Tarcutta Bike Jump and Pump Track

Wagga, NSW

Wagga City Council opened its bike jump and pump track at Paddy Osborne Oval in mid-2022. The bike track was a collaborative effort between the Wagga City Council and Tarcutta Progress Association, who successfully acquired \$127,000 in grants from the NSW Government's ClubGRANTS program.

Tarcutta Progress Association treasurer, Kathy Peel, said that when the residents were asked what they would like to see in their town, they wanted a new bike track: "Working with Council has been good; I was always kept in the loop and always asked for my opinion, now that the track is finished, everyone in the Tarcutta community loves it and is happy with the outcome".

Wagga Councillors have acknowledged the many benefits the track has brought to the community. Said Councillor Kim Parker, "It's pleasing to see committed community members working with Council to create something like this track, which benefits residents and will help draw travellers and visitors into Tarcutta for years to come."

Council were able to apply for funding because they had engaged with the community and had identified the park as a need in their Recreation, Open Space and Community Strategy 2040.

The park welcomes skateboards, scooters and all kinds of bikes, and is enjoyed by young children and adults alike.

☒	Planning
☒	Engagement
☐	Education
☒	Inclusion
☒	Management

Lessons for local government

- Plan for multipurpose and flexible facilities.
- Work in partnership between council, community groups, and local children and young people, and keep people informed.
- Have plans ready for when funding becomes available.
- Allocating spaces for young people to hang out and socialise can help to activate regional destinations.



City of Sydney skate parks

City of Sydney, NSW

Since the implementation of their Skate Strategy in 2006, City of Sydney Council has worked to create a network of skate zones across their local government area.

Opened in December 2020, Council's biggest site, [Sydney Skate Park](#), situated in Alexandria's Sydney Park, has become a much-loved and popular skate destination. With zones to suit every ability and style of skating, as well as scooting and BMX riding, Sydney Skate Park has been well received as a welcoming and inclusive place for skaters and spectators.

Scattered throughout the skate park are multiple viewing areas, seats and trees, inviting people to gather and watch – including from the adjacent grass hill which serves as a natural amphitheatre and meeting place to sit and observe.

More recently, Council completed the [Federal Park Skate Park](#), a plaza-style skate park located near the Glebe foreshore. Early consultation with skaters identified the need for a skate park with street elements that differ from Sydney Skate Park, such as rails, ledges, kerbs, and stairs. The city-central location near to other community facilities makes it an easy-to-access destination.

City of Sydney's Manager of City Greening and Leisure, Joel Johnson, says, "A zero tolerance to skaters doesn't work." With this realisation, Council shifted their efforts around stopping skaters towards improving sites where skaters want to go and hang out – and have since woven skateable objects amongst major facilities, such as Gunyama Park and the Drying Green, to create a network of skateable paths.

☒	Planning
☒	Engagement
☐	Education
☒	Inclusion
☐	Management

Lessons for local government

- Develop strategies to formalise commitments to skate facilities.
- Provide a network of skateable places with various offerings for different skate styles and skill levels.
- Visibilising skaters can change community perception about skateboarders.

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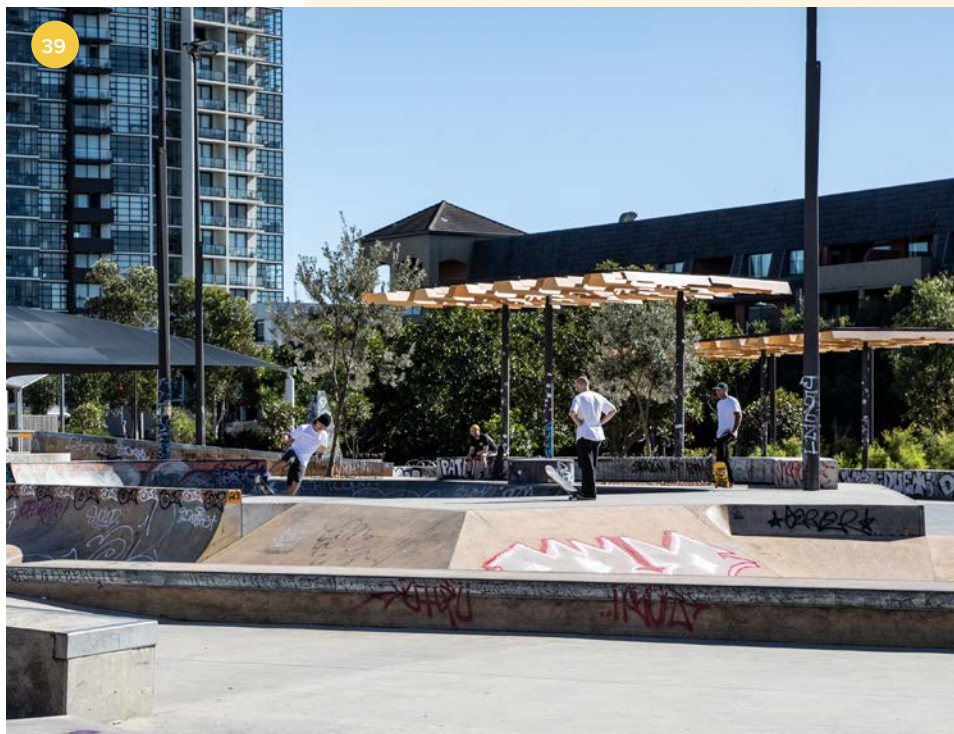


“We made an effort towards creating places that are safe and accessible, and where people wanted to go to.”

- Joel Johnson,
Manager of City Greening and Leisure,
City of Sydney Council

“ I definitely have seen, over the past three or four years, an increasing amount of girls at the skate park, which is really cool... It’s more mainstream nowadays, and an Olympic sport. And I think a lot of young girls are seeing other young girls do it, which gives them that little bit of confidence to go and stand on the board.”

-Liv, 19,
Olympic Program skater



Sydney Park Skate Park

“ It’s one of the biggest skate parks in Sydney and its got something for everyone – ledges and rails for street skaters, and the really gnarly big bowl. Being here on a Friday night, it’s awesome. There’s hundreds of skaters, and even if they’re not skating, they’re watching and hyping you up.”

-Liv, 19, Olympic Program Skater





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Federal Skate Park

“It’s really important to have skate parks like this because it gives young kids a place to hang out, get a sense of community. And it gives them a place to try a trick and get better and better.”

- Harry, 27,
School of Skate coach

Recreation in Natural Areas Strategy

Ku-ring-gai Council, NSW

Recognising the challenge in balancing access to outdoor recreation with environmental protection, Ku-ring-gai Council adopted the [Recreation in Natural Areas Strategy](#) in March 2020.

The Strategy provides “a consistent management framework for the provision and support of an ecologically sustainable, diverse and accessible range of recreation opportunities in the natural areas of Ku-ring-gai.” It outlines management actions relating to mountain biking, rock climbing, abseiling and bouldering, orienteering and regaining, and track-dependent recreation such as bushwalking, running and bird watching.

Extensive community consultation was carried out in the development of the Strategy, including workshops with recreation users, environmental groups and general community members. A risk assessment identified controls to reduce the safety and environmental risks associated with recreation in natural areas.

Council formed the [Sustainable Recreation Advisory Group](#) in November 2020 to support the implementation of the Strategy and to provide advice to Council on recreation opportunities and efforts to improve sustainability.

☒	Planning
☒	Engagement
☐	Education
☐	Inclusion
☐	Management

Lessons for local government

- Councils can develop specific strategies to manage recreation in natural areas and to ensure the local environment is protected from adventurous play activities.
- Adventure seekers and environmentalists are not mutually exclusive. Bringing together diverse stakeholders through multi-stakeholder engagement processes can increase understanding between user groups.

Ku-ring-gai Council Recreation in Natural Areas Strategy

March 2020

“Vision: ‘A Ku-ring-gai where recreation activities in natural areas are conducted in harmony with the local environment and within ecological limits, and where important environmental, social and cultural values are preserved’.”

-Ku-ring-gai Council Recreation in Natural Areas Strategy



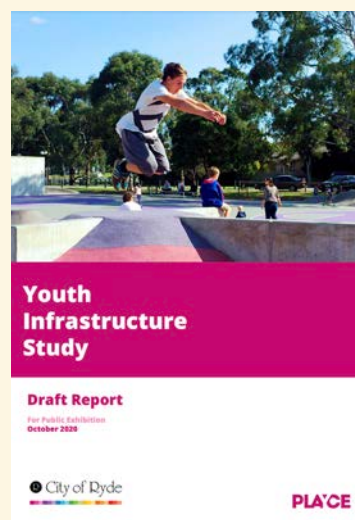
Youth Infrastructure Study

City of Ryde, NSW

City of Ryde's [Youth Infrastructure Strategy](#) provides strategic direction for the future provision of outdoor recreation places and spaces for young people across Ryde. It also assesses the need and demand for additional youth spaces and identifies the design principles and most appropriate locations for these facilities.

Community consultation was undertaken in the development of the Strategy to understand how local tweens, teens and young adults use and access public open space. Young people like to hang out in a diverse range of recreation spaces, including multipurpose sports courts, indoor sports facilities, outdoor community events, varied skateable elements throughout the City of Ryde and shaded outdoor social spaces.

Since development of the Strategy, City of Ryde have delivered the [Ryde Outdoor Youth Space](#) complete with parkour, bouldering and skate elements.



Lesson for local government

Councils can develop an infrastructure plan to complement their youth strategy to meet desires for more flexible and outdoor public spaces to hang out and be active.

Central Coast Skatepark Action Plan

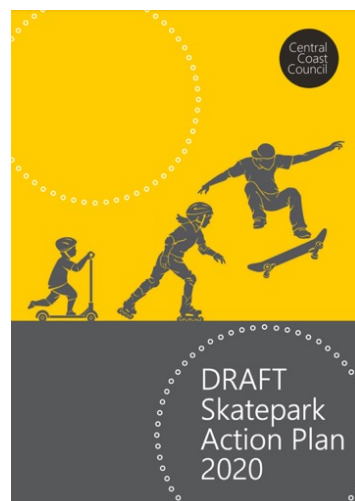
Central Coast Council, NSW

In recognising the many community benefits provided by skateparks, Central Coast Council developed their first region-wide [Skatepark Action Plan](#) to coordinate the future planning, management and maintenance of skateparks on the Central Coast.

A comprehensive engagement process helped Council to understand what can be done better and how to make skateparks more inclusive, while generating ideas for future skate facilities.

An audit of Council's 26 existing skateparks also found that more than 80% required improvements, including the need for more diversity in skater experience, as well as for different skill sets and abilities.

Council's [Bato Yard](#) located in Bateau Bay has gained attention as one of Australia's top skate parks.



Lesson for local government

Many councils already manage a range of adventurous play assets, such as skateparks. Councils can upgrade and maintain these facilities so they remain safe, entertaining and inclusive to a range of users, whether this be skill level or skate style (e.g. skateboarding, BMX, rollerskating).

Image sources

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1. Jubes Mountain Bike Park
2. Mya Arifin, Skater Uktis Sydney ambassador
(Source: Mya Arifin)
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35. Mya Arifin, skateboarder and Skater Uktis ambassador
(Source: Mya Arifin)
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44. Sponsored skateboarder, Kai Shimakage, 18, at Federal Park Skate Park
45. Skateboarders at Federal Park Skate Park
46. Front cover of Ku-ring-gai Council's Recreation in Natural Areas Strategy (Source: Ku-ring-gai Council)

Appendix

Adventurous play literature review

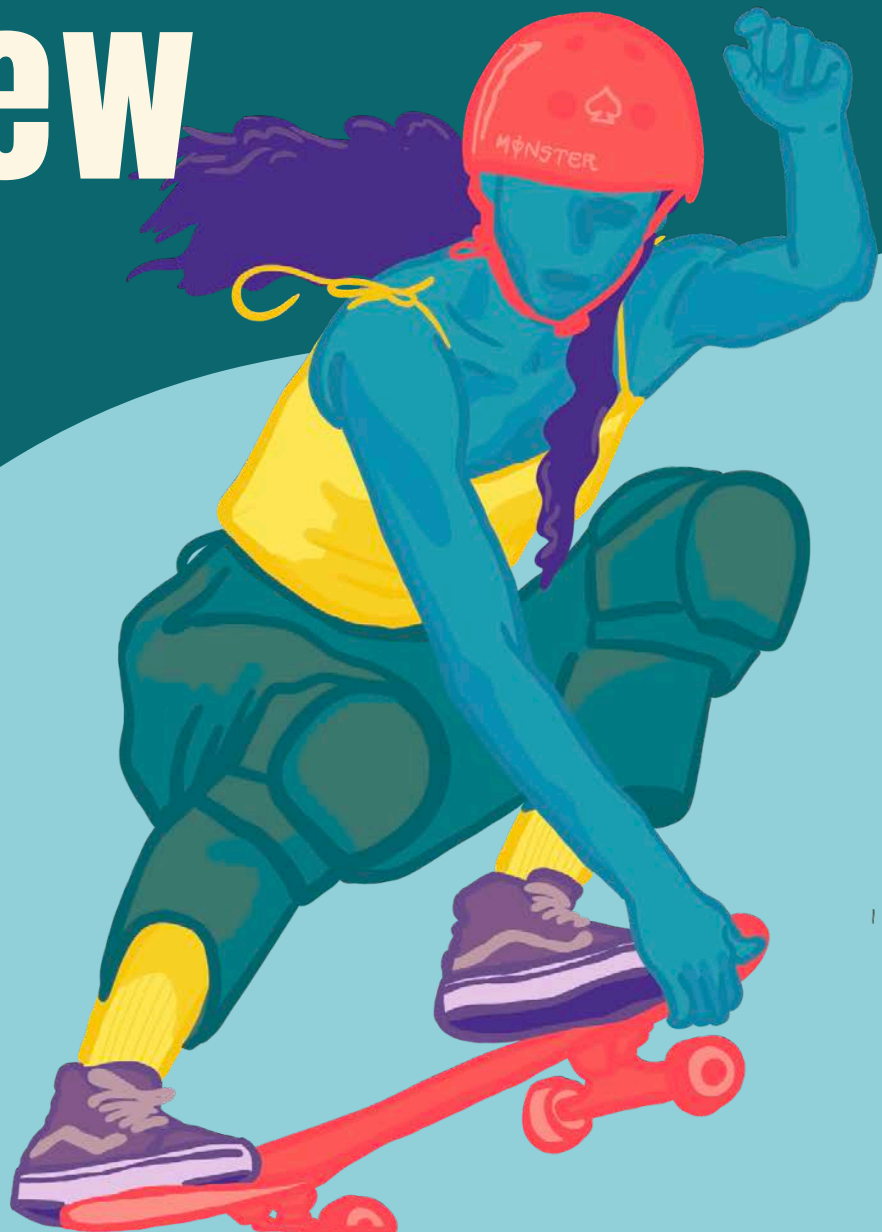


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1. Introduction

Purpose of this literature review

This literature review informs the Adventurous play Insights report aiming to unlock “Playful Cities”, projects that promote adventurous play, water and nature-based play, and offer outdoor recreation opportunities for all ages and abilities in NSW.

It aims to provide an overview of the research relating to adventurous play with a focus on understanding the importance, value and benefits of adventurous play, understanding various perceptions of risk, barriers and needs, and understanding lessons for government stakeholders from the literature that can “myth bust” concerns around adventurous play, and encourage the provision of more places to play within playful cities.

The Adventurous play literature review provides a literature review of articles and research relating to adventurous play, including participation trends; risks and myths; benefits; and learnings to support the provision of more places to participate in adventurous play in our cities.

As identified by NSW Department of Planning and Environment in the project brief:

“Risk in play is principally aligned with outdoor physical play activity for children and adolescents. Literature indicates the importance of risk in play for developing risk perception and risk management skills, and the importance of play and risk taking has been seen as critical to preparing children for the changing workforce. Evidence suggests regular and repeated exposure to high-quality outdoor play opportunities is important for fostering creativity, resilience, socio-emotional learning, cognitive development, mental health, physical health and risk negotiation skills. Concerns (by scholars, public officials, educators, and others) that excessive risk aversion has resulted in unwarranted limitation of children’s play opportunities to the detriment of their health, development and well-being”.

Key findings from the literature review clearly show that adventurous play is increasing in popularity as it becomes more mainstream; that it has more benefits than risks; and that the provision of quality, well-designed adventurous spaces within our cities can provide safe environments for participation in adventurous play activities.

2. What is adventurous play and who is it for?

Defining adventurous play

Adventurous play is also described as ‘outdoor risky play’ in the literature (Brussoni et al. 2015; Sandseter & Kieppe 2019) and defined as “thrilling and exciting forms of physical play that involve uncertainty and a risk of physical injury” (Sandseter & Kieppe 2019, p.2).

For the purposes of this project, adventurous play can be understood as unstructured, informal, non-competitive, and free outdoor physical play activities that push boundaries and involve an element of risk.

Adventurous play includes activities such as mountain biking, Bicycle Motor Cross (BMX), skateboarding, scootering, rollerblading/skating, climbing, and parkour. Many of these activities are now Olympic sports including cycling (BMX, mountain biking, track/road), sport climbing, and skateboarding. Skateboarding and sport climbing debuted at the Tokyo Olympics in 2021.

Who participates in adventurous play?

Adventurous play is primarily associated with children and adolescents. However, risky outdoor play activities engage people of diverse ages, genders, cultures and abilities (Krishna & Wightman 2022). While participation by girls and women is increasing, AusPlay research into participation by Australians in Olympic sports shows for some adventurous play, males are still the predominant participants (83% of those participating in some cycling are men and 17% are women; and 75% of those participating in skateboarding are men, and 25% women).

For adults 15 years and older, AusPlay 2021-2022 shows that mountain biking and skateboarding (also referred to as “skate” by AusPlay) are the most popular adventurous play activities, with mountain biking close in popularity to cricket. An AusPlay survey conducted in June 2021 focusing on the ongoing impact of COVID-19 on sport and physical activity finds there has been a surge in mountain biking since the start of the pandemic.

For all adventurous play activities, other than skateboarding, participation is still dominated by males. Mountain biking and skateboarding have the broadest spread of age participation throughout life stages, further indicating the intergenerational benefits of these activities.

AusPlay research indicates that those

Table 1 - Participation in Sports, Adults 15 years and over
(AusPlay survey results July 2020 to June 2021)

Adventurous Play	Total	15-17	18-24	25-34	35-44	45-54	55-64	65+	Males	Females
BMX	0.10%	0.20%	0.20%	0.20%	10.00%	0.00%	0.00%	0%	0.20%	0.00%
Mountain Biking	2.20%	1.90%	1.10%	2%	3.90%	4.60%	1.60%	0.40%	3.60%	0.80%
Parkour	0%	0%	0.10%	0.10%	0%	0%	0%	0%	0.10%	0%
Skate	1.20%	3.30%	2.70%	2%	1.20%	0.80%	0.30%	0%	1.40%	1%
Traditional sport comparison										
Basketball	4.70%								6.60%	2.80%
Cricket	2.70%								4.90%	0.60%
Netball	2.80%								1%	4.60%

Table 2 - Proportion of participants in each sport giving fun and enjoyment as a reason for participating

(AusPlay, Australians' participation in Summer Olympic and Paralympic sports, 2021)

 Surfing	81%	 Table tennis	66%	 Hockey	63%
 Sailing	77%	 Mountain biking	65%	 Football	63%
 Skate sports	76%	 Golf	65%	 Volleyball	61%
 Equestrian	74%	 Rugby union	65%	 Tennis	57%
 Canoeing/kayaking	66%	 Basketball	64%	 Badminton	55%

participating in Olympic sports such as skateboarding and mountain biking activities rate 'fun and enjoyment' as their top motivation, as expressed in Table 2.

The Parkour White Paper (Lark Industries, Tredwell, 2021) has also noted the increasing demand for and participation in parkour – noting that parkour is the most searched unstructured sporting code in Google and on YouTube in comparison with skateboarding, rock climbing and mountain biking worldwide.

Within Australia, parkour has had the highest

number of YouTube searches since 2008 in comparison with other unstructured sports including skateboarding, rock climbing and mountain biking, and it has been the second most popular Google search behind rock climbing since 2010. Parkour has also been found to be popular across all Australian states, and AusPlay data has identified that it is ranked the 8th most popular unstructured sport for children aged between 0 and 14 years old.

Risk in play?

Literature indicates the importance of risk in play for developing risk perception and risk management skills, and the importance of play and risk taking has been seen as critical for building social skills and preparing children for the changing workforce.

Evidence suggests regular and repeated exposure to high-quality outdoor play opportunities is important for fostering creativity, resilience, socio-emotional learning, cognitive development, mental health, physical health and risk negotiation skills. Concerns by scholars, public officials, educators, and others that excessive risk aversion has resulted in unwarranted limitation of children's play opportunities to the detriment of their health, development and wellbeing.

There are many different types of adventurous play with varying associated risks. Table 4 below

proposes eight categories of 'risky play' and their equivalent injury risks, as identified by Professor Ellen Beate Hansen Sandseter through her research and interviews with children.

Table 3 - Categories of risky play
(*Adventurous play categories bolded – adapted from Sandseter & Kieppe 2019*)

Category	Examples of activities	Risk
Play with great heights	Climbing, jumping, hanging/dangling, or balancing from heights	Potential of falling
Play with great speed	Bicycling at high speeds, sledging (winter), sliding, running (uncontrollably)	Uncontrolled speed and pace risking collision with something (or someone)
Play with dangerous tools	Working with axe, saw, knife, hammer, or ropes	Using objects that could lead to injuries
Play near dangerous elements	Ramps, cliffs, water, or a fire pit	Where you can fall into or from something
Rough-and-tumble play	Wrestling, fighting, or fencing with sticks	Where people might harm each other
Play where children go exploring alone	Bushwalking, trekking, hide-and-seek	Exploring without supervision and where there are no fences
Play with impact	Jumping into inflatable or padded objects	Crashing into something repeatedly just for fun
Vicarious play	Watching skaters, spectating	Experiencing thrill (and desire to emulate) by watching others

3. The benefits of adventurous play

We need more adventurous spaces for adventurous play

Adventurous play is an increasingly popular form of play. As our urban and regional places continue to grow and densify, the reliance on open public space to facilitate physical exercise and activity, access to fresh air, connection to nature, and places to meet and be social is increasing.

There has been considerable literature documenting the crucial role of play in fostering creativity, resilience, socio-emotional learning, cognitive development, mental health, physical health, and risk perception and management skills during childhood and adolescence (Brussoni et al 2012; Little & Eager 2010; NSW Play Australia Committee 2021). However, recent decades have seen a decline in opportunities for play, and particularly unstructured outdoor play (Little 2008). In 2010, Planet Ark estimated that only 35 percent of Australian children play outside every day, compared to 72 percent a generation ago.

This decline in outdoor play can be understood in relation to the increasing growth and densification of our urban and regional environments, with shrinking backyards and increasing traffic eroding spaces for children's play, alongside increasing work commitments for parents, meaning they have less time to supervise their children's play (Little 2008).

In addition, decreased opportunities for outdoor play have been linked to increasing parental concern about children's safety and wellbeing, resulting in parents placing greater restrictions on children's independent play. Furthermore, increasing fears of litigation has increased fear amongst non-parental carers, educators and play space providers, such as local governments, that they will be held liable for injuries suffered by children while using those spaces.

Scholars, public officials, and educators have argued that an exaggeration of the risks involved in many common childhood pursuits has resulted in unwarranted limitation of play opportunities to the detriment of their health, development and well-being (Furedi, 2001). This indicates that messaging of adventurous play has an impact on perceived risk.

The provision of high-quality open public space for adventurous play, alongside increased messaging around the benefits, can help to address the decline of opportunities for outdoor play for children and adolescents.

For more adventurous cities, the literature tells us we need:

- **Closer opportunities for active physical exercise** that is local and convenient to engage communities in regular healthy movement (Wollongong City Council 2020).
- **Quality, accessible and diverse spaces for active play** that is attractive, engaging, and will inspire ongoing learning for diverse age groups, as well as encourage repeat visits. “Children need to be provided with choice and variety that reflects different interests and abilities, and offers opportunities for challenge and risk to evoke and sustain excitement and stimulation” (Little & Eager 2010, p. 510).
- **Managed spaces specifically for wheeled sports** to respond to accelerated uptake in BMX, skateboarding and other wheeled devices (Allied Market Research 2021; Wollongong City Council 2020) in spaces that are safe, use appropriate materials, and away from potential collisions with traffic and people (VISS & Monash University 1997; Reliance Foundry 2020).
- **Places to socialise**, particularly for teens and pre-teens, but also enabling whole-family activities and opportunities for community to come together to enable social cohesion (Walton 2021). For example, research from articles (Lange 2021; Hegarty 2019) around gender mainstreaming and designing for girls indicates that many young women want hangout spots with round tables and art or games that foster interaction, not competition. Places to socialise in outdoor settings for girls could include shelters, observation platforms, swings, and roller rinks.
- **Inclusive spaces** that are attractive and welcoming for everyone to participate and/or be a spectator, particularly considering gender, age, physical/mental ability and cultural diversity (Finch 2020; Reliance Foundry 2020). “Now more than ever, equality is on the tip of everyone’s tongue. There are so many stereotypes being broken, and skating is just one of them. You are no less coordinated because of your gender; you are no less active; and absolutely no less extreme” (Finch 2020, para.29).

The benefits of adventurous play

Table 4 shows the many benefits of adventurous play including references from academic and public documents, as well as cultural sources such as user blogs, that express the personal benefits from those that practice adventurous play activities.

“Although the term ‘risk-taking’ often has negative connotations, the reality is that the willingness to engage in some risky activities provides opportunities to learn new skills, try new behaviours and ultimately reach our potential. Challenge and risk, in particular during outdoor play, allows children to test the limits of their physical, intellectual and social development.”

Helen Little “Outdoor play: Does avoiding the risks reduce the benefits?”

Table 4 - Summary of benefits of adventurous play provision

Category	Sources	Supporting Quote
Places to play	Krishna & Wightman 2022 United Nations 1989 NSW Play Australia Committee 2021 Play Safety Forum 2012 Reliance Foundry 2020 Walton 2021	“By creating environments that support play, we can increase children and young people’s sense of wellbeing, belonging, engagement with community, and build social cohesion” (NSW Play Australia Committee 2021).
Joy and delight	Cox 2020 Finch 2020 Hewes 2014 Johnston 2016 Krishna & Wightman 2022 United Nations 1989 Reliance Foundry 2020	“The experience of joy and freedom and thrill that many of us associate with our memories of childhood play are the possibilities that draw children into play, possibilities that frequently involve disorderly, disruptive elements of risk, uncertainty and unpredictability – social and emotional, as well as physical. The player is taking a chance that the risk might connect them to the world and others in new ways, and when it does, the player feels powerful. The understanding emerging from neuroscience that ‘playing is a way of building and shaping the emotion, motivation and reward regions of the brain’ resonates” (Hewes 2014).
Physical health	Brussoni et al. 2012 NSW Play Australia Committee 2021 Play Safety Forum 2012 Reliance Foundry 2020 Walton 2021 Wollongong City Council 2020	“The evidence from our systematic review indicates that the overall positive health effects of increased risky outdoor play provide greater benefit than the health effects associated with avoiding outdoor risky play” (Brussoni et al. 2012). “Parkour workouts encompass total body fitness. Running and jumping over and through obstacles requires work from all muscles. Parkour adds a fun twist to your usual static gym routine. It encourages play while tackling practical and fundamental movements” (Lappset, 2021).

Table 4 - Summary of benefits of adventurous play provision

Category	Sources	Supporting Quote
Mental health	Brussoni et al. 2012 Johnston 2016 NSW Play Australia Committee 2021 Walton 2021 Wollongong City Council 2020	“Children deprived of risk are more likely to experience obesity and poor mental health” (Brussoni et al. 2012). “The experience of rewarding, successful and satisfying participation in social play with friends, initiated, directed and sustained by young children themselves, and including the disruptive, rambunctious rowdy dimensions of full body social play, contributes to a robust and resilient sense of social connectedness that is essential to long-term physical and mental health” (Hewes 2014). “When training, the mental side is as fundamental to success as the physical. It helps you to discover who you are, what you can do, and also what you can’t do.” (Lappset, 2021)
Developmental health	Barnardos 2011 Brussoni et al. 2012 Little & Eager 2010 NSW Play Australia Committee 2021 Play Safety Forum 2012	“The benefits of play pervade every aspect of a child’s development: social, cultural, emotional, physical, and cognitive. Play is critical to healthy development including supporting increased intellectual achievement and capabilities for academic success; increased language and literacy development, promotion of social outcomes, development of self-knowledge and empathy, and increased ability to follow rules” (NSW Play Australia Committee 2021).
Learn to deal with uncertainty	Hewes 2014 Little & Eager 2010 NSW Play Australia Committee 2021 Play Safety Forum 2012	“Play, by its very nature, involves uncertainty, unpredictability, novelty, and flexibility, with a focus on the process rather than the result and a certain element of risk comes with this unpredictable and unstructured behaviour” (Little & Eager 2010).

Table 4 - Summary of benefits of adventurous play provision

Category	Sources	Supporting Quote
Encourages creativity and problem-solving	Belinky 2017 Cox 2020 Johnston 2016 Krishna & Wightman 2022 NSW Play Australia Committee 2021 Reliance Foundry 2020 Snowy Valley Council 2019 Walton 2021	“We characterise play as an intrinsic, creative, freely chosen, child-directed, participatory and an emergent process, where the process itself is most often prioritised over tangible outcomes” (NSW Play Australia Committee 2021). “Music, fashion, art, and videography have all been affected by skateboarding culture in some way or another [...] The art of a skateboard is for the individual and is a way to express themselves. Skaters have great connections to their boards, they know that it is part of their own identity. If you look at any pro’s style, you see that every deck is a reflection of them [...] Skateboarding is a sport like nothing else, it promotes creativity and free-thinking” (Cox 2020).
Explore boundaries	Cox 2020 Krishna & Wightman 2022 Little & Eager 2010 NSW Play Australia Committee 2021 Play Safety Forum 2012	“Rich, challenging, engaging play environments allow children to test themselves and explore their abilities. They can learn the penalties of misjudging a risk – or simply having bad luck – in managed environments that reduce the likelihood of serious harm” (Play Safety Forum 2012).
Learn about negotiating risk and self-regulation	Little & Eager 2010 Craigies Farm 2022 Snowy Valley Council 2019	“What we know is that a child is adept at assessing their own capabilities and negotiating the risk accordingly. The danger is that without access to age-appropriate risk as they grow, children do not develop their own internal risk assessment” (Craigies Farm 2022).
Physical literacy	Barnardos 2011 NSW Play Australia Committee 2021 Snowy Valley Council 2019	“Diversity of physical experiences promotes physical literacy, which establishes life-long positive predispositions towards physical activity. Physically risky play promotes children’s self-directed risk management with health and behavioural benefits” (NSW Play Australia Committee 2021).
Supports the adventurous	Krishna & Wightman 2022 Little & Eager 2010 Play Safety Forum 2012 Reliance Foundry 2020	“Some children and young people actively seek out risky situations. Play provision can give them the chance to satisfy their search for excitement in a managed context, potentially reducing the risk that these children will spend time in truly dangerous environments” (Play Safety Forum 2012).

Table 4 - Summary of benefits of adventurous play provision

Category	Sources	Supporting Quote
Connection to nature	NSW Play Australia Committee 2021 Outdoors NSW 2018 Play Safety Forum 2012 Wollongong City Council 2020	“Exposure to natural outdoor environments enhances children’s mental wellbeing and research has identified symptoms of attention deficit disorder can be relieved and concentration enhanced by exposure to natural spaces [...] In an era of climate change and eco-anxiety, every opportunity for play in cool, natural outdoor settings should be prioritised, particularly in urbanised environments” (NSW Play Australia Committee 2021).
Build resilience and perseverance – learning to recognise fear	Cox 2020 Blackwood 2020 Little & Eager, 2010 NSW Play Australia Committee 2021 Snowy Valley Council 2019	“Safety is always really important, but also allowing children to take a risk and to try out and to fail and to have to rely on one another and learn from those errors [...] When they overcome problems and face difficult situations, they’re really building those pathways in the brain to negotiate bigger stresses when they come along” (Blackwood 2020).
Socialising and hanging out, and reducing antisocial behaviour	Barnardos 2011 Belinky 2017 Finch 2020 Johnston 2016 Krishna & Wightman 2022 NSW Play Australia Committee 2021 Play Safety Forum 2012 Reliance Foundry 2020 Walton 2021 Wollongong City Council 2020	“It is through play that children learn to navigate unexpected events without the consequences of real-world life experiences and it supports children to develop the capacity to navigate the complexity of social structures” (NSW Play Australia Committee 2021). “The opportunity to make friends and develop friendships is one of the most important experiences in childhood. In addition to this, such opportunities help children build their confidence and social competences” (Play Safety Forum 2012).
Recreation and entertainment	Belinky 2017 Johnston 2016 Krishna & Wightman 2022 Play Safety Forum 2012 Reliance Foundry 2020 United Nations 1989	“Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts” (UN 1989). “Like adults, children need to enjoy their lives, to have times and spaces where they can simply have fun. Good play environments offer a wide range and choice of play experiences” (Play Safety Forum 2012).

Table 4 - Summary of benefits of adventurous play provision

Category	Sources	Supporting Quote
Alternative to digital	Blackwood 2020 Standards Australia 2017 Walton 2021	"In a world that is increasingly digital it is important that children enjoy physical play environments as well" - Dr Bronwyn Evans, CEO of Standards Australia (Standards Australia 2017). "Ms Ford said technology was having an impact on children developing resilience, as was less time outside. "One of the biggest impacts that I see is the disconnect that's happening – when we're tuned in to our devices instead of each other" (Blackwood 2020).
Attractive to broad demographics	Drury 2021 Finch 2020 Krishna & Wightman 2022 Play Safety Forum 2012 Reliance Foundry 2020 Walton 2021 Wollongong City Council 2020	"Skateboarding is street, but it's also park. It's about individuals, but it's also about collective. It's about white male teenagers, but it's also about gay, black, older females. It's counter-cultural, but it's also business. It takes place in LA, but you can also go to Mongolia and find skateboarding. It's a sport, but it's a subculture and that there's photography, and there's art, and there's music, and there's all kinds of social enterprises and charities that use skateboarding as a way to reach hard to reach youth" (Krishna & Wightman 2022).
Support for carers	Krishna & Wightman 2022 Play Safety Forum 2012	"Good, accessible play provision helps parents and carers extend their children's play experiences. It can help to reduce conflict and relieve stress levels inside the home by providing other places where children spend their time" (Play Safety Forum 2012).
Reduction in youth antisocial behaviour	Belinky 2017 Brussoni et al. 2015 Reliance Foundry 2020 Walton 2021	"Skaters spend years revitalising abandoned spaces and putting together completely DIY parks for the benefit of the community, while others continuously destroy numerous body parts challenging themselves to new tricks – all while managing to maintain a close-knit community riddled with almost exclusively positivity and good vibes" (Belinky 2017). "Skateboarding helped create social hubs by reinterpreting previously underutilized public spaces. Sometimes, all it took was adding a few granite benches to squares that helped unite neighborhoods and give kids a place to go" (Reliance Foundry 2020).

Table 4 - Summary of benefits of adventurous play provision

Category	Sources	Supporting Quote
Reactivates dormant spaces and entrepreneurialism	Johnston 2016 Krishna & Wightman 2022 Reliance Foundry 2020	“By activating dormant spaces and creating opportunities for different groups to interact, skateboarding enabled the city to create a stronger sense of community. Previous, underutilised spaces that had issues with crime suddenly became home to vibrant, engaged communities. Skateboarders and businesspeople both learned that skateboarders had the same right to skate a bench as they did to sit on them” (Reliance Foundry 2020). “On a social level it is said to harbour great potential for developing social and entrepreneurial skills as well as identity. Tomlinson et al (2005) have suggested that skateboarding represents an avenue for sporting participation and social engagement for men and women, young and old, who have been alienated by traditional school-based and institutional sport practices” (Johnston 2016).
Builds social cohesion	Finch 2020 Krishna & Wightman 2022 NSW Play Australia Committee 2021 Reliance Foundry 2020 Walton 2021	“Children’s play has an impact on social cohesion, with improved family wellbeing and increased social interactions provided through play in the community (NSW Play Australia Committee 2021).

Measuring the value of adventurous play

One of the challenges with adventurous play is that it is easier to quantify unfavourable aspects such as injury, costs and litigation, whereas the positive benefits are far more difficult to give a value to (Play Safety Forum 2012). Many of the benefits, outlined in the following section, generate intrinsic and extrinsic value for participants, communities and councils,

however there is little quantitative data available, particularly from social, cultural, and economic lenses.

The following captures some of the tangible data points found in the literature to better highlight the ‘value’ of outdoor recreation and adventurous play.

Figure 1 - Snapshot of ‘value’ data points for adventurous play

Health “Skateboarding can burn an average of 150 to over 222 calories in just a 30 minute period.” (Reliance Foundry 2020)	Use NSW residents participated in 47 million hours of outdoor recreation in 2016, including around 9.6 million hours of walking activity. (Outdoors NSW 2018)	Market The global skateboard market was valued at approximately \$1.94 billion US in 2018. (Statistica 2020)
Economy Outdoor recreation contributed an estimated \$6.7 billion of direct and indirect value to NSW in 2016. (Outdoors NSW 2018)	Professional sport Skateboarding was officially recognised as an Olympic sport in 2020, with Queenslander Keegan Palmer winning gold in park skateboarding in Tokyo.	Employment Outdoor recreation in NSW attributed 77,000 full-time equivalent jobs in 2016. (Outdoors NSW 2018)
Demographics Skateboarders are getting older in the US, moving from a 71% majority of 12-17 in 2006, to only 45% in 2020. (Skate Review 2020)	Healthcare Outdoor activity in NSW is estimated to have avoided \$480 million in healthcare costs in 2016. (Outdoors NSW 2018)	BMX Market In 2020 global BMX bikes market valued at \$230 million and looks to reach \$382 million by 2030. (Singh 2021)

4. Risk

Perceptions of risk in adventurous play

Those drawn to adventurous play are looking to experience the thrill of risk. As part of their development, children and young people are particularly drawn to sensations of height and speed (Brussoni et al. 2012; Little & Eager 2010). However, while adventurous play activities often include the risk of injury, they should not be limited to these definitions.

As previously highlighted, there are many valuable benefits to adventurous play, not least the fact that engaging with risk and unpredictability in unstructured play is essential for developmental health and social outcomes (NSW Play Australia Committee 2021). Through this lens, Little & Eager (2010, p.500) offer an alternative definition of ‘risky play’ as ‘play that provides opportunities for challenge, testing limits, exploring boundaries and learning about risk.’

The use of the word ‘risk’ is important. Many sources seek to distinguish ‘risk’ from ‘hazard’, arguing that the intended neutrality of the word risk (in other words, something that may or may not occur), is often misunderstood to mean ‘hazard’ – something likely to cause serious injury (Barnardos 2011; Little & Eager 2010).

All documents reviewed that sought to understand the value of types of play with inherent risk outlined that safety should be the highest priority, but also, that safety and risk could co-exist, so long as hazards were understood and removed (Brussoni et al. 2012; Play Safety Forum 2012; Little & Eager 2010).

The aspiration of many authors is a shift from a risk-averse culture that demands “as safe as possible,” to one that promotes “as safe as

necessary” approaches (Brussoni et al. 2012). Such an approach demands responsibility from both public provision providers and the users themselves to avoid serious injury.

Many scholars have found that perceptions of risk regarding outdoor play are culture dependent. For example, parents and teachers in Norway, New Zealand, and Canada appear to be less risk averse than those from the USA and Australia (Watchman & Spencer-Cavaliere 2017; Jelleyman et al. 2019; Little et al. 2012). Research by Guldberg (2009) indicates that Norwegians are less risk averse due to their love for outdoor activities and reluctance to restrict children’s freedom to roam outdoors. However, in other countries such as the USA, teachers and volunteers report being held accountable for injuries and the risk of litigation as factors for them to be restrictive towards children’s outdoor risky play.

Recognising the importance of perception of outdoor play, the Welsh Play Sufficiency Assessment provides training for parents, professionals, and volunteers who work with children in play spaces (Brussoni 2020). An important component of this training is reframing attitudes towards risk and increasing understanding about the benefits of risky play. This suggests that while perceptions of risk are culturally dependent, attitudes can be shifted through key messaging and promoting the benefits of adventurous play.

“The easiest way to think of it is that a risk is something you can judge how high can you go and still safely jump off the swing and fly through the air. This is good. Children learn ‘physical literacy’ this way by starting small and then becoming more adventurous.

A hazard is something you cannot judge. ‘Is the swing pivot almost worn right through and about to give way unexpectedly?’ This cannot be judged by a child, so this is bad and must be avoided by good management practices.”

London Play Briefing (Barnardos 2011, p.8)

The difference between risks and hazards

While all types of adventurous play have inherent risk, it is important to understand the difference between risk and hazards:

- A **risk** is something that is possible to negotiate and may be appropriate for particular situations.
- A **hazard** is something that is inherently dangerous and needs to be remedied, such as a climbing structure with sharp edges or loose boards that could seriously injure children if they play on it (Curtis, 2010).

Understanding the difference between these two concepts is fundamental to how we think about providing high quality public open space for adventurous play. It shifts our focus towards designing public open spaces for play that reduce hazards rather than removing potentially beneficial risks.

One anecdotal example of the difference between risks and hazards identified by stakeholders is trampolines. Historic high rates of injury associated with above-ground trampolines were correlated with their installation on concrete hard surfaces. A trend towards in-ground trampolines designed with netting has seen reduced falling and impact hazards.

This is also demonstrated by the much higher rate of serious injury to skate boarders and cyclists when on roads, than within adventurous spaces such as skate parks, pump tracks or mountain bike parks. A US study (Lovejoy S et al. 2021) indicated that only 5% of skate boarding injuries are severe and the majority of these occur from an accident involving a car. Literature indicates that in many instances adventurous play is not dangerous if participated within a well-designed space free of hazards (like cars).

“No play space is risk-free. No matter how much we try to remove the risk of children being hurt, children (and adults) can still get hurt. We can have the super smooth soft fall surfaces in our children’s centres and school playgrounds, but when children walk out into the real world the surfaces they come into contact with are anything but that. The greater risk is not providing children with the skills and abilities to identify and mitigate risk when they come across it so they can engage with the big wide world.”

ACECQA: Talking about practice: Adventurous play – Developing a culture of risky play

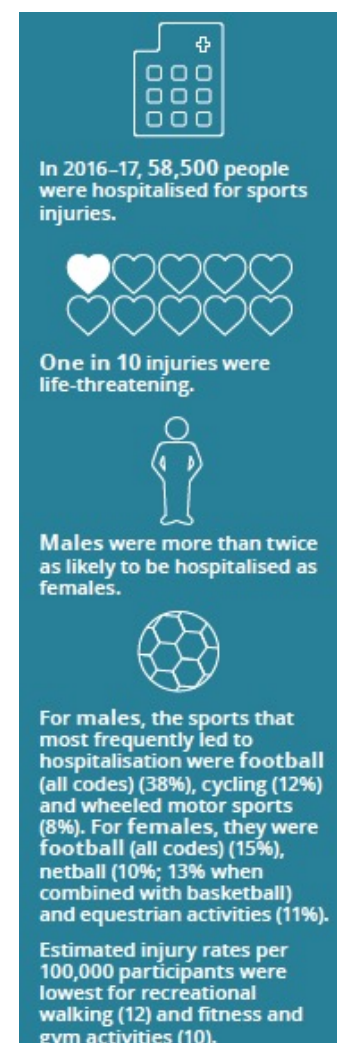
Actual risk

As the leading cause of hospitalisation for children and young people globally (Kids Health Child Health Promotion Unit 2019), injuries (including leisure and sport related injuries) are a major concern. The potential for serious injury is the primary risk identified with adventurous play affecting the victim, their families, the community and provision providers, with PTSD experienced by up to 47% of parents of seriously injured children, and the cost of injury-related hospitalisation costing \$3,119 per child, a total of \$212 million a year across Australia (Mitchell et al. 2017).

The following figures indicate high-level injury-related hospitalisation statistics for children and adults. There is a lack of current data to determine information about serious injuries specific to adventurous play, particularly in public open spaces.

Figure 2 - Kid's injury-related hospitalization & Figure 3 - Hospitalised sports injury in Australia

(Kids Health Child Health Promotion Unit 2019, p.3 & Australian Institute of Health and Welfare 2020, p.1)



The following two tables detail further statistics on injury-related hospitalisations for children across Australia in an attempt to indicate injuries endured during adventurous play participation in public places amongst the broader context of injuries experienced by children.

Table 5 - Activity and place of occurrence for injury-related hospitalisations for children aged ≤16 years by gender, linked hospitalisation and mortality data, Australia, 1 July 2002 to 30 June 2012 (Mitchell et al. 2017, p. 26).

Most relevant adventurous play categories highlighted yellow and potentially representation of public open spaces in orange.

	Male (n = 436,8645)		Female (n = 249,536)		Total (n = 686,409)	
	n	%	n	%	n	%
Activity at time of incident						
Sports Activity	99,894	22.9	30,272	12.1	130,167	19.0
<i>Team ball sports</i>	48,542	11.1	7,571	3.0	56,113	8.2
<i>Team bat or stick sports</i>	2,970	0.7	887	0.4	3,857	0.6
<i>Individual water sports</i>	3,206	0.7	1,553	1.6	4,759	0.7
<i>Equestrian activities</i>	942	0.2	3,944	1.6	4,887	0.7
<i>Wheeled motor sports</i>	7,996	1.8	904	0.4	8,900	1.3
<i>Wheeled non-motor sports</i>	23,147	5.3	5,917	2.4	29,064	4.2
Leisure Activity	27,758	6.4	17,552	7.0	45,310	6.6
Working for income	2,368	0.5	461	0.2	2,829	0.4
Other types of work	4,918	1.1	2,409	1.0	7,327	1.1
Resting, sleeping eating or engaged in other vital activities	11,049	2.5	8,735	3.5	19,748	2.9
Engaged in other specified activities	65,831	15.1	49,867	20.0	115,700	16.9
During unspecified activity	225,047	51.5	140,240	56.2	365,292	53.2
Place of occurrence						
Home	93,691	21.5	74,439	29.8	168,130	24.5
Residential institution	433	0.1	497	0.2	930	0.1
School, other institution and public administrative area	42,784	9.8	23,581	9.5	66,365	9.7
Sports and athletics area	47,944	11.0	11,129	4.5	59,073	8.6
Street and highway	23,313	5.3	11,916	4.8	35,229	5.1
Trade and service area	4,603	1.1	3,126	1.3	7,729	1.1
Industrial construction area	854	0.2	127	0.1	981	0.1
Farm	3,814	0.9	1,592	0.6	5,406	0.8
Other specified places	21,676	5.0	10,562	4.2	32,238	4.7
Unspecified places	197,753	45.3	112,567	45.1	310,320	45.2

Table 6 - Fall injury sub-mechanism of injury-related hospitalisations of children aged ≤16 years by gender, linked hospitalisation and mortality data, Australia, 1 July 2002 to 30 June 2012 (Mitchell et al. 2017, p. 26).

Most relevant adventurous play categories highlighted yellow and potentially related activities in orange.

	Male (n = 436,8645)		Female (n = 249,536)		Total (n = 686,409)	
	n	%	n	%	n	%
Fall injury sub-mechanism						
Fall on same level from slipping and tripping	17,491	4.0	11,250	4.5	28,741	4.2
Fall involving ice-skates, skis, roller skates, skateboards, scooters, and other pedestrian conveyances	17,957	4.1	6,500	2.6	24,458	3.6
Other fall on same level due to collision with, or pushed by, another person	16,311	3.7	2,227	0.9	18,538	2.7
Fall while being carried or supported by other persons	2,326	0.5	2,047	0.8	4,373	0.6
Fall involving wheelchair	141	0.03	90	0.04	231	0.03
Fall involving bed	6,107	1.4	5,103	2.0	11,210	1.6
Fall involving chair	6,123	1.4	5,418	2.2	11,541	1.7
Fall involving playground equipment	30,875	7.1	25,848	10.4	56,723	8.3
Fall on and from stairs and steps	4,630	1.1	3,312	1.3	7,942	1.2
Fall and from ladder or scaffolding	686	0.2	320	0.1	1,006	0.1
Fall from, out of or through building or structure	7,072	1.6	3,055	1.2	10,127	1.5
Fall from tree	5,650	1.3	2,283	0.9	7,933	1.2
Fall from cliff	407	0.1	181	0.1	1,006	0.1
Diving or jumping into water causing injury other than drowning or submersion	889	0.2	439	0.2	1,328	0.2
Other fall from one level to another	10,800	2.5	6,681	2.7	17,481	2.5
Other fall on same level	19,782	4.5	10,582	4.2	30,364	4.4
Unspecified fall	15,482	3.5	9,661	3.9	25,143	3.7
Total fall-related hospitalisations	165,879	38.0	97,380	39.0	263,260	38.4

Despite the lack of data specific to adventurous play, there are several important points that can be drawn from available statistics and reports. These include:

- Most injuries to children occur at home, and 43% of hospitalised injuries are for children younger than five (Kids Health Child Health Promotion Unit 2019), before they partake in adventurous play activities.
- Injuries are more common in competitive sports than in adventurous play activities (Gill 2018), with 38.1% of injuries (15 years and up) occurring during football (all codes) for men and 15% for women versus cycling: 12.1% men, 7.2% women; wheeled motor sports: 8.2% men [not shown for women, assumed statistically very low]; and roller sports: 4.4% men, 4.1% women, between 2016-2017 (Australian Institute of Health and Welfare 2020).
- 233 children were admitted to the Sydney Children's Hospital Network between 2016-2017 as a result of falls from roller skates, ice skates, skateboarding, scooters and other wheeled devices, making it the fourth most common reason for fall-related injury (Kids Health Child Health Promotion Unit 2019).
- Those at greatest risk of injury during adventurous play are young children, those learning, and experienced users attempting tricks at high speed (Sydney Children's Hospital Network 2021).
- Children that live in socioeconomically disadvantaged areas represent a higher proportion of injured children, and children that live in regional and remote areas are at higher risk of dying from their injuries (Mitchell et al. 2017).
- Contributing factors to injuries on wheeled recreational devices are: speed, obstacles, inability to stop, steep slopes, hard landing surfaces, as well as lack of protective gear including helmets, knee and elbow pads, wrist and mouth guards (Sydney Children's Hospital Network 2021).
- Over a 10-year period (2000-2019), the activity categories with most injury-related fatalities for adults was wheeled motor (26.9% - 275 people) and non-motorised wheeled sports (16.2% - 193 people) (Fortington et al. 2021). The majority of these injury-related deaths were related to high speed, and three contributory factors have been outlined as human factors, vehicle factors and environmental factors (Prahlow et al. 2018).
- Three main factors related to critical injury through adventurous play activities include: collisions and incidents with traffic, undertaking activities in inappropriate places (e.g. near roads or water), and not wearing protective gear – particularly helmets (VISS & Monash University 1997).
- The most serious injuries in adventurous play occur to the head, outlining the importance of protective head gear (Victorian Injury Surveillance System [VISS] and Monash University Accident Research Centre [Monash University] 1997).
- Failure to wear protective gear has always been a safety issue in adventurous play culture, but this is increasing in a social media context where tricks are filmed and there is a low perception of safety gear (Power 2017). This was expressed in 2017 by then 12-year-old skateboarder, Ethan Wright, who experienced a critical accident after taking off his helmet to film a stunt and reflected: "Many children don't wear helmets because they aren't cool, and they don't like the feel of them" (Power 2017, para.8).

5. Barriers and opportunities for more adventurous play

The benefits of participating in adventurous play are well documented, as summarised in Section 4. In addition to perceptions of risk, there are other barriers identified through the literature, including environmental and cultural impacts, fear of youth and antisocial behaviour and fear of litigation, that impact on the delivery of more adventurous spaces.

Table 7 - Barriers to adventurous play provision across stakeholders

Stakeholder	Barriers
Local councils and providers	• Fear of liability and legal consequences (Play Safety Forum 2012) • Lack of engagement with regulations, standards and benefits (Gill 2018) • Difficult to quantify benefits against tangible risks (Play Safety Forum 2012) • Funding (capex and opex) (Play Safety Forum 2012) • Ongoing management of sites (opex) (Play Safety Forum 2012) • Young people not considered/prioritised in planning (NSW Play Australia Committee 2021) • Skaters viewed as nuisances or problems (Johnston 2016) • Increased densification and shrinking backyards (Arundel et al. 2017)
Local community	• Skaters viewed as nuisances or problems (Johnston 2016) • Management of open spaces (Play Safety Forum 2012) • Noise from play areas (Play Safety Forum 2012) • Weekend/holiday overcrowding and capacity of supporting facilities/amenity, e.g. parking (Play Safety Forum 2012)
Carers/parents	• Safety concerns (Brussoni et al. 2012; Little & Eager 2010) • Accessibility/convenience (Wollongong City Council 2020) • Cost (ticketing/parking/equipment if any) (Wollongong City Council 2020) • Reduced outdoor play time and increase in sedentary activities, e.g. computer games (Brussoni 2020) • Provision of seating and shaded areas

Lack of access

While not documented in the literature, a lack of access to adventurous spaces is also a barrier to participation, particularly for younger residents or other transport-disadvantaged people. Given the increasing participation rates and benefits of adventurous play, this indicates the need for more adventurous spaces throughout our cities that are accessible via public transport, or safe cycle and pedestrian paths.

Survey data from the NSW Department of Planning and Environment Recreation Needs of Greater Sydney Research Report demonstrates that where facilities are provided, there are generally higher participation rates. For example, mountain biking is higher in Western Sydney where there is a higher provision of parklands (e.g. the Blue Mountains has a 51% participation rate, while urban Cumberland is only 8%), and cycling on roads is higher in the Eastern City, where there are more bike lanes. Skateboarding is higher in the southern district likely because of a higher provision of skate parks.

Table 8 - Table 9: Participation in adventurous play across Greater Sydney's Cities
(NSW Department of Planning and Environment Recreation Needs of Greater Sydney, 2019)

	Total Sydney City/District					
	NET	Western City	Central city	Eastern city	Northern District	Southern district
Cycling on roads	26%	19%	23%	31%	28%	24%
Mountain bike riding	15%	19%	14%	12%	24%	18%
Skate parks (skateboarding, rollerblading, scooter)	8%	8%	7%	8%	9%	11%
Engaged in combat sports (e.g. wrestling, boxing)	2%	2%	2%	2%	2%	2%

Lack of planning

Lack of planning can lead to missed opportunities in the provision of new and upgraded adventurous spaces. Planning and designing well can also help to secure future funding, coordinate ongoing management of sites, and mitigate risks associated with adventurous play.

Local councils and adventurous play providers can:

- **Undertake appropriate risk benefit assessment upfront** which, apart from mitigating risks (such as use of appropriate surface materials (VISS & Monash University 1997), evaluates the community benefits of the provision and is central to successful litigation (Gill 2018; Standards Australia 2017; Play Safety Forum 2012). Australian Standard AS 4685.0 has introduced a risk benefit analysis technique to support owners and operators to quantify hazards and use evidence-based management techniques to mitigate risk (Standards Australia 2017).
- **Supply adequate options suitable for different ages and abilities to be stimulated and challenged** to avoid boredom, which often leads to inappropriate use and greater exposure to unacceptable risks (Play Safety Forum 2012; Little & Eager 2010). Provide ‘appropriate risk’ to meet the need for a variety of options to enable people with different levels of skill, ability and physical literacy to be stimulated and challenged (Craigies Farm 2022; Sandseter & Kieppe 2019).
- **Plan adventurous spaces and parks away from hazards** such as traffic and water to reduce collisions with motor vehicles, objects and people (Sydney Children’s Hospital Network 2021; VISS & Monash University 1997). Suitable provision enables the authority to thus restrict adventurous play on public roads and dangerous areas (VISS & Monash University 1997).
- **Manage play provision to adequately maintain skating surfaces and eliminate hazards** such as irregularities, stones, branches and glass (VISS & Monash University 1997). This requires regular and ongoing risk management of facilities and may require ad-hoc and responsive interventions to ensure user safety (Barnardos 2011; Play Safety Forum 2012).

“Risk is an inherent feature of playtime and there are many acceptable risks as part of a stimulating and challenging learning environment. The solution is not to wrap kids in cotton wool; the standard is all about challenging children and developing important life skills.”

- Professor David Eager, Chairperson of the Technical Committee (Standards Australia 2017, para.8)

Lack of engagement

A lack of engagement with existing and anticipated users of adventurous spaces can compromise the outcomes of new and upgraded facilities. Given the diverse needs and values of different stakeholders, this indicates the need for comprehensive engagement processes that include different voices of community such as people with disability, children and young people and people from culturally and linguistically diverse backgrounds; as well as stakeholders with conflicting interests, including environmental groups.

Opportunities for engagement include:

- **Engage children and young people in planning processes:** “Children readily identify local environmental affordances for play, such as a climbing tree, hiding spaces, safe and unsafe public spaces and are the ‘play experts’ best placed to provide advice on their needs and interests in the urban environment, range of independent mobility and any impinging factors” (NSW Play Australia Committee 2021, p.2).
- **Undertake thoughtful and engaged processes to design and deliver play spaces.** NSW Play Australia Committee (2021) describe a process titled ‘CASE’ where the following is considered to develop inclusive, appropriate, accessible and joyful play areas. They also share useful questions to consider throughout the process.
- **Educate and communicate safe supervision, preparation, and participation** through public platforms and local clubs and organisations to encourage safety from current participants (VISS & Monash University 1997) and engage new audiences to adventurous play (Wollongong City Council 2020).

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