

The Schoolyard Greenprint

Volume 1

Overview



Your guide to the Schoolyard Greenprint

Contents

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The creation of the Greenprint Guides would not have been possible without the contributions from the following people: Linda Corkery, Noel Corkery, Maria Grainger, Marta Day, Kristen Douglas, Andrew Fitzsimons, Dean Farquhar, Deb O’Riley, Jacqui Simpson, Emily Garrett, Rhy Baumann, Chloe Richards, Catherine Daly, Ceridwen Owen, Claire Osborne, Deb Auckland, Eve Clark, Kenn Fisher, the Hon Peter Garrett AM FTSE, Tim Baber, Deb Laporte. We are grateful to the students and staff of participating schools, who trusted us with their stories and inspired us with their visions.

The following photographers generously donated imagery: Peter Barnes and Brad Griffin.

Acknowledgement of Country

The Health Research Institute at the University of Canberra acknowledges that it stands on Aboriginal land. We pay our respect to the Ngunnawal people, the Traditional Custodians of the land on which this work has taken place. Country shapes many of the spaces we move through, especially our schools, where it is a powerful teacher that invites curiosity, learning and responsibility. We appreciate the privilege of living on this Country and consider its future grounded in respect, understanding and reconciliation.

Enquiries

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The Schoolyard Greenprint

“Guidance [would be helpful] on what is needed from the landscape to support kids today. The world is different from when we were all kids, and adult designers may not respond to current needs.”

(Gender and Inclusivity Workshop)

Why schoolyards matter

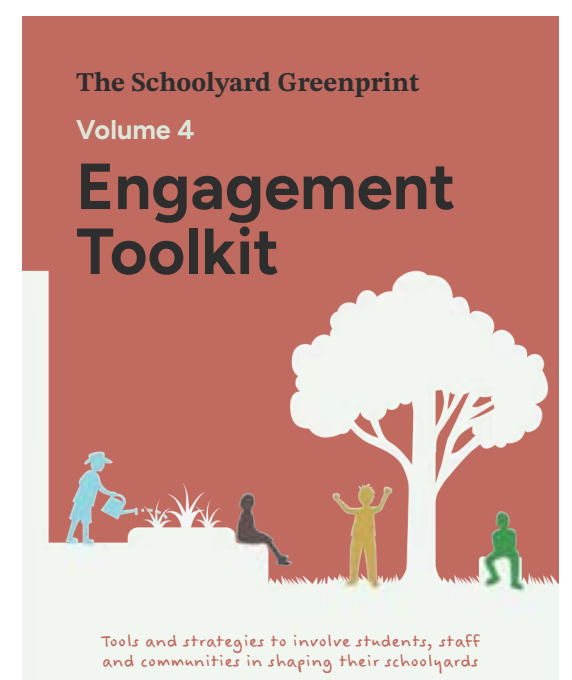
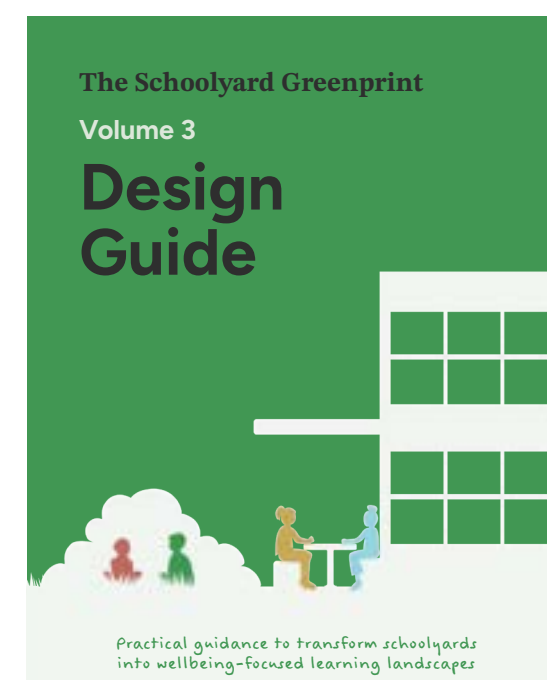
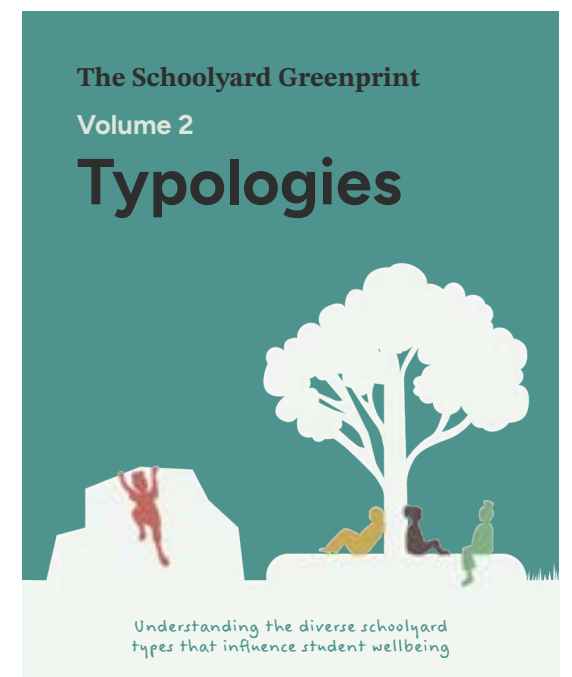
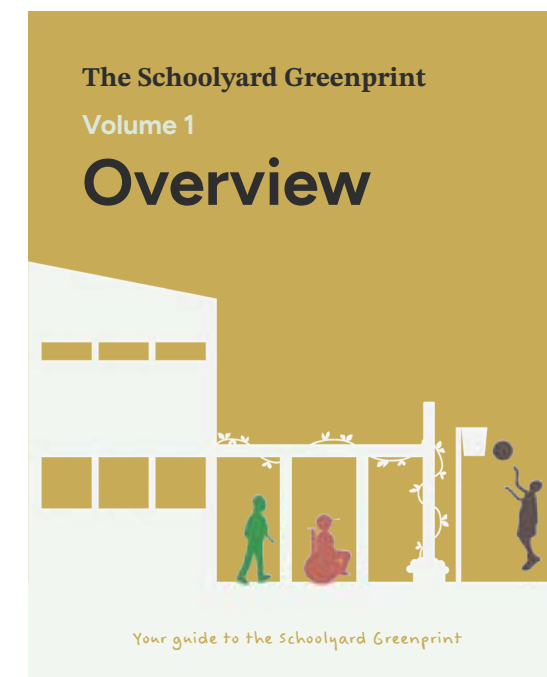
For most young people, the transition from primary to secondary school is marked by many changes: new campuses, uniforms, peers and routines. These are well-recognised rites of passage as students step into adolescence. Less often acknowledged, however, is the shift to the secondary schoolyard. Moving from the playground to the playing field represents more than a physical change, it reshapes how students find their place, regulate emotions and connect with others. This shift can be exciting, signalling greater independence, but it also introduces new pressures around belonging, identity and wellbeing that play out daily in the school grounds.

The Schoolyard Greenprint responds by reframing high school outdoor spaces as critical settings for wellbeing and belonging. Drawing on two years of engagement with school leaders, students, advocates, designers and community members from across Australia, it is grounded in student voice and data. The Greenprint offers a coordinated set of resources to help schools understand what students need from their outdoor spaces, and how thoughtful design can support them to feel safe, connected and able to thrive.

The Greenprint incorporates the following documents:

1. **The Greenprint Overview** is about exploring the role and impact which outdoor spaces have on students’ health and wellbeing and help make visual these needs.
2. **The Greenprint Typologies** provides a planning and design resource to guide how school environments can transition toward more nature-integrated, socially supportive green campuses. School campuses are categorised into different landscape layouts to explain how spatial design influences student activity, social interaction and connection to nature.
3. **The Greenprint Design Guide** provides a comprehensive, evidence-based framework for designing school outdoor spaces that better support student development and learning. Guidance is organised around six aspects of wellbeing: physical, emotional, psychological, cognitive, social and cultural, and sets out specific design guidelines and practical solutions for each.
4. **The Greenprint Engagement Toolkit** provides tools and templates to gather data on schoolyards so that school communities know the challenges and opportunities for change. This is particularly useful for designers to build skills in how to effectively engage with students and also provides tools when student engagement is not possible, such as for green field developments.

This suite of Schoolyard Greenprint documents provides a roadmap for embracing the full potential of outdoor spaces to meet the diverse needs of school communities. It is designed to support principals, students, designers and community members in advocating for school grounds that better respond to students’ outdoor needs. Each document offers clear, practical guidance to build a shared design language, deepen understanding of school sites, and empower users with processes and precedents to support both. Used together, the documents provide schools with ideas, tools and strategies for creating outdoor environments that best meet the diverse needs of their students.



Welcome

The Greenprint Youth Voices, a group of 5 young adults who have shaped the Greenprint, welcome you to this document.



Chloe Richards

Gamilaroi woman
Lives on Wiradjuri country,
New South Wales,
Rural school



Emily Garrett

Lives on Yugambeh land,
Queensland,
Suburban school



Finlay Robinson

Lives on Ngunnawal land,
Australian Capital Territory,
Suburban school



Hunter Jackson

Lives on Wiradjuri Land,
New South Wales,
Rural school



Rhy Baumann

Lives on Kurna land,
South Australia,
Suburban school

Our role

We have had diverse schoolyard experiences, having attended schools from Queensland to South Australia, rural to urban, both independent and government. Despite this, we all agree that the current quality of schoolyards had an impact on our day-to-day wellbeing while at school, and that the quality of schoolyards across Australia can be improved.

As young people, we hope that this document is used by and with young people so they thrive in schoolyards. We hope that these documents inspire you, especially young people, to consider future schoolyards differently. We think the content in the following documents will provide school executives and designers with practical solutions to schoolyard problems that many students, us included, have experienced.

The Greenprint Youth Voices has been a continual source of insight in developing the Greenprint. We have spent time talking to other students and young adults, ensuring that the information in the Greenprint accurately reflects our experiences. This approach upholds the methodology of working with young people to achieve better outcomes for young people.

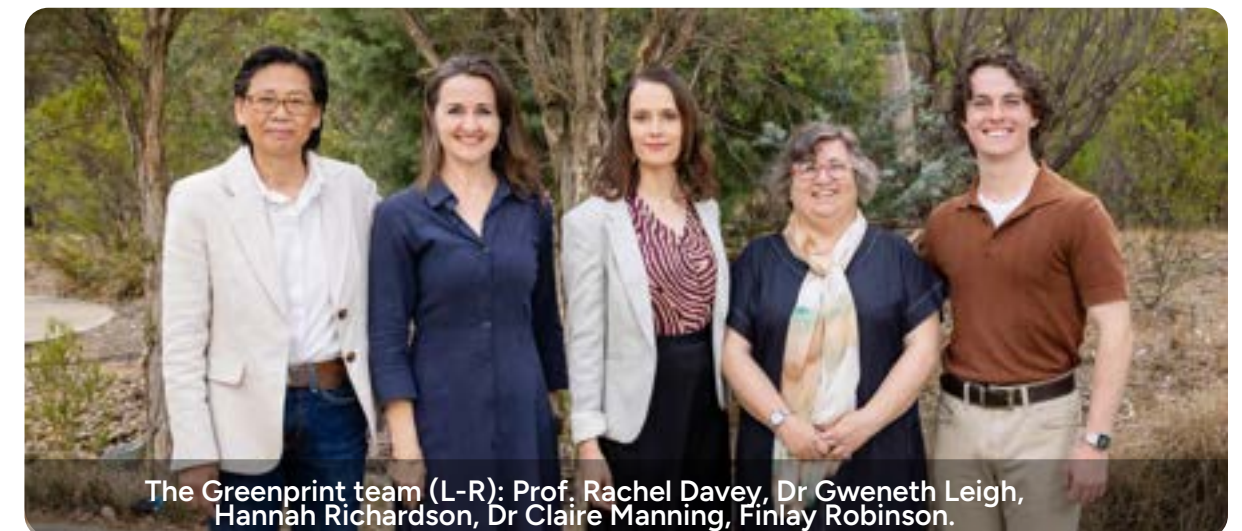
The future of schoolyards, in our words

We want schoolyards that are safe. We want schoolyards that are open, not crowded, sunny, grassy, natural, with some sort of shade or cover for if it rains. We need safe spaces in our schools for times of stress and hardship so that we can regulate ourselves. We want schoolyards that give everybody space but still connection. We want schoolyards that function in many ways, spark creativity and show an element of joy.

As young people we want schoolyards that:

- inspire young learners while providing a greener and more inclusive space to do so.
- are more sustainable, nurturing and innovative future. Making change for future generations.
- provide students free access to areas that support engagement between the environment (gardens, paved shaded areas, murals/art), each other (social areas) and ourselves (exercise, sport and study).
- create greener spaces, focusing on the development of students' wellbeing and ensuring we experience an enriching range of activities within schools that also provide inclusive and accessible spaces for our learning.
- create outdoor education spaces where students can succeed in all aspects of life.
- are green outdoor spaces where all students can get their daily dose of nature to support their personal development and wellbeing

Thank you for caring about a schoolyard in your life. We hope this guidance inspires you as much as this journey has inspired us.



The Greenprint team (L-R): Prof. Rachel Davey, Dr Gweneth Leigh, Hannah Richardson, Dr Claire Manning, Finlay Robinson.

Aims of the Greenprint Guides

Across the suite of guides, practical guidance is provided to build a shared understanding of schoolyard design, strengthen knowledge of school sites and empower users with tools and examples to support better outcomes. This is achieved through:

Building a common language

Our educational spaces are shaped by many contributors: the designers who create them, the administrators who look after them, the educators and students who use them, the researchers and policymakers who seek to improve them, and the wider community who share them. With so many perspectives, how we talk about, study, and use school spaces matters. The Greenprint helps build a common language and shared understanding among stakeholders around the role of school grounds from educational, cultural, ecological, and experiential perspectives.

Building site wellbeing knowledge

Time outdoors plays a significant role in shaping health and habits. However, there is little evidence on how secondary school students experience their school grounds. The Greenprint brings together insights into how these spaces are perceived and valued, helping to fill a critical gap in understanding how current school design standards affect the students’ lived experiences, and how they can be reshaped to better support wellbeing.

Building schoolyard evidence and action

Working closely with schools through participatory research strengthens understanding of how outdoor spaces influence everyday student life, from learning and socialising to relaxing and managing stress. By improving how we measure the use of spaces such as ovals, courtyards, and gardens - or why they are avoided - we can make more informed decisions about where to invest and how to improve them.

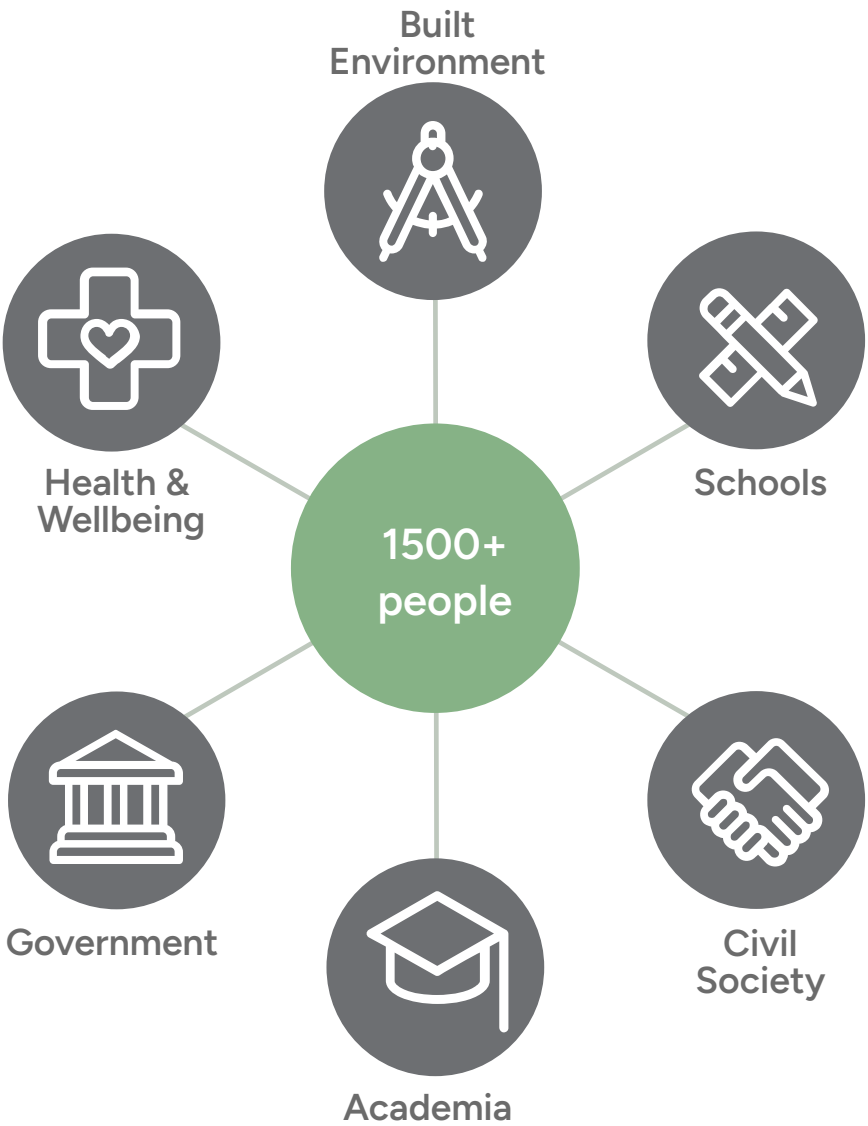
“a perfect playground meets the needs of all of the kids: ...that quiet space ...so that kids can go and sit and just chill out. ... the active zone where they can run around ...the space I can sit and talk with my friends and play cards ... then I come back into my class ready to learn because I’ve just had a really positive experience. Relaxation, energy, whatever it is. And I suppose that for me, that’s what [a perfect schoolyard] looks like.”

Principal 1

The Co-Design Process

Over 1500 people have given their time and insights to make this work possible. From students to nurses, teachers to designers, their collaboration, expertise, and support have been instrumental in shaping the ideas and guidance presented here, and we warmly acknowledge all they have shared. Further information on the co-design process is in Chapter 4: *How the Greenprint Guides were developed*.

Study participants



How we cite our study participants

Cohort	Description	Example of citation
Principals	Phone interviews and photo survey with 37 principals in NSW government schools and independent schools (nation-wide).	Principal 1 to Principal 37
Principals	Workshop and survey with Illawarra government school principals	Illawarra Principal Workshop
Principals	Survey on schoolyard key priorities	Delphi survey
Study schools	Research activities with 3 schools	School R, Year 7-8F
	• School R – an independent school in Queensland	(F indicates female.)
	• School L – an independent school in Queensland	
	• School M – a government school in Adelaide.	
Adult virtual workshops	Virtual workshops with 90 participants around the country: • Health and Wellbeing • Needs and Strengths • Gender and Inclusivity • Government Process • Excellence • Western Australia	Health and Wellbeing Workshop
Co-design workshops	In person workshops in:	Adelaide Workshop
	• Adelaide	Brisbane Workshop
	• Brisbane	Canberra Workshop
Specific cohort workshops	In person workshops and interviews:	Queer Youth Interview
	• Queer youth	Refugee Youth Workshop
	• Refugee youth	Brisbane Youth Workshop
	• Brisbane youth	First Nations Workshops
Designer interviews	12 interviews with landscape architects from around Australia	First name, last name, Landscape Architect.
Practitioner interviews	22 interviews with school design practitioners from around Australia	Practice 1
		Practice 22
Reference Group + Working Group	16 Working Group sessions 7 Reference Group sessions	Working Group 1 Reference Group 7

Chapter 01

How to use the Greenprint Guides

The design process

Creating better outdoor spaces in schools is an ongoing journey, from setting shared goals and planning improvements to designing, delivering and caring for spaces over time. This process is shaped by the needs of school communities, supported by parents and community partners, and guided by the policies and design standards set by individual states and territories. The Greenprint resources aim to support and inform each stage of this process.



Who the guides are for

Over the past three decades, school buildings have evolved in exciting ways, reflecting advances in environmental awareness, technology, and teaching practice. The Greenprint resources aim to support principals and school communities to bring this same level of innovation to outdoor spaces. Together, they provide practical guidance for the planning, design and evaluation of outdoor environments in Australian secondary schools.

School communities can use these guides as a starting point for schoolyard upgrades and retrofits, supporting the development of site understanding, engagement with student voice and the use of tools to gather evidence and advocate for change.

They also support **Councils** in developing design briefs for outdoor programming that respond to students' needs beyond curriculum requirements.

School designers can draw on case studies to inform design decisions and use the techniques in the Engagement Toolkit to run more effective co-design with schools.



1. Initiate

Schoolyard renewal begins with recognising the value of outdoor investment in secondary schools, as outlined in the **Greenprint Overview**. This stage focuses on bringing together school staff, students and community members to establish shared design goals and clarify priorities for improvement, alongside consideration of budget and potential funding sources.



2. Explore & Plan

Exploring and planning involves developing an informed understanding of the existing schoolyard. The nine identified **Schoolyard Typologies**, based on a national analysis of Australian secondary schools, support this process by identifying site opportunities and constraints and options for improvement. The **Schoolyard Engagement Toolkit** shows how you can explore your schoolyard using proven techniques. By this stage, you will have a series of site priorities for change.



3. Design

With priorities established, the **Schoolyard Design Guide** provides evidence-informed guidelines and practical solutions for change. Drawing on insights from students and principals, it explores site layout, design features and material choices, organised around student wellbeing needs. The **Schoolyard Engagement Toolkit** further supports this stage by offering tools for co-designing new ideas with students.



4. Implement, Maintain, Review

Implementation involves the delivery of upgrades through contractors or with support from the school community, with attention to safe, well-coordinated outcomes. Ongoing care is supported through routine maintenance and regular review. Continued engagement with students and school users helps guide future improvements and ensures spaces remain responsive to evolving needs, with the **Schoolyard Engagement Toolkit** supporting this ongoing evaluation.

Student personas

Why use personas

Personas help adults make better design decisions based on real student experiences. Design standards can be interpreted as a list of required items, but the item itself is less important than the student need it meets. Personas help designers address a spectrum of student need when site, budget or design constraints limit the provision of specific spaces or features. When it is not possible to co-design with students, such as new builds, personas bring student perspectives into the design process while protecting the anonymity of the students who contributed to this research. When engaging with students, personas can support them to consider perspectives beyond their own. Further guidance is in the **Greenprint Engagement Toolkit**.

Personas: needs and constraints

Physical



Isla

Needs

- Movement to regulate her mood
- Variety and novelty
- Safe challenge
- Physical play

Pain points

- Boredom
- Active options are limited to sports
- Boys and older kids dominate the oval meaning others get left out
- After a rough soccer match, she needs to rest and drink but there isn't anywhere to do that outdoors

Emotional



Alex

Needs

- Calm, shade, low sensory stimulation;
- One-to-one or alone near others
- Permission to be still
- Dignified toilet access while they figure out their gender identity

Pain points

- Noise and crowds are overwhelming, they become disregulated, affecting others
- Schoolyard feels hot and exposed
- Feels judged when alone
- Sits in a stairwell to get privacy

Psychological



Sylvia

Needs

- Her own spot
- To contribute to proposed changes in the schoolyard
- Autonomy and spaces to claim
- Accessible spaces

Pain points

- Blocked or rough pathways
- Unspoken territory rules about where she can't go
- Being displaced (especially entering senior years)
- Gets frustrated when she can't access spaces like other students

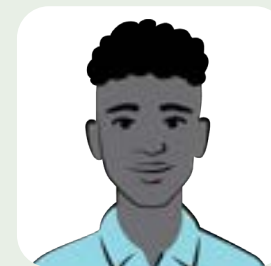
How they were developed

These personas represent the needs of the over 500 students who participated in the Greenprint research. They were drafted by the Greenprint Youth Voices based on lived experience, survey data and focus group sessions.

How to use them

Each persona represents a realistic bundle of needs and pain points that should be accounted for in schoolyard designs. They illustrate a spectrum of student experiences and provide designers with a tool to use in responding to these varying needs.

Cognitive



Marcus

Needs

- An outdoor study space
- Clear spatial boundaries and transitions
- A space to pursue hobbies
- Order, fairness, and consistency in shared spaces
- Clear wayfinding

Pain points

- Ambiguous or rapidly changing rules
- If there are no structured options break becomes aimless
- Goes to the library but it's full

Social



Noah

Needs

- A hangout spot with his mates
- A lounging chair or hammock
- Casually shoot hoops while socialising
- A space to rest after a bad test result
- Good sightlines to find friends

Pain points

- Gets in trouble for socialising in the senior's hub
- Can be loud and rough, intimidating younger students
- There's not enough space for his friends at the picnic table

Cultural



Shreya

Needs

- To feel she belongs
- To express her creativity in the schoolyard
- To connect to her ancestors and cultural plants
- To lead ceremonies for the school
- When it's parent-teacher time, to bring several aunties along and talk outdoors

Pain points

- The school building was once an orphanage and community elders don't feel comfortable there

“If students have a nice...environment and natural environment... they’re going to feel more connected to it”

Principal 6

Community college in Victoria
Designer: Cley Studio, Photo credit: Peter Casamento

Chapter 02

Overcoming schoolyard challenges

The importance of schoolyards

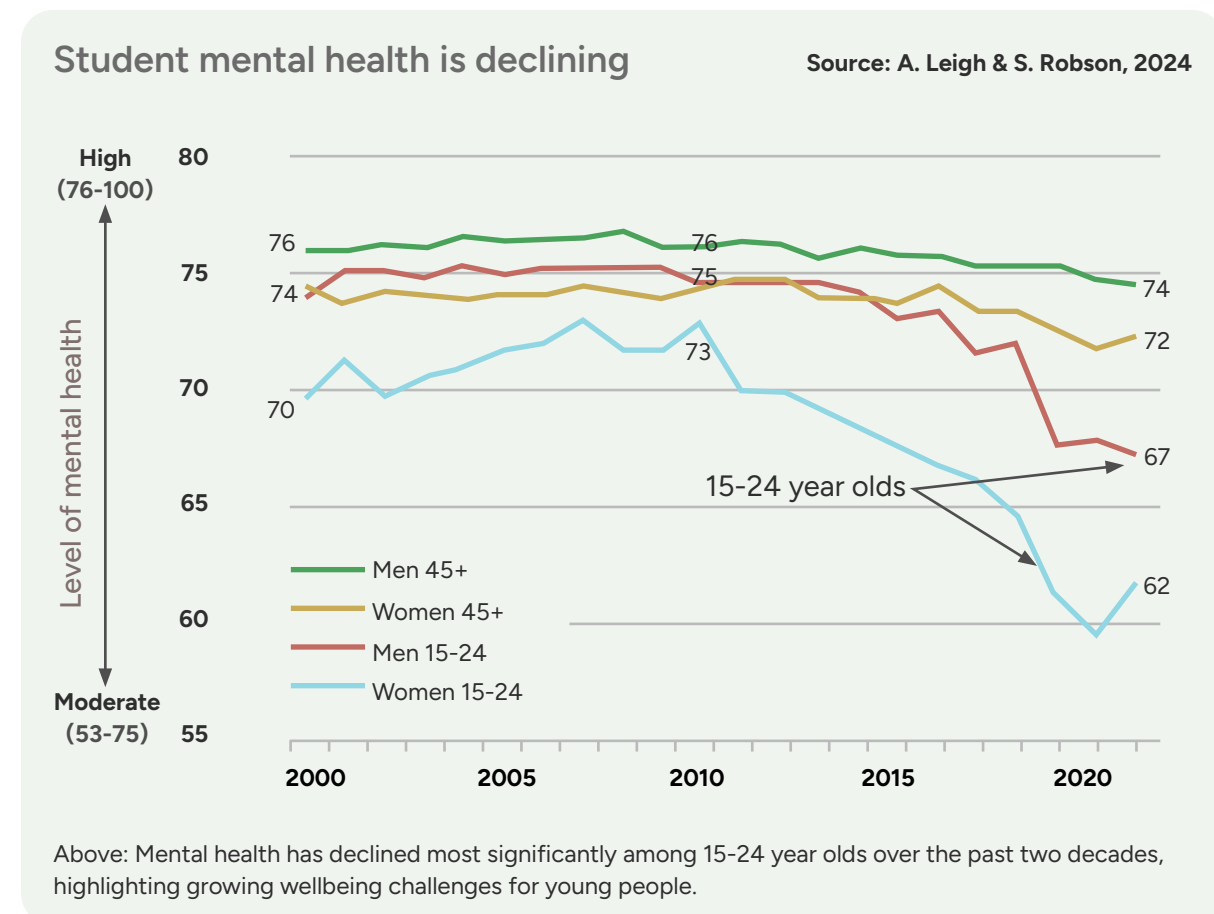
Growing evidence shows that time spent outdoors can positively influence mental and physical health by improving mood, supporting social connection, and providing accessible spaces for respite and relaxation (Bikomeye et al., 2021). This is particularly important during adolescence.

Schoolyards offer students regular opportunities to spend time outdoors. They are the daily backdrop during a period of rapid physical, social and emotional change. As such, they present an opportunity to position school grounds as a natural counterbalance to the increasing social and academic pressures experienced by young people.

Why outdoor spaces matter in schools

There are several reasons why more investment in school outdoor spaces is necessary.

1. Our students are stressed. Rates of stress, anxiety and depression continue to rise at alarming rates for teens. In 2020, one third of young Australians were reporting high or very high levels of psychological distress, treble what they were in 2007 (Headspace, 2020). This concerning trend underscores the importance of prioritising time outdoors, where natural environments can play a vital role in reducing stress and supporting students' overall wellbeing.

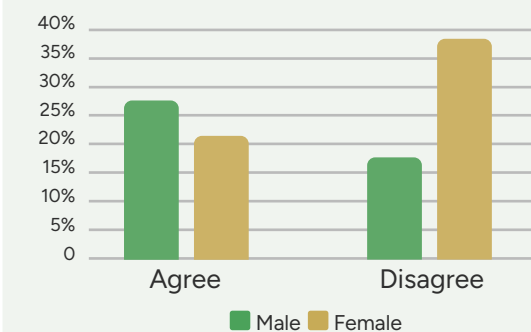


2. Students spend an enormous amount of time at school. Australian students spend on average over 10,000 hours of their adolescence in schools, well above the OECD average of 7540 hours (OECD, 2014). The design quality of school facilities, both indoors and out, impacts student wellbeing.

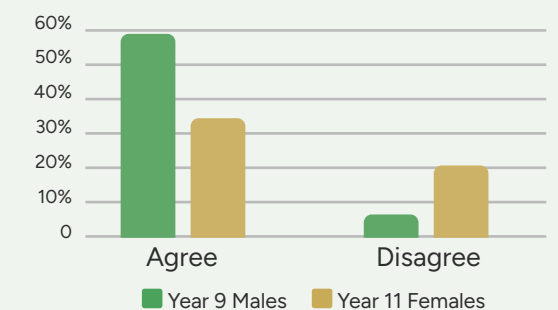
As part of this, school outdoor spaces have the potential to better support student mental health and learning outcomes.

3. Current designs don't adequately address diverse student needs. School research suggests that traditional secondary schoolyards of sporting ovals and ball courts are inequitable in the benefits delivered to students, with older and female students often less engaged in these spaces. Some have attributed this to low school ground quality (Jansson et al., 2018; Andersen et al., 2015; Raney et al., 2023). In Greenprint schoolwide surveys, older and female students more frequently recorded negative schoolyard perceptions, particularly in comparison to younger male students.

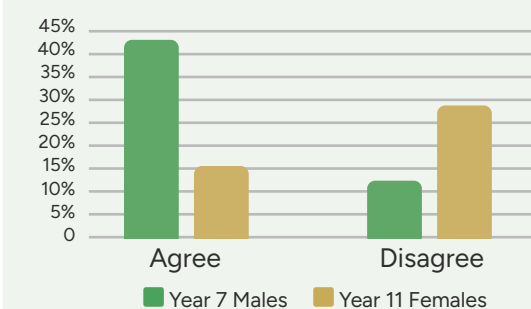
I am fascinated by the schoolyard



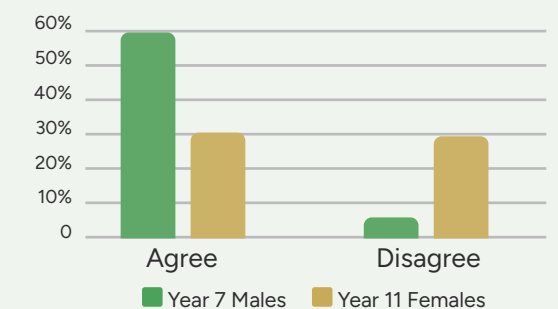
My schoolyard is a place where I feel safe



I can do lots of different things in different parts of the schoolyard



I can do the things I want and enjoy doing in the schoolyard



Above: A sample of Greenprint schoolyard student survey results in Years 7-12 at three case study schools (n=577). Differences in schoolyard perceptions were observed between male and female students (top left, fascination) and between male Year 7 students and female Year 11 students.

Barriers to change

The schoolyard is a social landscape that supports peer interactions, provides spaces for relaxation and fosters a sense of belonging. It is also one of the most consistent settings in which adolescents can experience contact with to nature, positioning school grounds as important settings for healthy adolescent development.

The Greenprint identified a range of barriers to making change in schoolyards, based on extensive engagement with stakeholders. Recognising that each school is unique, there was broad consensus that change is needed across many settings.

How we engaged with Principals:

The Greenprint consulted with over 80 Principals of both independent and government secondary schools through phone interviews, workshops, online surveys and site visits.

Information gathered through this process focused on their perceptions around the design impacts of school outdoor spaces on student wellbeing.

For further information see page 50.

1 Limited budgets

Competing priorities for funding

“We’re not, you know, rolling in money.”

(Principal 11)

2 Safety & risk concerns

Building consensus around risk and safety needs of students

“Some [kids] like to climb things and I have to stop them...next thing, I find they’re climbing up walls.”

(Principal 10)

3 Where to start

Understanding how spaces work for wellbeing

“The world is different from when we were all kids; adult designers may not respond to current needs” (Gender and Inclusivity Workshop)

4 Changing adolescent needs

“the 13 year old has a very different way of socialising, interacting and moving through space than an 18 year old does.”

(Health and Wellbeing Workshop)

5 Lack of student voice

Prioritising belonging and choice

“Agency is needed for students to manipulate and create their own learning environments.”

(Government Process Workshop)

6 Maintenance demands

Managing ongoing/competing infrastructure demands

“Maintenance is really tricky...I don’t have a gardener. So maintenance is then really difficult.”

(Principal 11)

7 Questioning value

Debating the value of spaces outside

“It’s not the main priority. The main priority is to provide education to young people.”

(Government Process Workshop)

8 Restrictive processes

Engagement and design-process barriers

“The Department of Education will only replace like for like...even if it’s outdated.”

(Principal 11)

9 Mismatch

Considerations between what is provided and what students need

“There’s an assumption that high schools don’t want [play areas] because...the kids are older.”

(Principal 3)

Barriers to change

1. Insufficient funding

“Where do we plant more trees? How do we get this [school] more green?...But again, it’s a cost thing.”

Principal 5

Insufficient funding is a major barrier for Principals across a range of groups consulted. In surveys to public school principals at New South Wales secondary schools, all participants identified the challenges of insufficient budget as a barrier. In response to the adequacy of funding for the design and delivery of secondary school outdoor space, 90% selected that it was ‘less than adequate’.

Principals shared concerns around funding inequities, with a perceived growing gap between low and high funded schools across Australia in both the public and private education sector.

Major schoolyard improvements were regularly considered too hard despite successes in implementing smaller improvements with minimal resources. Early-stage discussions were often abandoned due to the need for money to be prioritised to other more urgent areas.

Spending on outdoor spaces was often reduced during school redevelopment because of construction hurdles such as budget overruns and rising material costs. When this happened, landscape and outdoor plans were frequently scaled back or removed altogether so the overall project could be completed.

2. Safety and risk concerns

“We can’t make the most out of spaces because of the safety regulations required.”

Illawarra Principals Workshop

Concerns for safety constrain designs. Duty of care is a central responsibility for school leaders and teachers, from maintaining safe facilities and vegetation to supervising students during breaks. As a result, safety considerations tended to dominate decision-making, particularly outdoors. In some cases, areas were closed when supervision was limited, or spaces such as bushland were seen as too risky and used only occasionally.

Risky options that are implemented can be scaled back. For example, at School L, new play equipment had been installed to encourage more active use of outdoor spaces by secondary students. This was accompanied by a long list of rules limiting when and how the equipment could be used during breaks. Despite these controls, a small number of incidents occurred and a swing was subsequently removed, much to students’ disappointment.

There is limited practical guidance on how to balance risks against benefits of risky play in schoolyards, despite safety being emphasised in education guidelines. This can result in safety being prioritised, for example trees being removed. Principals expressed frustration that strict regulations can limit positive outdoor experiences, even though these experiences may improve student wellbeing and behaviour.

3. Where to start

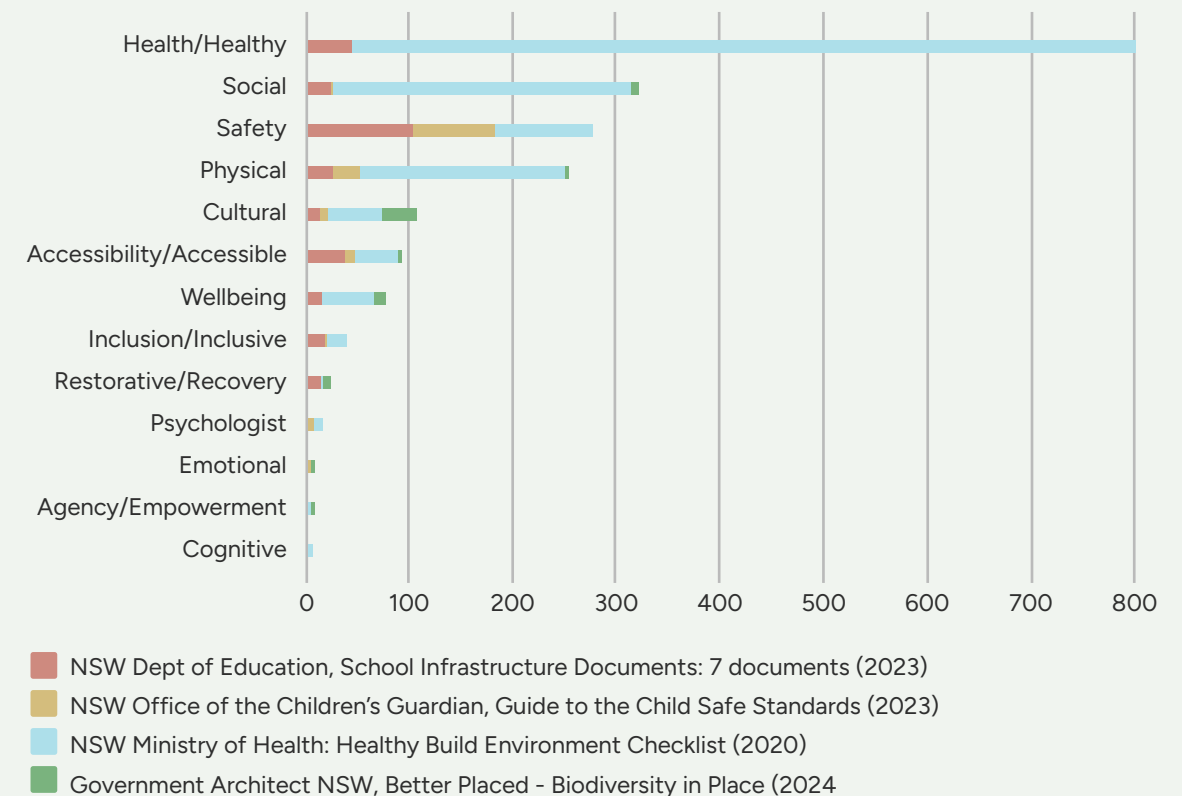
Australia does not have national guidelines for designing school facilities or outdoor spaces. Instead, each state and territory sets its own standards. While all jurisdictions include policies that support student wellbeing, these are typically separate from school design requirements. Design standards generally focus on safety, accessibility, durability, and cost. While these are important factors, they can prioritise buildings over how spaces are experienced by students.

Design guidelines do not always refer to wellbeing in schools, or provide insufficient

advice. A review of Australian secondary school design guidelines (2015–2025) found that wellbeing is referenced, but often in broad terms (e.g., health, inclusion, or green space) without clear direction on how it should be addressed in practice. This can make it difficult for school leaders to translate wellbeing objectives into clear, actionable outcomes for schoolyard improvement.

This uncertainty, combined with practical considerations such as supervising students outdoors, managing weather, and planning outdoor learning, adds further complexity.

Summary of terms: Suite of strategies



Above: A preliminary review of New South Wales built environment standards, design guidelines and policy documents were searched for the listed terms. While terminology use broadened with further inclusion of documents, so did the reading load (500+ pages). In many cases, the presence of terms was an aspiration (“Green spaces are critical for providing healthy places for people”). Such broad statements can create challenges around how to embed actions into designs that address student wellbeing needs.

Case study: Budget

JJ Cahill Memorial High School, New South Wales by Tanya Wood Landscape Architecture

The challenge: The school had a small budget and had to rely on funds raised by the parents and friends committee and donations for a schoolyard upgrade.

The solution: The design process was undertaken in stages to make it financially manageable. Engaging landscape architecture students from UTS helped to reduce costs while involvement with a local nursery allowed the school to source tubestock of endemic plants to guarantee a greater chance of their survival.

The benefits: By undertaking the project as a school, they met the budget, reintroduced lost species and created a design to benefit the school and its students.

“Endemic vegetation in a school ground is less maintenance than a lawn because it is self-sustaining. It is the species that is meant to be there. So it will look after itself.”

Tanya Wood, landscape architect
at Tanya Wood Landscape Architecture

Collaboration with landscape architecture students from UTS
Landscape architect Tanya Wood saw this as an opportunity for tertiary students to experience all the stages of a project design from concept to construction. This also reduced costs for the school.

The importance of ecosystems
A healthy ecosystem is self-sustaining and has an increased chance of survival. This reduces maintenance and plant replacement costs.



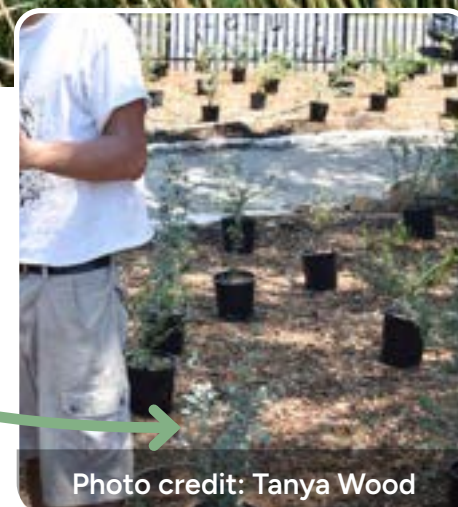
What is tubestock?

Young plants typically between 5cm and 15cm tall that are favoured for their established root systems, cost-effectiveness and ease of planting en- masse.

What are endemic species?

Plants native to and restricted to the local area. Using endemic species supports biodiversity and can be linked to cultural stories.

Tubestock
Planning ahead of time allows tubestock to grow to a reasonable size by the time of planting.



Endemic species
Plants native to the area thrive in their natural setting and grow into healthy and robust plants.

Working bee
Involving students and school community members reduces costs and fosters a sense of stewardship.



Barriers to change

4. Changing adolescent needs

“Seniors like a quiet space to sit and chat”

Principal 5

Secondary student needs vary significantly.

Across Australia, secondary schools vary widely in their design, communities, and student populations.

In addition, as students grow rapidly during adolescence, their needs shift significantly as they progress through secondary school. Developmental pathways also vary, including differences in physical development, disabilities, and learning needs.

Younger students need support as they transition to high school. Throughout this study they requested spaces that support social connection and confidence as they transition into high school. They often express wanting more physical activity and play.

By contrast, older students want more responsibility and often more quiet. They may prioritise quiet areas for study and rest as the face exams or stressful interpersonal experiences. These needs also differ across school contexts and cultures.

Designing outdoor spaces that respond to this diversity can be challenging, particularly within the constraints of limited budgets and existing infrastructure. However, well-designed outdoor environments can accommodate both active and quiet uses, supporting student wellbeing, engagement, and behaviour.

5. Lack of student voice

“Once they design it, they like to use it.”

Principal 8

Some decision makers feel they don't have time to engage with students. Schools often face significant time constraints due to crowded curricula and competing daily priorities, limiting opportunities to engage all stakeholders, particularly students, in discussions about improving outdoor spaces.

When engagement happens, it is often consultation at the end rather than co-design throughout. For example, asking students for commentary only after master plans have been developed.

Student engagement often focuses on a narrow scope. While some schools consult Student Representative Councils (SRCs) to capture student perspectives, this approach may provide only a narrow view of student needs. Creating safe and inclusive spaces in secondary schools can offer particular benefits for neurodivergent students, whose perspectives are often underrepresented in SRC-led processes.

Designers have often not been taught how to effectively engage with citizens, let alone young people. In new builds, students are often not available, while some adults may be concerned that students will put forward improbable or expensive design options. This creates challenges on how and who designers engage with, which has flow-on effects for school ground outcomes.

Fig 1: Student engagement

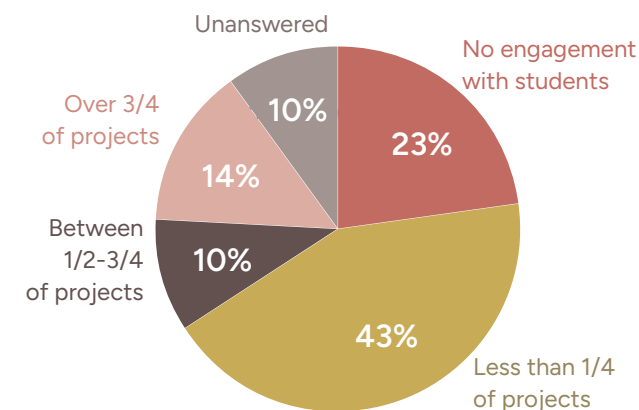
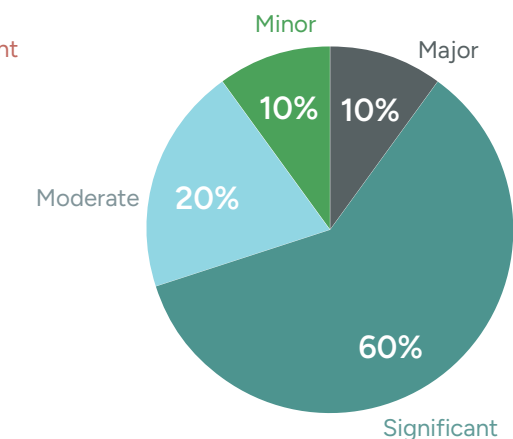


Fig 2: High maintenance requirements



Above: Greenprint interviews and surveys with design practitioners and principals revealed common trends. Figure 1 illustrates how often surveyed design practitioners consult with students on school design projects. Figure 2 illustrates to what extent surveyed principals at NSW government secondary schools viewed high maintenance requirements as a barrier to achieving positive schoolyard outcomes.

Within the National Australian Student Wellbeing Framework (NASWF), student voice is recognised as a key pillar in supporting learning and wellbeing. However, the design of schoolyards often reflects limited student involvement, as noted in Greenprint research of surveyed school facility designers and principals. This may reflect a continued undervaluing of school grounds, and/or a lack of resources to support student co-design processes. Both warrant further investigation.

6. Maintenance demands

“We’ve got two tennis courts...they’ve been a nightmare because the tree roots have wrecked them.”

Principal 10

For principals, maintenance costs are a significant challenge. Survey data indicates that 60% of principals view maintenance as a major or significant barrier to upgrading outdoor spaces.

Sadly, vegetation is considered a maintenance burden. Principals often associate green spaces with mowing, hedging or leaf collecting, and don't always recognise that native gardens involve less maintenance. While trees are valued by principals they are also seen as a cost and

risk, requiring regular tree audits to monitor the risk of falling limbs. There are additional costs linked to replacing damaged or diseased trees, particularly as exposure to flooding, fire and climate-related weather extremes increases.

Schools report difficulty forecasting long-term expenses. While the cost of an initial build is often covered by relevant authorities, ongoing maintenance is often monitored and financially managed by the principal through school specific budgets.

Case study: Student voice

Chapter 02

JJ Cahill Memorial High School, New South Wales by Tanya Wood Landscape Architecture

The challenge: The school had a degraded front school entry in need of upgrading.

The solution: Student and community engagement with an emphasis on testing and prototyping designs with students.

The benefits: Students help determine how the spaces will best serve their needs and also engage in the maintenance of the space.

Student engagement
Speaking with students about their schoolyard ideas and experiences leads to an understanding of the varying physical and emotional needs within the school. The design process should be centered on addressing their needs.

“How are we going to think about how students use this space? We can build it and make it beautiful but nothing matters if it doesn’t meet its purpose, which was always for the benefit of the community.”

Tanya Wood, Owner and Director
at Tanya Wood Landscape Architecture



Images of the same space
Left: Testing and re-testing the placement of seating to check its suitability for social interaction and conversation

Above: the finished placement of the seating allows for both smaller group and larger group interaction.

The process

Tanya Wood engaged tertiary landscape architecture students from UTS to co-design with students from JJ Cahill Memorial High School. This process included numerous interviews with students and teachers, meeting with a local indigenous nursery, testing designs in situ and physically installing the design.

Barriers to change

7. Questioning value

“Outdoor spaces would require a redistribution of funds. So has to be perceived as really high value to get that redistribution of funds, and that’s difficult.”

Principal 35

Schools and designers want to make the case for better outdoor environments, but often lack the evidence. When existing environments are perceived to function adequately, it can be difficult to make a compelling case for change. Transitioning from aging, concrete-dominated spaces to greener, more responsive outdoor environments requires substantial investment and a clear evidence base.

Schools often face competing priorities when allocating limited resources. Prioritising outdoor improvements may require compromising other goals. As a result, infrastructure decisions tend to favour initiatives that benefit the largest portion of the school community, often involving trade-offs where some needs are unmet.

8. Restrictive processes

“Getting approvals...is too hard.”

Illawarra Principal Workshop

The planning and design process is highly complex. School leaders must navigate complex compliance requirements, making even small changes difficult to implement. Approval processes are often lengthy and involve multiple stages of review, funding and planning.

Projects must also meet strict infrastructure, safety, and design standards set by government and education departments. Inconsistencies across national, state, and territory guidelines further complicate implementation. These challenges can lead to delays, increased costs, and reduced momentum. In some cases, the complexity discourages schools from pursuing improvements, limiting opportunities to enhance outdoor environments.

9. Mismatch

“Our library is at absolute capacity during breaks. You’re 1 librarian and maybe 60 kids in the library...”

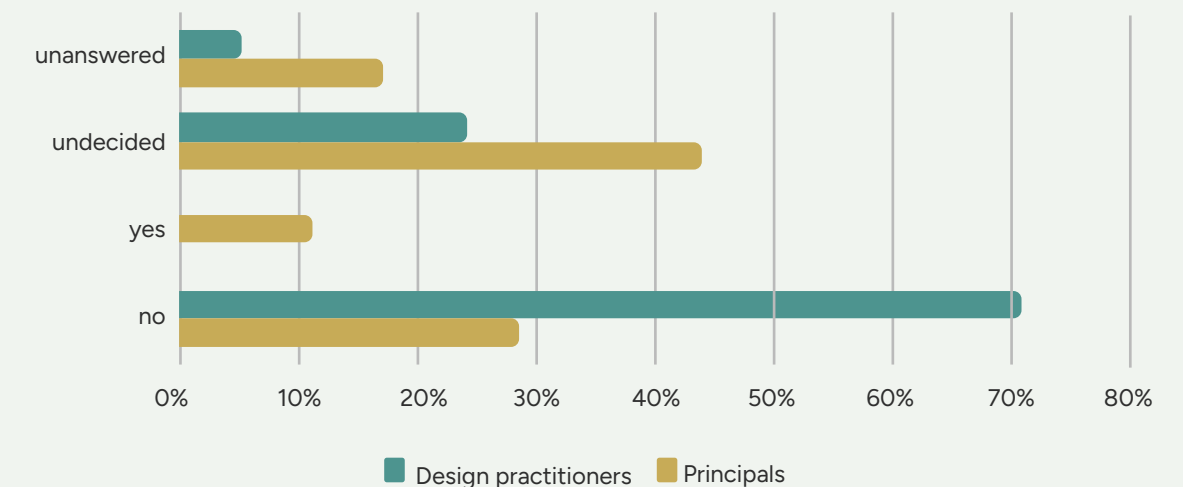
Principal 9

When schoolyards do not meet the needs of students, students, staff and principals are affected. Some students report feeling disengaged, overwhelmed by large open areas, or uncomfortable in busy, high-activity environments such as sporting facilities.

As a result, many students retreat indoors including to libraries seeking quiet, safe environments. In Greenprint interviews, libraries are often described as overcrowded, which limits their effectiveness. Principals describe a range of anti-social behaviour that can occur in crowded settings. Well-designed outdoor spaces that offer small, calm, and sheltered environments could help relieve this pressure.

Toilets can also become sites of tension. Students report that these areas are often used for calm shelter to down regulate, to avoid supervision. This indicates unmet needs elsewhere in the school environment.

Principals, students and teachers all expressed a desire for better outdoor spaces to address these needs and avoid over reliance on toilets and libraries.



Above: Greenprint interview responses by school design practitioners and independent secondary school principals to the question 'Are existing schoolyards fit for purpose?'

Case study: Raising funds

Dapto High School, New South Wales

The challenge: The school had a limited budget and needed an outdoor performance space for the music department to reduce disruption to surrounding classrooms.

The solution: The school engaged staff, students, parents and the wider community to partake in a Return and Earn container deposit scheme to raise funds for the new music space.

The benefits: \$20,000 was raised to build a powered stage with sandstone seating and a scillion roof. This new music lawn is used during music lessons, for performances and during break times.

“[The Return and Earn scheme] helped build a sense of unity and purpose across the school.”

Andrew FitzSimons, former Principal at Dapto High School

Communication with the school community
Students involved in the school's Green Group spoke at assemblies to raise awareness and ask for support. Blue collection bins were placed around the school as reminders. The principal helped sort through the bins and published monthly fundraising data in the school newsletter.

Keeping momentum
Regular updates helped the school community feel a sense of progress and ensured the successful delivery of the project. Says former Principal Andrew FitzSimons, “There was a sense of achievement in the school because we had got it done.”



Dapto students collecting bottles
Photo credit: Dapto High School



Dapto's music lawn
Photo credit: Dapto High School/Andrew FitzSimons

Sense of ownership
Students at Dapto were actively involved in the collection of containers during break times which significantly reduced the amount of litter around the school.

Parent involvement
The container deposit scheme was successful in involving parents as it did not require attending Parents and Community (P&C) meetings. Instead, it allowed parents to be as involved as they felt comfortable.

Community involvement
Local cafes got involved by donating containers for collection by the school.

Work with existing school groups
The Building and Construction students poured the concrete slab and helped with construction. The SRC (Student Representative Council) garnered support from students while the student-led Green Group supported the running of the container deposit scheme. The P&C welcomed all levels of support from parents and the wider community in the collection and deposit of containers.

“most kids go outside if the weather’s good ... we’ve got sunshine today, so they’ll all be outside today and be happy to be in the sun”

Principal 10

Woodcroft College wellbeing garden
Designer: Swanbury Penglase, Photo credit: Brad Griffin

Chapter 03

Student wellbeing needs

Where do students currently find wellbeing?

Research demonstrates that involving students in schoolyard design can provide them wellbeing benefits (Bell & Dymont, 2008) and result in better designs (Kreutz et al., 2018).

Yet, students are not always engaged.

One designer shared that in 30 years of school design practice, “I’ve never actually had student representation at any of my stakeholder meetings,” (Practice 20).

There is an opportunity to better equip designers and decision makers with tools for engaging with students. A lack of student involvement may reflect either an undervaluing of outdoor spaces or limited resources to support co-design processes. Addressing these gaps presents an opportunity to align environmental, social, and health goals within school settings, making schoolyards safer and more inclusive to diverse student needs.

How we engaged with students

Co-designing with students was a priority in this research. In addition to embedding the Youth Voices into the whole research life cycle, this research draws on both qualitative and quantitative data from over 500 students. This was collected through site visits at three case study schools through focus groups, surveys and on-site activities. This included a photo activity of ‘framing’ those schoolyard spaces they enjoyed with a green frame (pictured right) and those spaces they didn’t in a red frame.

Co-design workshops were also conducted in Brisbane, Adelaide and Canberra. Additional sessions were conducted with specific groups including migrant youth and those in the LGBTQIA+ community. Further details provided on page 52.



“Nature”

School L, Year 11-12F



“Tables at courts”

School R, Year 11 F&M



“The Chapel Green”

School R Year 7-8F



“Undercover area for exercise”

School L, Year 11-12M



“Sport dominated, able to sit and watch”

School M, Year 8-9F



“Year 7 recess area”

School R, Year 7-8M

What are student preferences?

Mapping Activity

At the three schools this study visited for research, students in focus groups (n=97) mapped their schoolyard to identify spaces they liked, disliked, and wanted improved. These responses were grouped into key themes (Right) and visualised (Opposite page)

Preferred spaces

Students most value environments that support social interaction, with over a third identifying areas to connect with friends.

Active spaces for sport and play are highly valued. As are quiet, calm spaces to relax.

Disliked spaces

Students most frequently report disliking environments that are noisy, crowded, or difficult to access. Open and exposed areas are also less preferred by some students. Concerns about poor condition, limited comfort, and social discomfort are common, while boredom is a lesser issue.

Students avoid environments that feel chaotic, uncomfortable, or hard to reach, highlighting the importance of well-maintained, accessible, and appropriately scaled spaces.

Spaces to improve

Suggested improvements focus on enhancing the everyday use, such as more seating, better site amenities such as power points for charging devices and overhead shade and more engaging or fun areas. Access to site areas and sport infrastructure are also important, highlighting the overall need to improve schoolyard comfort and usability.

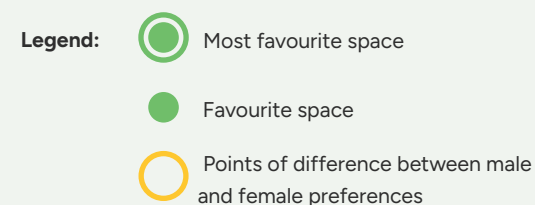
School R: Affinity mapping



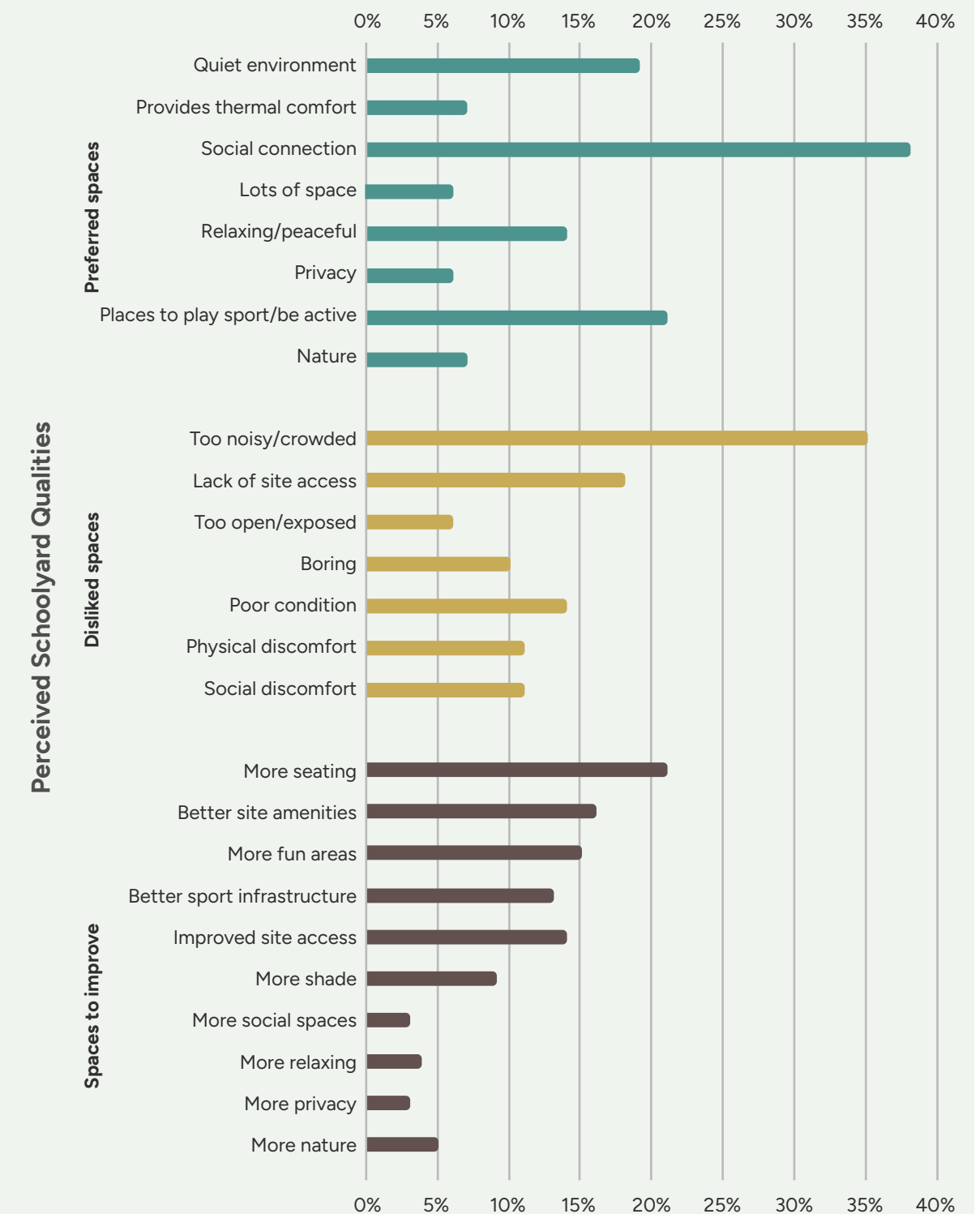
Above: Female students (F) preferred outdoor spaces along the edges of sporting fields and smaller scaled, shaded outdoor spaces.



Above: Most popular with male students (M) were the sport courts and handball areas.



Comparison of Schoolyard Perceptions



Above: Student preferences were collected through mapping exercises where students nominated their favourite schoolyard space and provided a sentence explaining why. This information was thematically grouped across the three schools sampled and visualised.

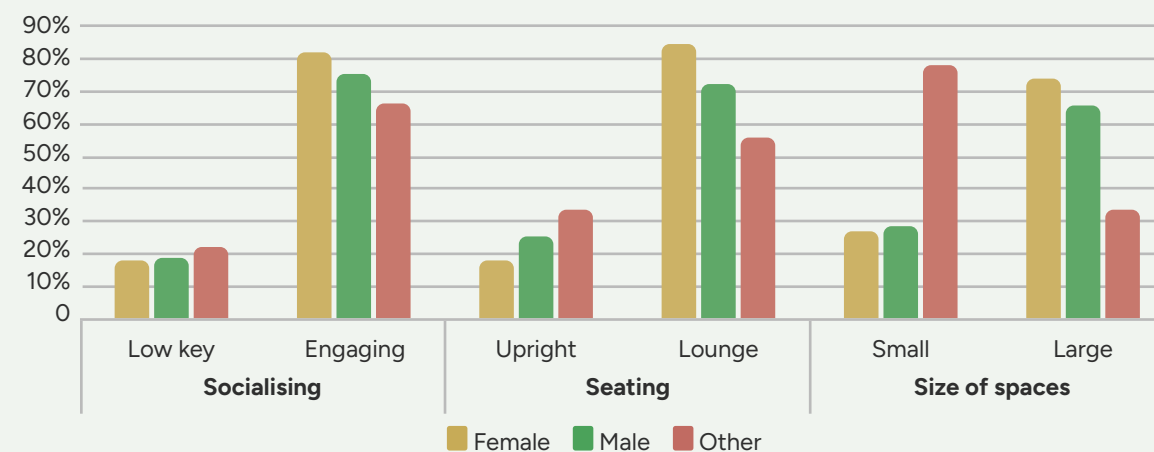
What are student preferences?

Given there is limited research data on student schoolyard preferences, a simple 'Either/Or' survey was conducted with 95 secondary school students to identify shared and differing views on spatial qualities, materials, and programming. Students selected between paired images showing contrasting options. Further details are available in the Greenprint Engagement Toolkit. Key findings are summarised below.

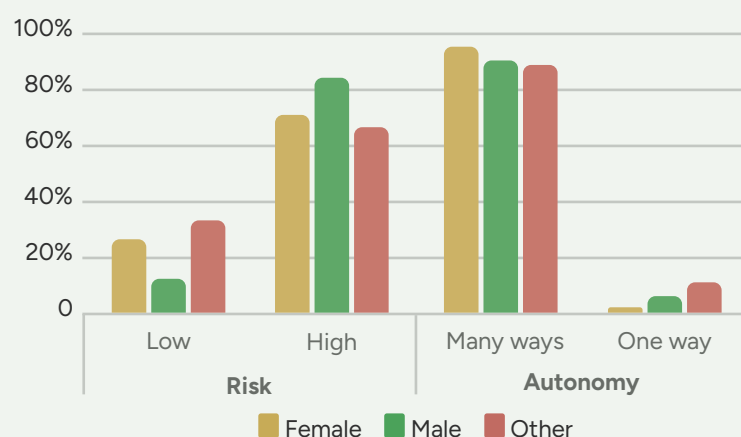
Social Spaces

Students prefer social spaces that are engaging and comfortable. Many favour lounge-style seating and larger gathering areas, while smaller, more contained spaces are also important for some groups including the Queer and neurodivergent community. Low-key socialising is less common. Females and males tend to use larger, more social settings, while other students show stronger preferences for smaller and quieter spaces. Results indicate a mix of seating types and space sizes is needed to support different ways students socialise.

Socialising Spaces



Risk, autonomy and how you use a space



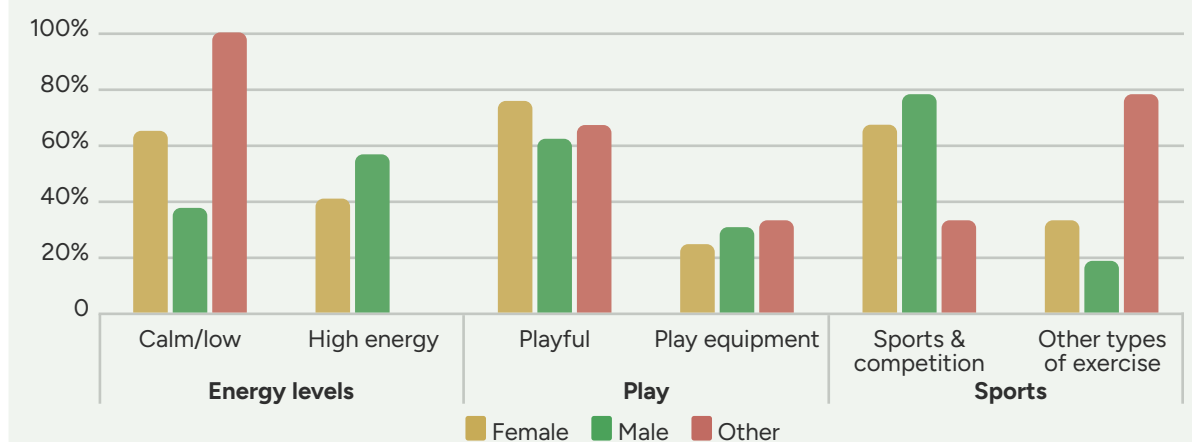
Risk and autonomy

Students preferred schoolyard spaces that provide opportunities for challenge, autonomy, and flexible use. Across all groups, spaces that are ambiguously programmed and could be used in many different ways were strongly favoured over spaces with a single intended use.

Sport and Activity

Students have different preferences for ways to use outdoor spaces. Some students, particularly those who don't identify as male or female, prefer quieter, low-energy areas, while boys prefer spaces for sport and high-energy activities. Girls opt for a mix of spaces, with a stronger interest in informal and playful areas. Results highlight the need for a balance of quiet, social, and active spaces.

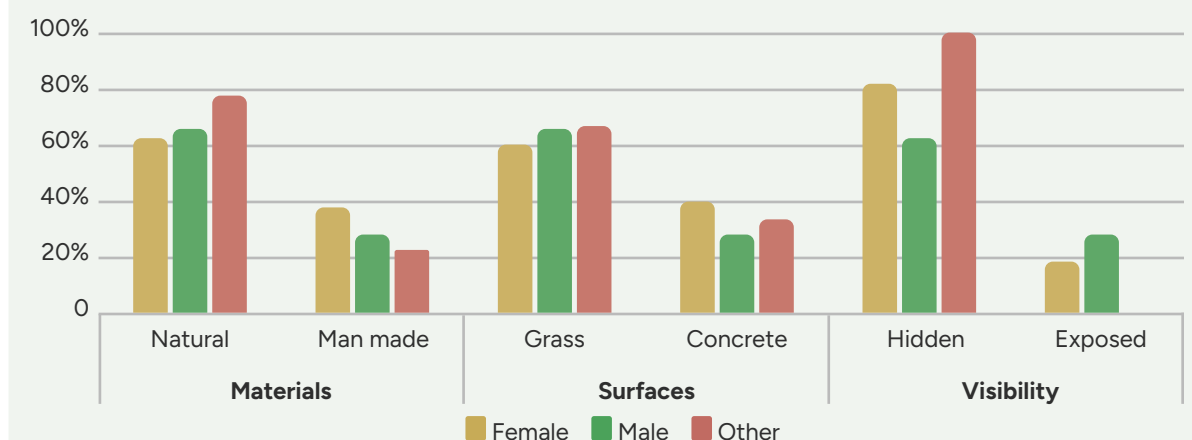
Sport and activity



Materials and Screening

Clear differences were observed in preferred materials, surfaces, and visibility across groups. Results suggest a strong preference for greener, softer, and more private outdoor environments compared to paved, highly visible spaces.

Materials and screening



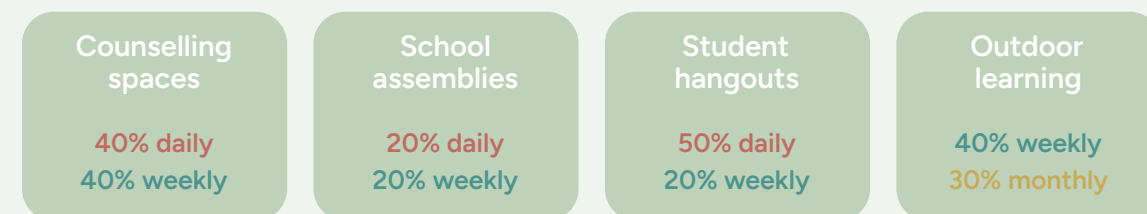
The opportunity for change

Why now?

Schoolyards are increasingly recognised as critical environments for supporting student wellbeing. Within Australia, they are already places of daily use. Growing research demonstrates that their greening - bringing natural elements back onto school grounds - is associated with wide-ranging benefits, including increased academic achievement, improved social inclusion, enhanced wellbeing and reduced stress (Bates et al., 2018; Bikomeye et al., 2021; Bohnert et al., 2022; Raney et al., 2021; Raney et al., 2019; van Dijk-Wesselius et al., 2018). Even views of nature from a classroom window can positively influence attention and stress levels (Matuoka, 2010, Tennessed & Cimprish, 1995).

A health promoting school environment extends beyond classrooms. According to the World Health Organization, schools should foster physical, mental, social and spiritual wellbeing, making the design and management of school grounds essential to this holistic approach. Outdoor spaces can serve as settings for social interaction, connection to nature, community building and emotional development.

Principal survey: Schoolyards are places of DAILY use



Above: 2025 Greenprint research survey response by NSW Government school principals to identify the type and frequency of schoolyard uses.

Climate change impacts

Climate change means schoolyards need to be adapted and retrofitted to improve their comfort and environmental performance (Díaz-López et al., 2023). This is particularly needed within Australian school environments, where school ground design standards are frequently considered outdated, obsolete and mostly inadequate to address current climate challenges. For example: in New South Wales the average government school building was built in 1971, according to a 2017 audit (Auditor-General, 2017).

Many Australian schoolyards are outdated and poorly equipped to handle rising temperatures. Schoolyards built decades ago lack sustainable design practices, often consisting of concrete paved quadrangles, sporting ovals, relatively little shade and a limited planting palette, contributing to the urban heat island effect (Hyndman 2017). Such design approaches render school grounds vulnerable to the effects of climate change, particularly as pavements can absorb and retain more heat than natural surfaces (Serrano-Jiménez et al., 2025) and are particularly important due to the vulnerability of children to heatwaves (McBride, 2016). In an analysis of heat vulnerability index quintiles (Sun et al., 2022) on a 5% randomised sample of Australian secondary schools, we found over 68% were in zones of high or extreme vulnerability.

Accelerated warming has been observed over the last 25 years, with 8 of the 9 warmest years on record occurring since 2013 and 2019 being the warmest year ever recorded. Outdated school infrastructure, especially in secondary schools, exacerbates these risks (Pfautsch et al., 2020). These conditions heighten students' exposure to heat stress and reduce opportunities for restorative outdoor experiences.

The combination of Australia's warming climate and aging school infrastructure requires design strategies that adapt to environmental climate challenges in ways that also safeguard student health and wellbeing. Research has linked hotter temperatures with increases in aggression (Kenrick & Macfarlane, 1986) and a reduced concentration and focus (Haverinen-Shaughnessy & Shaughnessy, 2015). Emerging research by McCormack (2023) demonstrated that hot conditions increased student absenteeism and behavioural referrals. Growing heat exposure in schoolyards also has gendered implications. Differences exist in heat acclimation, with males being physiologically more heat-tolerant due to higher sweat rates (Giersch et al. 2025; Wickham, Wallace, and Cheung 2021). Rising temperatures may further discourage girls from participating in outdoor learning or play, reinforcing gendered patterns of exclusion and limiting physical and social development.



The opportunity for change

Australia as a world leader for schoolyard change

Australia is well positioned to be a global leader in taking preventative steps to protect the health and wellbeing of its adolescents and young people, starting in the schoolyard. Recent policies directed at youth which crack down on bullying and rethink social media norms both have direct flow-on effects to student dynamics in the schoolyard.

2025 National Anti-bullying policy

Few countries have taken a unified stance in establishing anti-bullying standards across all school sectors, as recently outlined in Australia's 2026 National Anti-Bullying Final Report. The report links bullying prevention with broader mental health and wellbeing strategies, including co-designed interventions.

Schoolyard design plays a key role in shaping student behaviour in how it structures interactions. As a space often traditionally dominated by sporting fields and ball courts, a lack of spatial diversity makes it difficult for students to demarcate and identify places of meaning (Rasmussen, 2004), especially for those who don't feel comfortable engaging in sports (Larsen, 2013). This lack of choice and variety can restrict broader play opportunities and has been attributed to behavioural problems such as fighting and bullying due to boredom (Freeman & Tranter, 2012; Moore, 2017).

Relevant to this are the experiences of girls, who report higher rates of bullying than boys across all school levels. This cohort also reports greater dissatisfaction of schoolyard spaces in secondary years (Leigh, Muminovic, & Davey, 2023). Research shows that during high school, girls spend less time outdoors (Larson et al., 2019) while also experiencing worsening mental health in comparison to boys; these disparities often extend into adulthood (Campbell, Bann, & Patalay, 2021). Considering the health benefits of time outdoors, it prompts consideration of whether female students would benefit more from improvements to school grounds (Sillman et al., 2022).



60%
of principals surveyed AGREED
with the statement that
Their students worry about
schoolyard bullying

Above: 2025 Greenprint research survey response by NSW Government school principals

Filling the digital void with quality outdoor experiences

Over the past five years, Australia has been taking efforts to tighten the accessibility of digital tech by teenagers, starting with school phone bans – first enacted in Western Australia in 2020 – and leading to national coordination by 2024. This has been followed by Australia's Social Media Minimum Age Policy which - in December 2025 – put in place a nationwide restriction preventing youth under 16 years of age from creating or maintaining accounts on major social media platforms.

Australia's nationwide restrictions on youth access to digital technology aims to reduce screen time and encourage healthier, more active lifestyles. However, experts like Jonathan Haidt – author of *The Anxious Generation* (2025) – argue that this tightening of restrictions on teen mobile phone and social media use needs to be accompanied by a collective cultural shift on how young people spend their time (Haidt, 2025). This includes how schools support play and social interactions, particularly within their outdoor spaces during break times.

Australia has the opportunity to continue to lead in this space by drawing attention to how schoolyard spaces can be redesigned to reflect the diverse modern-day needs of young people. The Greenprint seeks to support and facilitate this change, one schoolyard at a time.



Above: this independent school in Victoria includes a range of strategies to provide shade and shelter. this includes a timber structure with skillion roof both options reduce heat. The wire structure to the left provides opportunities for vines to climb creating shade, the sail to the right provides shade while trees on site grow and retaining large pre-existing trees provides natural shade.
Designer: Cley Studios, Photo credit: Peter Casamento.

“Gardens [are] actually quite important [for] schools to have... it provides us more opportunities as well for recreation because [a] garden is quite good for your wellbeing”

Canberra Workshop



J J Cahill Memorial High School, Photo credit: Tanya Wood

Chapter 04

How the Greenprint Guides were developed

Co-design process

Co-design was critical to the Schoolyard Greenprint. Our overall approach was to co-design directly with a small group (the Working Group) and those young people with lived experience (the Youth Voices Group), as well as consult with a broader stakeholder group (the Reference Group) and conduct outreach activities such as interviews and site visits with a broader range of stakeholders.

Youth Voices Group

This co-research group brings the perspective of young people with lived experience to the Greenprint, helping ensure the research reflects student needs and experiences. They designed engagement activities, wrote sections of our research, participated in workshops, reviewed proposed approaches and draft findings, and worked alongside us to analyse findings and communicate results.

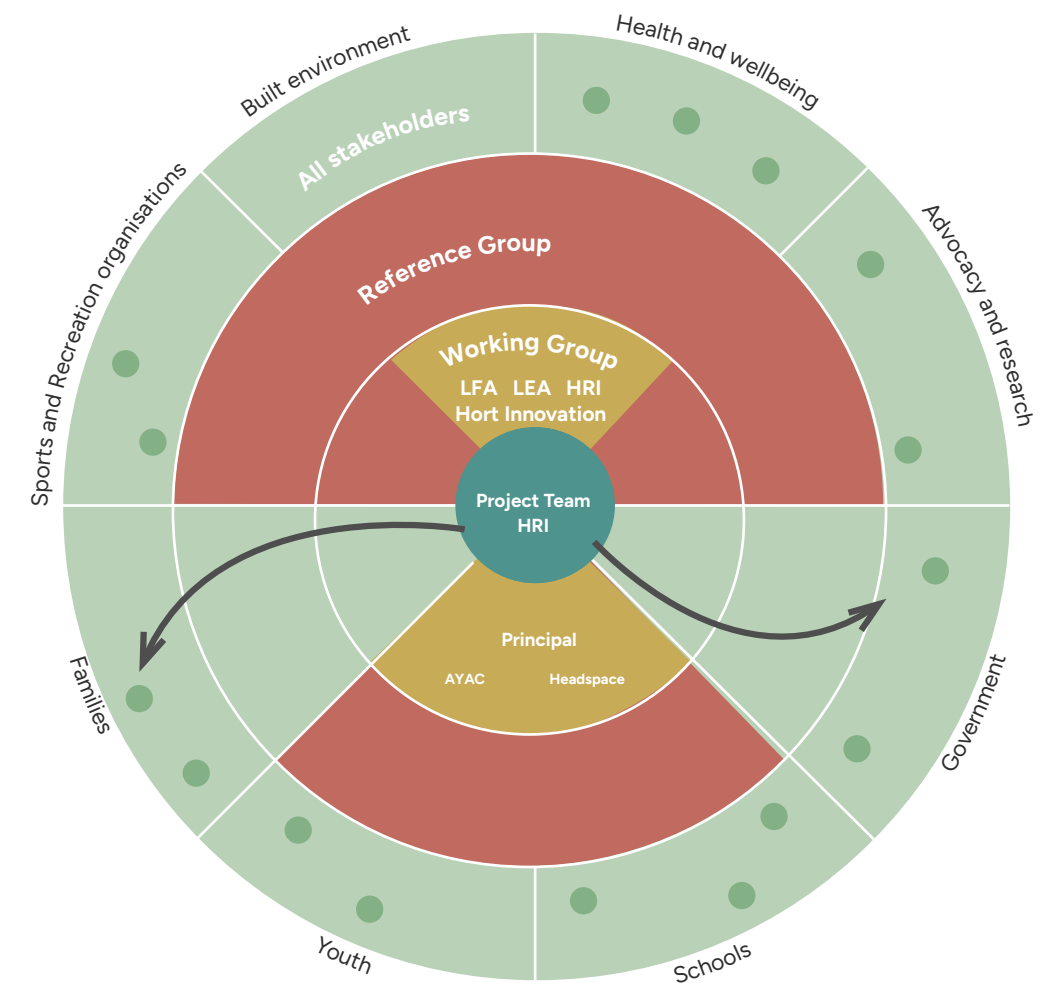
Working Group

A monthly co-design forum consisting of 8 key stakeholders from education, built environment, youth advocacy and health research. The purpose of the Working Group (WG) was to actively co-design with the Project Team the vision, outcomes and broad structure of the Greenprint deliverables. This includes providing guidance and advice on the content of deliverables, the methods for drafting them and conducting engagement.

Reference Group

The Reference Group is a consultative forum of approximately 30 organisations that met once every 3 months. The purpose of the group was to ensure the Greenprint Study reflected a wide range of schoolyard conditions and user needs. It acted as a consultative forum, providing feedback on findings, recommendations, and draft materials, and helped to broadly share information about the study.

Stakeholder cohorts



Working and Reference Group members

Built Environment

- New Learning Environments
- Place Lab
- Touched by Olivia Foundation
- Playstreet
- Landscape Foundation Australia
- Learning Environments Australasia
- Zoe Marris - Landscape Architect

Academia

- Marilyn Campbell - Queensland University of Technology
- Tim Baber - the University of Melbourne
- Hort Innovation
- Ceridwen Owen - the University of

Tasmania

- Brendon Hyndman - Charles Sturt University
- Kenn Fisher - the University of Melbourne
- Nicola Ridgers - Adelaide University

Education

- Montessori Australia
- Educated by Nature
- Andrew Fitzsimons
- Australian Secondary Principals' Association
- Independent Schools Australia
- Educated by Nature

Government

- South Australia Department of Education
- NSW Population Health Promotion
- Cancer Institute NSW
- ACT Government
- School Infrastructure NSW
- Government Architect NSW
- WA Education Directorate

Advocacy

- Australian Parents Council
- Positive Partnerships
- Zero Bully
- Australian Secondary Principals Association

Health

- Bully Zero
- Purely Access
- South Australian Rainbow Advocacy Alliance
- Women Sport Australia
- Multicultural Youth Advocacy Network
- Australian Youth Affairs Coalition

Health

- Occupational Therapy Australia
- Cancer Council NSW
- Headspace
- Australian Association for Adolescent Health
- Australian Primary Health Care Nurses Association

Adult stakeholders

We used a range of methods to engage with adult stakeholders. This includes interviews and focus groups with representatives from education, government, built environment, health, families, and community organisations. This helped us understand how schoolyards are planned, managed, and used, and identify key issues before and while working directly with students. Around 330 participants contributed, providing insights to shape the research and ensure it reflects real-world constraints and needs.

Virtual Workshops

We ran six national online workshops including 90 experts in February 2025 across health, education, design and youth advocacy. The workshops explored themes of student health and wellbeing, schoolyard needs and strengths, gender and inclusivity, governance and design excellence.

Principal Engagement

We engaged with nearly 90 principals. This includes indepth interviews and a delphi survey with NSW secondary school principals and independent principals, a photo survey and workshop in the Illawarra region.

Study schools

We visited three schools for in depth study between June to July 2025. Located in Queensland and South Australia activities included focus group discussions with 148 secondary students and 21 staff, and online surveys with 577 student responses.

CoDesign Workshops

We held in person workshops with over 30 participants to explore challenges, validate findings and develop solutions with young people designers and school representatives in Adelaide, Brisbane and Canberra.

Design Practitioner Interviews

We conducted 35 interviews with landscape architects and architects who are experts in the design and delivery of secondary school outdoor spaces. This included advice on best practice design and engagement techniques and detailed feedback examples of excellence.

	Reference Group	Working Group	Virtual Workshops	NSW Principal Interviews	Illawarra Principal Workshop	Photo Survey	Adelaide Co-design Workshop	Brisbane Co-design Workshop	Designer Interviews
Date	Nov 2024-May 2026	Oct 2024-June 2026	Feb 2025	Mar-May 2025	May 2025	May 2025	June 2025	July 2025	May 2025-May 2026
# invited	100+	12	142	400+ emailed	NA	31	60+	12	14
# attended/participated/responded	42	8	90	13	52	31	42	8	12
Data collection	7 Reference Groups held over 2 years to co-design and validate project components	16 Working Groups (held monthly) were conducted over 2 years to co-design and validate project findings	Commentary, imagery	Interviews, surveys	Piloting of Schoolyard Wellbeing Tool Survey, questionnaire, quotes	Photos and commentary	Drawings, commentary, validation of materials	Drawings, commentary, validation of materials	Imagery, commentary

Youth stakeholders

Youth stakeholders were consulted through online surveys and in-person focus group discussions held at three secondary schools (one in South Australia and two in Queensland). In-person workshops were also conducted outside of school hours with local students and community groups representing refugee youths and those in the LGBTQIA+ community. The aim of this engagement was to uncover challenges and opportunities in the design and use of secondary school outdoor spaces for wellbeing as perceived by those with lived experience. Activities included the following:

Student focus group discussions: At schools, these were arranged based on gender (female and male students were engaged with separately) and year level.

In addition to verbal data, students participated in a mapping exercise placing dots on a map to indicate their experiences of different spaces.

Students also did a storytelling activity to draw out more detailed experiences that they might not otherwise share with a group. The story template helps students articulate their needs and the outcomes

they are trying to achieve in the schoolyard.

Students also took photos of their schoolyard to indicate liked and disliked spaces. These images appear throughout this report. Those images with a red frame are disliked spaces while those with a green frame are liked spaces.

Specific cohort Sessions: Targeted engagement with queer youth in Adelaide and refugee-background students in Brisbane generated valuable insights into their specific needs and experiences. This focus was important, as issues relating to queer and cultural identity were not explored in depth during broader student group interviews conducted at school case study sites.

In addition, we ran targeted workshops with refugee youth and First Nations stakeholders to articulate their specific needs and challenges.



Youth co-researcher Finlay Robinson with Chief Investigator Dr Gweneth Leigh running a focus group discussion with students.

The importance of youth co-researchers

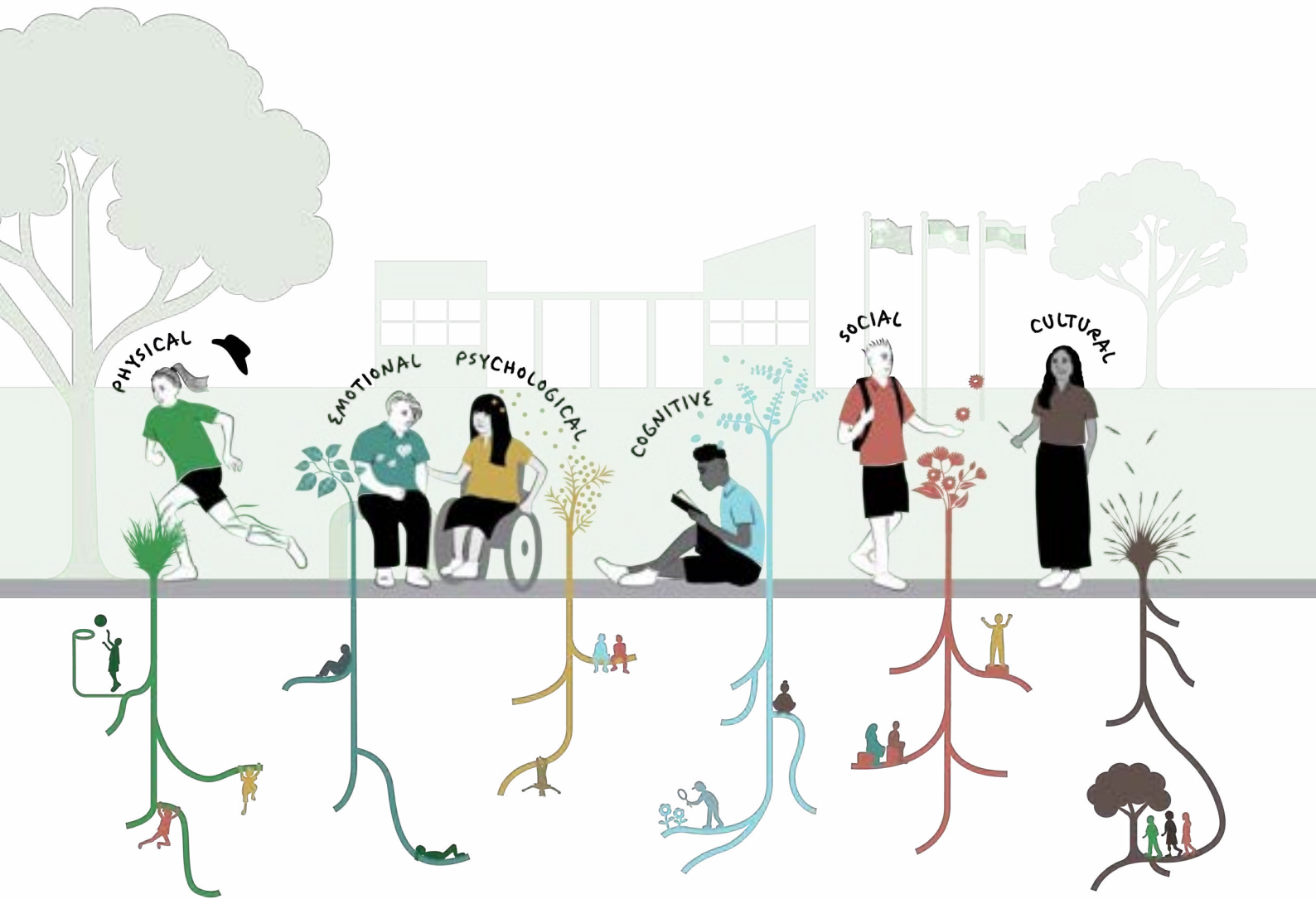
Youth co-researchers played an important role in the Greenprint. As experts in their own lived experiences, the Youth Voices provided valuable schoolyard insights. Their perspectives helped ensure that research findings and recommendations were responsive to student needs. They also provided input into data collection processes and priorities and ensured the findings were interpreted through a youth-informed lens. They encouraged their peers to participate in research activities and helped create environments where students felt comfortable sharing their views. They contributed to the development of findings and the communication of project outcomes. By working alongside the research team, the Youth Voices fostered genuine partnership and ensured the Greenprint Guides were informed by the voices of those most directly affected by their recommendations.

	Youth Working Group (Youth Voices)	Case Study: School R	Youth Consultation (Brisbane)		Study School: School M	Queer youth consultation	Study School: School L	Refugee Youth Workshop	Canberra Co-design Workshop
Date	Mar 2025-June 2026	June 2025	Feb 2025		July 2025	June 2025 (Adelaide)	July 2025	July 2025	Nov 2025
# attended/participated/responded	5	Focus group: 35 students Survey: 351 students	4		Focus group: 23 students Survey: 26 students	8	Focus group: 56 students Survey: 200 students	14	8
Data collection	Commentary, validation of materials	Commentary, survey, site assessment, questionnaires, photos	Mapping, survey, commentary, storycard		Focus group, survey, site assessment, photos	Commentary, questionnaire, storycard	Mapping, commentary, questionnaire, storycard, photos	Mapping, questionnaires, commentary	Storycard, drawings, commentary

The future of schoolyards starts here.

Growing change, one schoolyard at a time.

We want to break current cycles of poor design outcomes through meaningful engagement with those who use these spaces every day. Achieving better outcomes will require investment, student-centred design and robust measures for assessing impact. With adequate support and resources, secondary schoolyards can evolve into valued places that enrich the lives of students and strengthen their wider communities.



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The Schoolyard Greenprint

2026

The Schoolyard Greenprint

Volume 2

Typologies



Understanding the diverse schoolyard
types that influence student wellbeing

Authors

Gweneth Leigh, Hannah Richardson, Claire Manning, Finlay Robinson, Rachel Davey

Health Research Institute, University of Canberra

In preparing this report, we sourced aerial imagery from MetroMap (<https://metromap.com.au/>) and publicly available school enrolment data from the My School website, operated by the Australian Curriculum, Assessment and Reporting Authority (<https://myschool.edu.au/>)

The creation of the Greenprint Guides would not have been possible without the contributions from the following people: Linda Corkery, Noel Corkery, Marta Day, Kristen Douglas, Dean Farquhar, Andrew Fitzsimons, Maria Grainger, Deb O’Riley, Jacqui Simpson.

Acknowledgement of Country

The Health Research Institute at the University of Canberra acknowledges that it stands on Aboriginal land. We pay our respect to the Ngunnawal people, the Traditional Custodians of the land on which this work has taken place. Country shapes many of the spaces we move through, especially our schools, where it is a powerful teacher that invites curiosity, learning and responsibility. We appreciate the privilege of living on this Country and consider its future grounded in respect, understanding and reconciliation.

Enquiries

For enquiries or more information on the Schoolyard Greenprint please contact the Schoolyard Greenprint team at the Health Research Institute at the University of Canberra via email: schoolyardgreenprint@canberra.edu.au.

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AI-assisted writing tools were used to support the drafting and refinement of report text. Responsibility for the content, interpretations, and recommendations rests entirely with the authors.

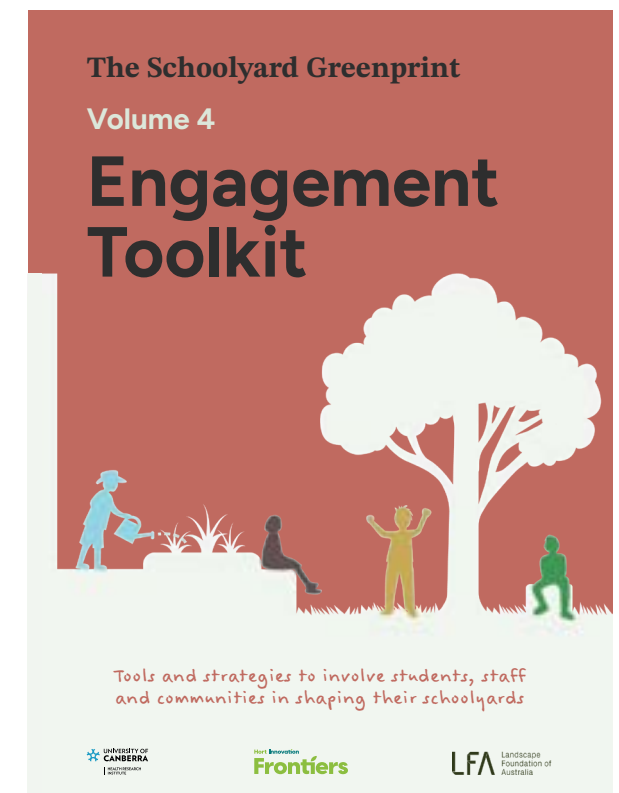
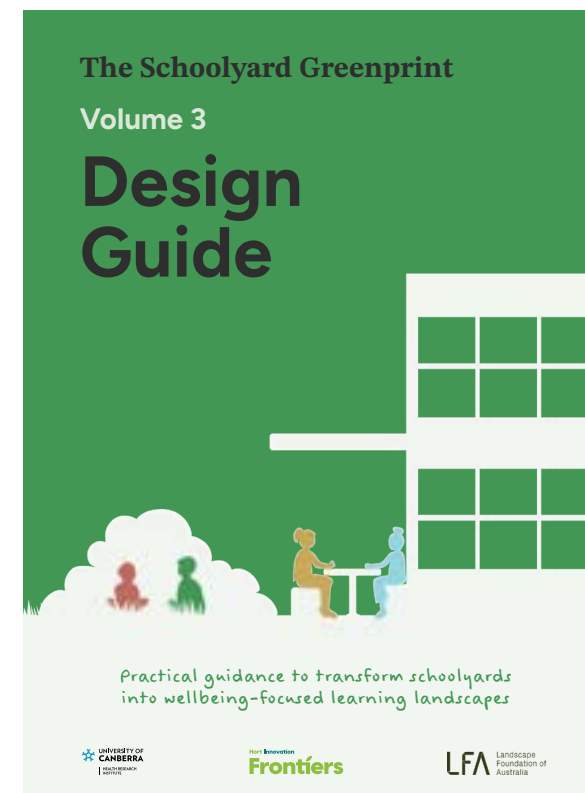
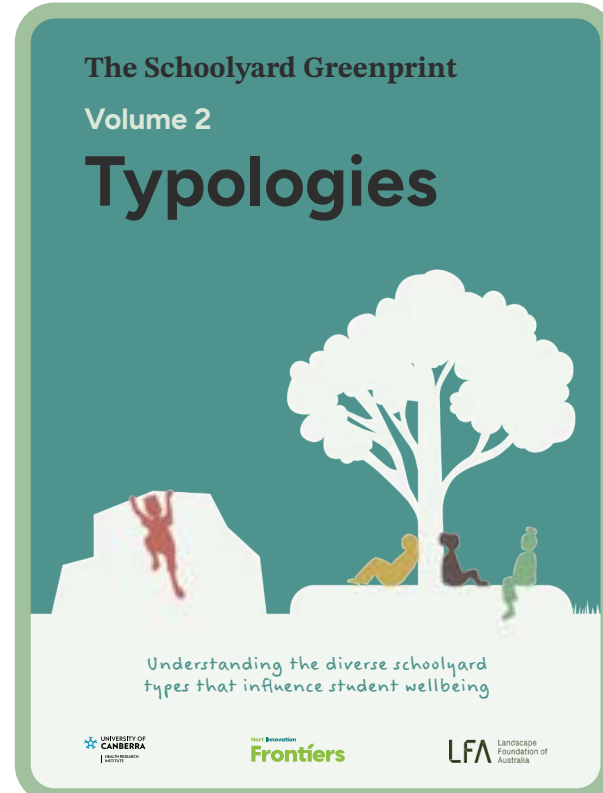
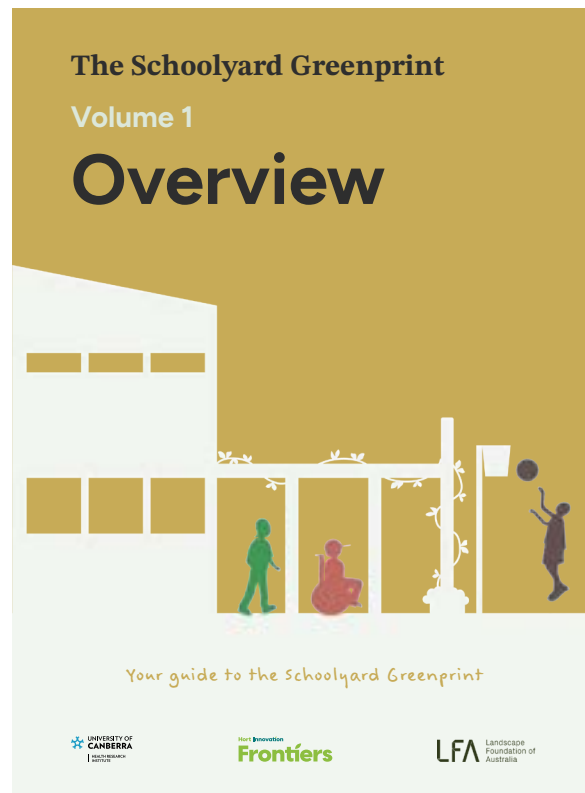
Design: Fuzzydog Creative



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The Schoolyard Greenprint



About the Schoolyard Greenprint

The transition to secondary school involves not only new routines and relationships, but also a shift in how students experience outdoor spaces. Moving from playgrounds to playing fields changes how students build connections, manage emotions, and navigate belonging. The **Schoolyard Greenprint** responds to this change by positioning outdoor spaces as essential to wellbeing and inclusion.

Developed over two years with input from students, educators, designers, and community members across Australia, the Schoolyard Greenprint provides a coordinated suite of resources to guide better schoolyard design. Grounded in student voice and research evidence, it helps schools understand what young people need from outdoor environments, explored through the following four key documents:

Overview:	Explores how outdoor spaces influence student health and wellbeing.
Typologies:	Guides planning through different campus layouts, showing how design shapes activity, social interaction, and connection to nature.
Design Guide:	Offers evidence-based principles and wellbeing design strategies
Engagement Toolkit:	Provides tools to capture student experiences and evaluate how well spaces are performing.

Together, these resources offer a roadmap for creating schoolyards that support diverse student needs. They equip principals, designers, and communities with practical guidance to advocate for and deliver outdoor environments that help students feel safe, connected, and able to thrive.

About Volume 2: Typologies

The Greenprint Typologies provides a planning and design framework to guide how school environments can transition toward more nature-integrated, socially supportive environments. School campuses are categorised into different landscape layouts to explain how spatial design influences student activity, social interaction and connection to nature.

Most students do not get a choice of where they attend school. Many will spend a significant portion of their childhood on school grounds. Understanding how these environments shape daily experiences can inform the future practice of their design and use.

“Every part of the site should be considered and integrated with a view to maximise the use of the total [school] site as a landscape for learning.”

Design Standards for Queensland Government education facilities Version 6.0, p25

Welcome

The Greenprint Youth Voices, a group of 5 young adults who have shaped the Greenprint, welcome you to this document.



Chloe Richards

Gamilaroi woman
Lives on Wiradjuri country,
New South Wales,
Rural school



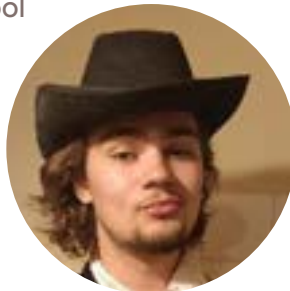
Emily Garrett

Lives on Yugambah land,
Queensland,
Suburban school



Finlay Robinson

Lives on Ngunnawal land,
Australian Capital Territory,
Suburban school



Hunter Jackson

Lives on Wiradjuri Land,
New South Wales,
Rural school



Rhy Baumann

Lives on Kurna land,
South Australia,
Suburban school

Our role

We have had a diverse schoolyard experiences, having attended schools from Queensland to South Australia, rural to urban, both independent and government. Despite this, we all agree that the current quality of schoolyards had an impact on our day-to-day wellbeing while at school, and that the quality of schoolyards across Australia can be improved.

As young people, we hope that this document is used by and with young people so they thrive in schoolyards. We hope that these documents inspire you, especially young people, to consider future schoolyards differently. We think the content in the following documents will provide school executives and designers with practical solutions to schoolyard problems that many students, us included, have experienced.

The Greenprint Youth Voices has been a continual source of insight in developing the Greenprint. We have spent time talking to other students and young adults, ensuring that the information in the Greenprint accurately reflects our experiences. This approach upholds the methodology of working with young people to achieve better outcomes for young people.

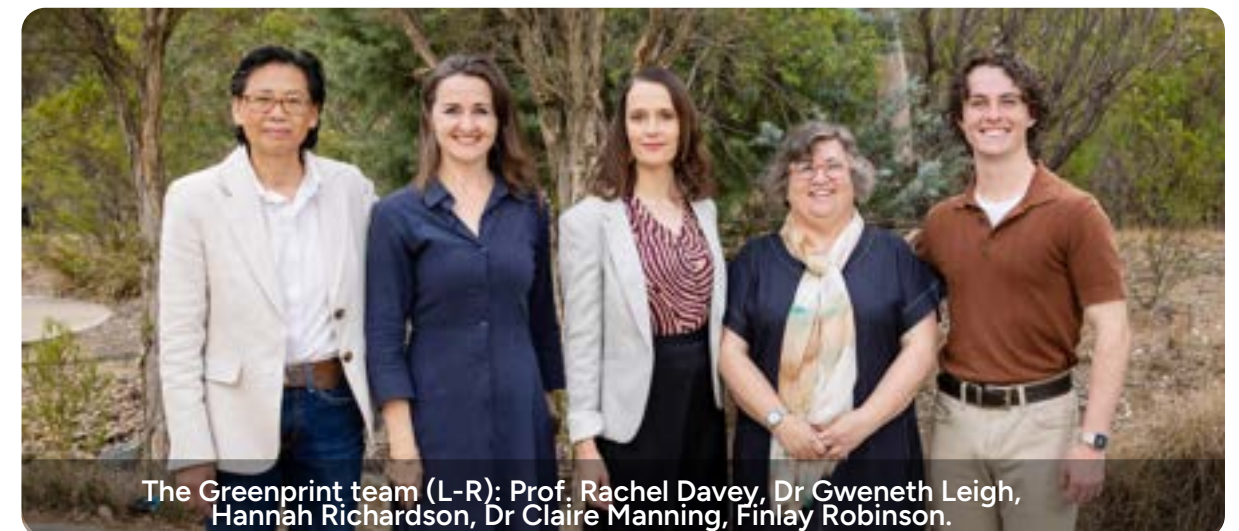
The future of schoolyards, in our words

We want schoolyards that are safe. We want schoolyards that are open, not crowded, sunny, grassy, natural, with some sort of shade or cover for if it rains. We need safe spaces in our schools for times of stress and hardship so that we can regulate ourselves. We want schoolyards that give everybody space but still connection. We want schoolyards that function in many ways, spark creativity and show an element of joy.

As young people we want schoolyards that:

- inspire young learners while providing a greener and more inclusive space to do so.
- are more sustainable, nurturing and innovative future. Making change for future generations.
- provide students free access to areas that support engagement between the environment (gardens, paved shaded areas, murals/art), each other (social areas) and ourselves (exercise, sport and study).
- create greener spaces, focusing on the development of students' wellbeing and ensuring we experience an enriching range of activities within schools that also provide inclusive and accessible spaces for our learning.
- create outdoor education spaces where students can succeed in all aspects of life.
- are green outdoor spaces where all students can get their daily dose of nature to support their personal development and wellbeing

Thank you for caring about a schoolyard in your life. We hope this guidance inspires you as much as this journey has inspired us.



The Greenprint team (L-R): Prof. Rachel Davey, Dr Gweneth Leigh, Hannah Richardson, Dr Claire Manning, Finlay Robinson.

About this document

Schoolyard Typologies and Student Wellbeing

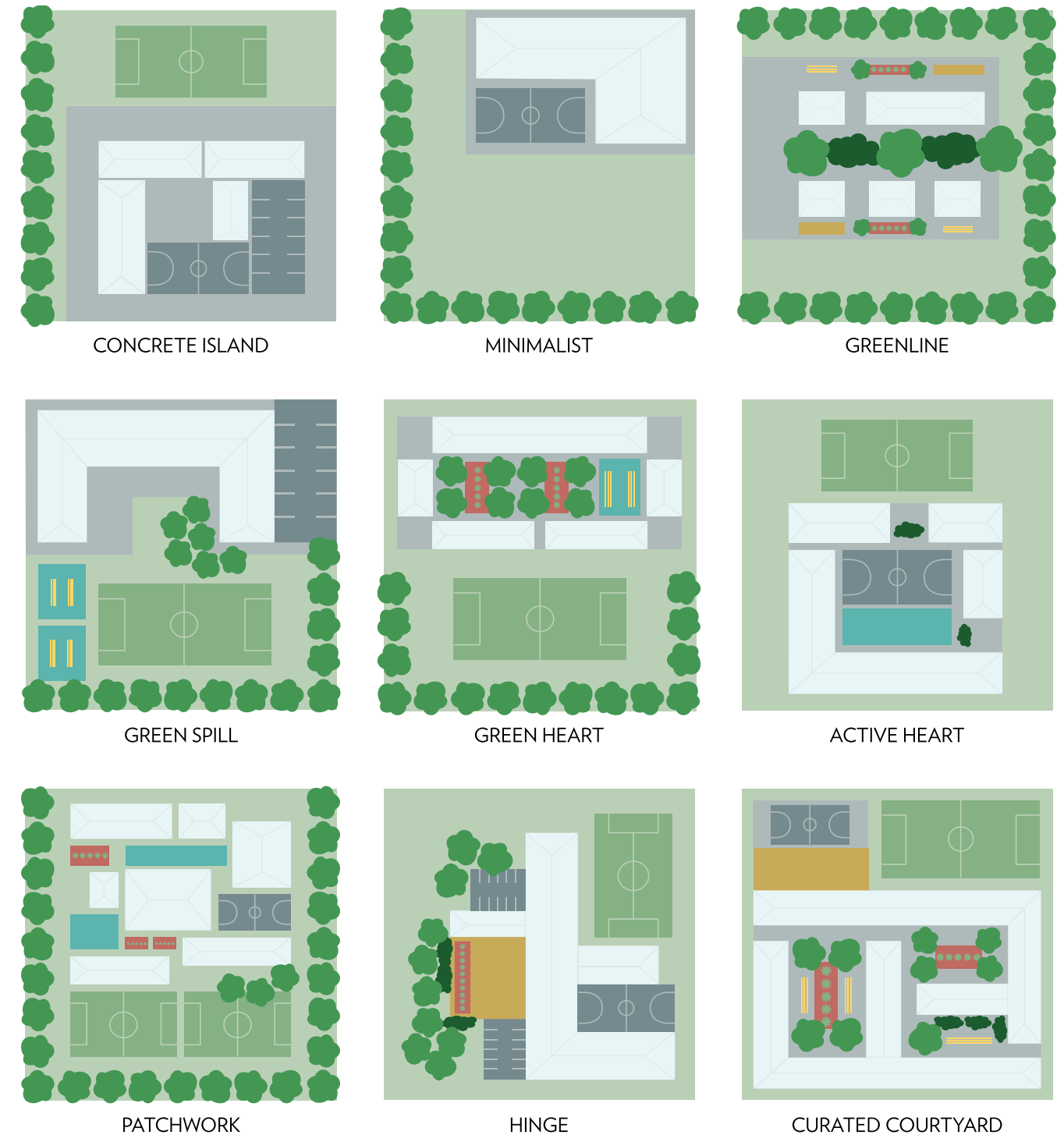
Spending time outdoors can act as a natural salve for students navigating the social and academic stresses of high school. Whether it's a game of handball, hanging with friends or finding a quiet space to decompress, school grounds provide important scaffolding for supporting student wellbeing. Finding ways to maximise the benefits of this time outside across all school types, whether in the playground or the playing field, is one way to help reduce disparities in the types of outdoor experiences provided to students across Australia.

To better understand how schoolyards currently support student outdoor experiences, an aerial inventory was undertaken on a randomised 5% sample of schools from across Australia. Geospatial schoolyard data was studied, measured and mapped using aerial imagery to understand the current types and configurations of green space being delivered within Australian secondary school environments. By documenting landscape characteristics such as tree plantings, surface treatments and building layouts, we can better understand how school designs support the comfort and accessibility of its outdoor spaces for use by the broader school community – particularly students.

The development of the School Typologies

Through the process of mapping and measuring school grounds, nine 'types' of school configurations were identified. This development of schoolyard 'typologies' provides a diagnostic tool through which to understand the spatial arrangement of elements across a school site. It provides a basis from which to compare and characterise features of different school 'types' and explore their capacity to be re-framed or converted from one 'type' to another.

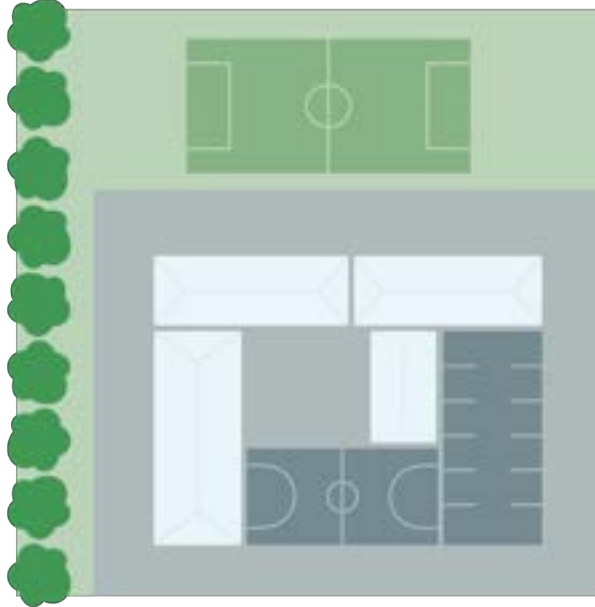
The development of the nine schoolyard typologies in the pages that follow were based on the quantity, arrangement and co-location of trees, building, surface treatment and programming. They are intended as a starting point for assisting school stakeholders to understand the layout of their school through a landscape lens; it may align with one type or be a hybrid of two or three. Highlighted within each are potential site opportunities and constraints, accompanied by future design considerations for outdoor experiences that can best support the wellbeing needs of students and staff.



The nine schoolyard typologies

01 Concrete Island

Introduction



The Concrete Island is characterised by extensive hard surfaces, with paved areas such as car parks, quadrangles, courtyards and ball courts dominating the central parts of the school. Buildings and infrastructure are tightly grouped, creating a built-up core with limited greenery.

Building Organisation: Buildings are clustered together in a central, inward-facing layout, surrounded by paved courtyards and circulation areas. Car parking and access areas are often located close to this core, reinforcing the hard-surfaced environment.

Canopy: Tree canopy is mostly limited to the edges of the site, with minimal shade in central areas. As a result, the main campus spaces can feel exposed and lack natural cooling or greenery.

Programming: Outdoor activity is focused on sports courts and fields, typically located at the edges or back of the site. This pushes most active and open space functions away from the central area, which is largely used for movement and access.

“The school I went to was a concrete island... From the student viewpoint, it's a very restrictive feeling. It's not even a playground, it's just the ground, really. Students wouldn't go in and sit in the fields. They would stay close to the edges. They would stay close to the trees... We had barely any trees or places to sit and a big open space isn't particularly good. Cause you can't do anything with that space.”

Youth Voices member



Government school, estab 1956, 424 students NSW



Catholic school, estab 1979, 1068 students, SA



Government school, estab 1965, 880 students, SA

“The idea of greenery, especially now that more of us are living in apartments, means that the schoolyard might be one of the few opportunities for students to actually experience nature.”

Practitioner 18

“Spray painting four-square courts and stuff [is needed]...it sounds really simple, but [students]... still love right up to even Year 12 playing handball.”

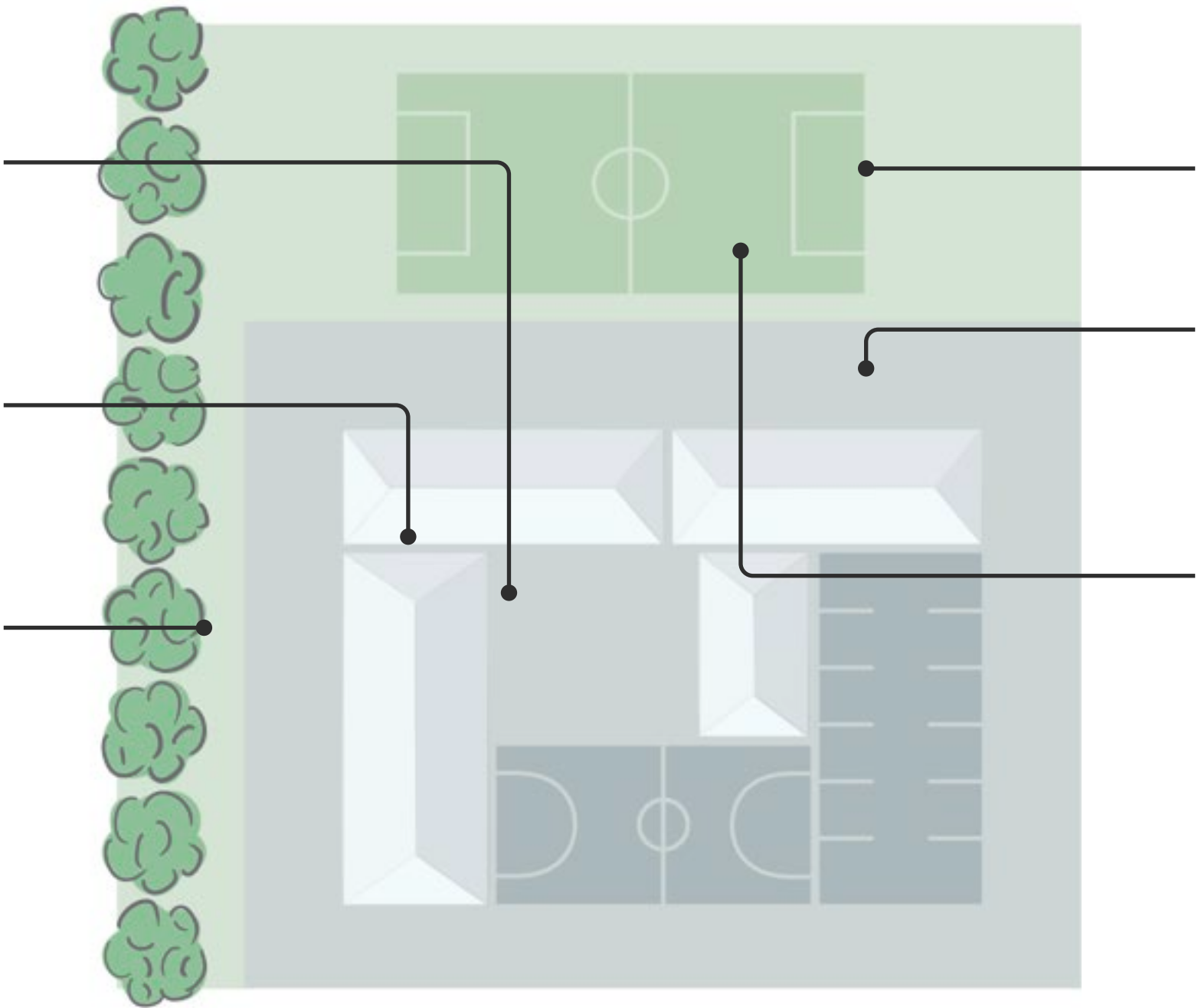
Adelaide Workshop

Site Opportunities

- Flexible, multi-use hardscape areas.** The large paved areas can support many activities, including formal sport, informal play, assemblies, and everyday student movement, making these spaces easy to use throughout the school day.
- Easy to supervise and navigate.** The layout is clear and predictable, with open sightlines that help staff monitor students and make it easy for students to move around the school.
- Opportunities to add greenery.** Open edges around the site provide clear areas where trees, shade, or outdoor learning spaces can be added in the future.

“There’s really no playgrounds for like teens and places that we can like, just run around and do stuff.”

School R Year 7-8F



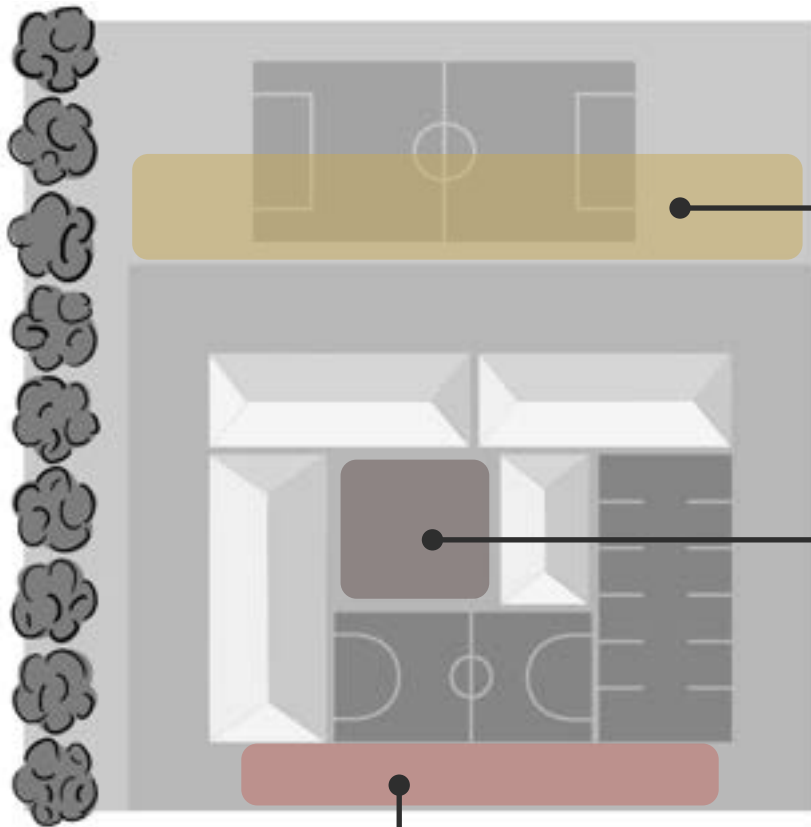
Site Constraints

- Limited shade and comfort.** Large concrete areas and few trees can make the school hot and uncomfortable, reducing how much outdoor spaces are used during warmer months.
- Low greenery and environmental value.** With most planting at the edges, there are fewer opportunities for biodiversity, stormwater absorption, natural cooling and nature-based learning or play across the site.
- Sports and open space less connected.** Sporting fields and open space are pushed to the site edges, often behind buildings or near car parks, making them less visible and harder to access as part of everyday school activities.

“Schools that are full of concrete are really unpleasant schools to be in...We now know more about how we re-radiate heat back into the atmosphere. But in the time that a lot of the schools were built, it wasn’t considered.”

Practitioner 20

Wellbeing opportunities



Psychological

Create spaces that physically challenge students, such as thru landform, terracing, timber ledges to invite balancing, jumping and perching.

3.2 Autonomy and risk



Natural elements at School M encourage playful use. Photo credit: Gweneth Leigh

5.1 Variety of social spaces



"This is a good place for groups to sit during breaks... There's physical space but the grass and the practical seating allows all students to be in this area."
Principal 15



Social

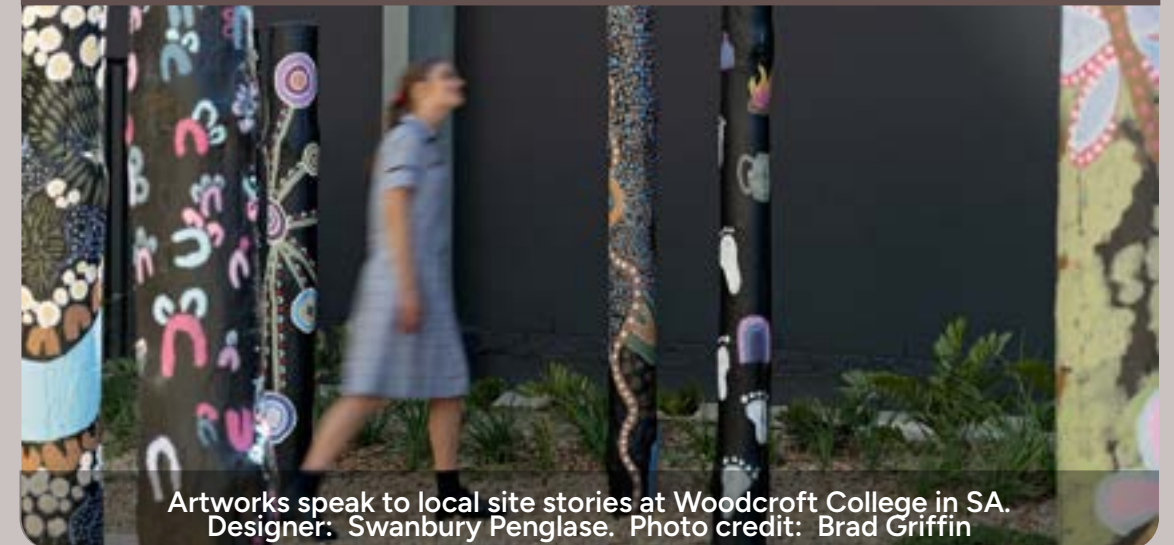
Activate edges between spaces so students can passively socialise and connect through observing others, such as through different seating configurations



Cultural

Consider how artwork, plants and materials can tell stories and histories of the site and communicate school values.

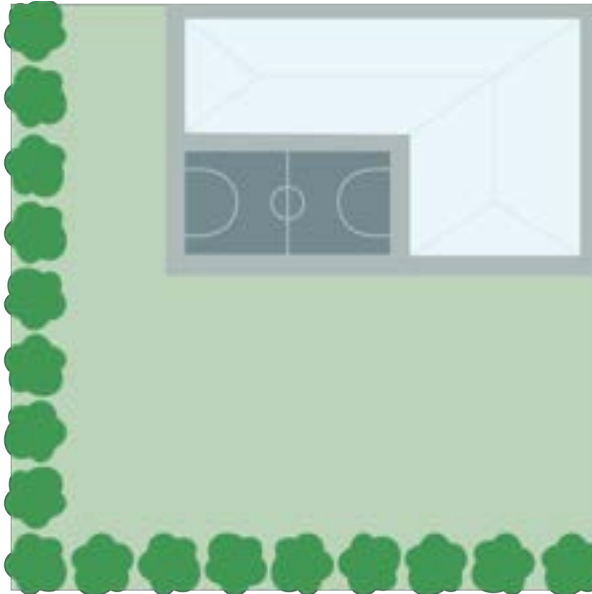
6.1 Belonging



Artworks speak to local site stories at Woodcroft College in SA. Designer: Swanbury Penglase. Photo credit: Brad Griffin

02 Minimalist

Introduction



The Minimalist school is typically found on compact sites with limited outdoor space. It focuses on a simple, functional layout with a single main open area used for most outdoor activity.

Building organisation: Buildings are usually consolidated into one main structure or a small number of buildings, often along the site edge or in a vertical (multi-storey) format. This maximises the available space for a central open area.

Canopy: Tree cover is limited and generally located around the site edges rather than within the main open space. As a result, central areas are often exposed, with little shade or landscape variety.

Programming: Outdoor use is centred on a single oval, turf area, or small hardcourt for sport and recreation. In some cases, nearby public parks are used to supplement limited on-site space.

“There was a very thin strip of corridor that would lead from the junior school to the high school campus...it was just a plain corridor with metal fences on each side.”

Student, Adelaide Workshop

“It’s difficult to incorporate outdoor learning because I’m on the second floor and can’t easily head outside with the kids.”

School M, Staff member

Case study

Adelaide Botanic High School

Adelaide Botanic High School demonstrates both the opportunities and challenges of vertical school design in dense urban environments. Established in 2019, the coeducational government school accommodates a large student population on a constrained inner-city site. The school aspires to deliver approximately 25% of learning beyond the school grounds through access to resources like the Adelaide Botanic Garden, Adelaide Zoo and nearby sporting ovals.

The school’s six-storey design uses extensive glazing to provide natural light and views of surrounding tree canopies and parklands, helping students maintain a connection to nature despite the limited site footprint. Outdoor terraces and a sky deck offer opportunities for fresh air and outdoor learning, while internal breakout spaces and quiet zones support what Principal Sarah Chambers describes as “a very deep human need” for students to retreat and self-regulate.

The limited ground-level open space does present challenges. Due to supervision requirements, only a small proportion of the school’s nearly 1300 students can access nearby parks or sporting facilities during breaks. Physical education classes can lose valuable teaching time walking to nearby ovals. Competition for limited outdoor spaces may result in areas being informally ‘claimed’ by particular groups, potentially reinforcing social exclusion.

While vertical schools offer an effective response to urban education, careful attention must be given to outdoor spaces that nurture student learning and wellbeing. Adelaide Botanic highlights the importance of designing vertical schools that support both.



Adelaide Botanic High School, estab 2019, 1285 students, SA

Catholic school, estab 2022, 474 students, QLD

“We actually use a public playground... as an area where our youngest students are able to play at recess and lunchtime. Outside of school hours, it’s a public park....If you can find multi-use spaces, you start to have far greater purpose to what they’re able to provide...The more utilization you can get out of the space, the more that you can justify the investment in it.”

Principal 30

“There was no undercover spots though, so when it was raining we had to go inside to the library and just everyone was packed into the library. It was kind of bad.”

School M, Year 9M

Site Opportunities

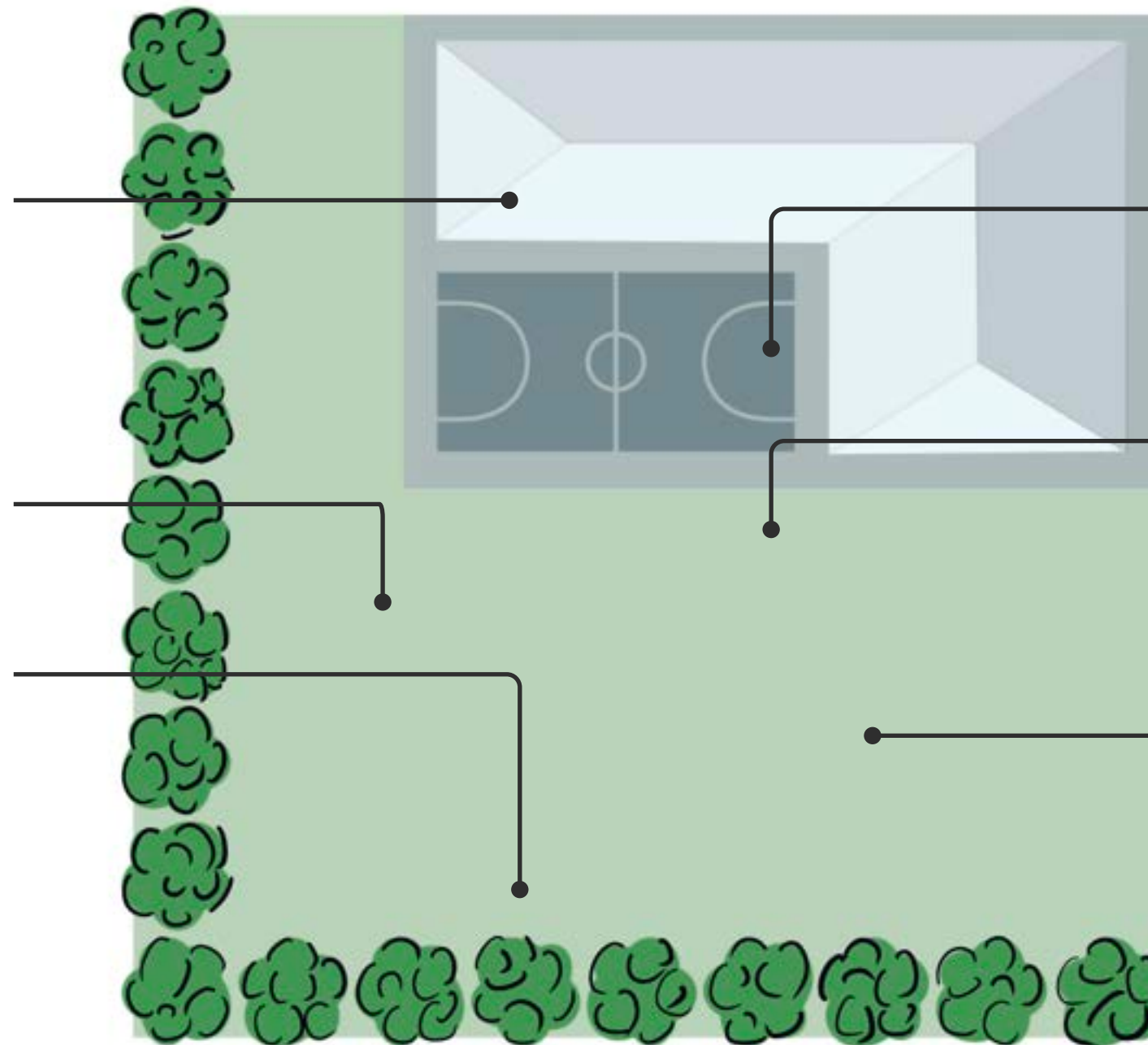
Efficient use of space. Buildings are grouped together, leaving more room for outdoor use - particularly valuable on smaller sites. Features like green roofs, terraces and planted areas can add shade and improve student wellbeing, even where space is limited.

Flexible open space. A single grass or turf area can support a wide range of activities, including sport, play and school events.

Access to nearby facilities. Schools can use local parks or ovals to expand their sports and recreation options and build community connections through the sharing of local green space.

“Trees and accessibility to shady areas are on the periphery...”

Young person, Brisbane Workshop



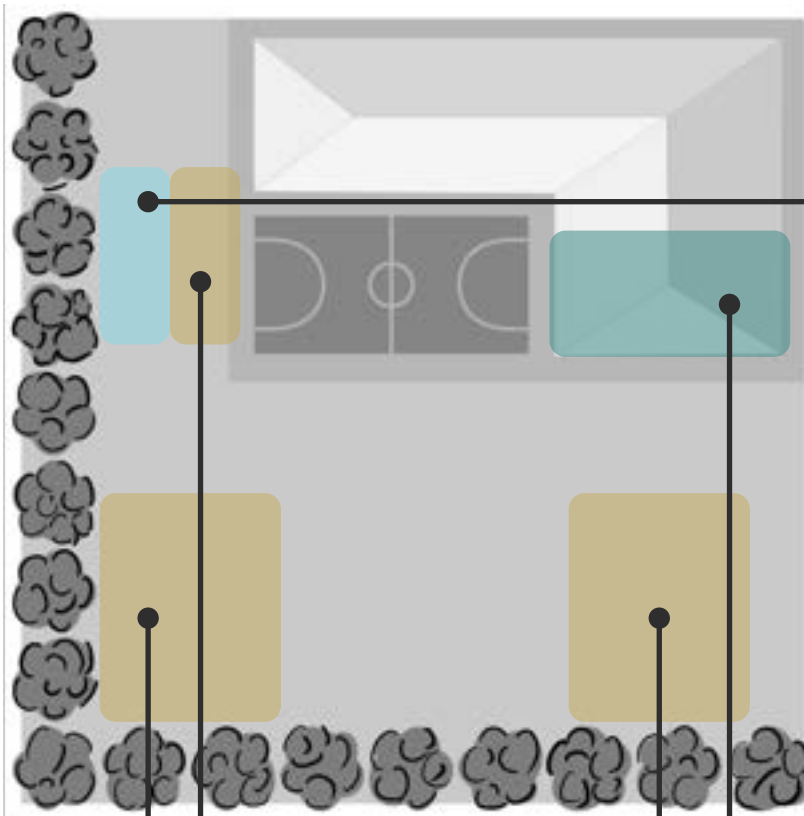
Site Constraints

Limited variety and comfort outdoors. Outdoor spaces are basic and often lack shade, greenery, and quieter areas, reducing options beyond sport and making them less comfortable in hot weather.

Crowding and wear on spaces. Limited space can lead to crowded, noisy environments and heavy use of key areas, increasing maintenance needs and reliance on synthetic surfaces. Crowded conditions can also create loud environments that may overwhelm students.

Reliance on external or exposed spaces. Using nearby parks can create challenges with access and supervision, while rooftop or terrace areas may be exposed to sun and wind, requiring careful safety planning.

Wellbeing opportunities



"I want to sit with my friends... somewhere where it's, like, quiet... [not] so many people around."

School L, Year 11-12F

3.1 Claimable space



A favourite student sitting areas at School R.
Photo credit: Student photo



Psychological

Offer a diverse range of distinct, claimable spaces to support a sense of ownership among different student groups. Reduce social gatekeeping by providing desirable features in several locations for access by students of all ages.



Cognitive

Create outdoor curriculum spaces to facilitate spontaneous outdoor teaching and study opportunities, especially for senior students.

4.2 Outdoor learning



A large outdoor seating area at School L. Photo credit: Gweneth Leigh



Emotional

Use verandas, covered landings or small sheltered edges between classroom blocks and external spaces to create pause points

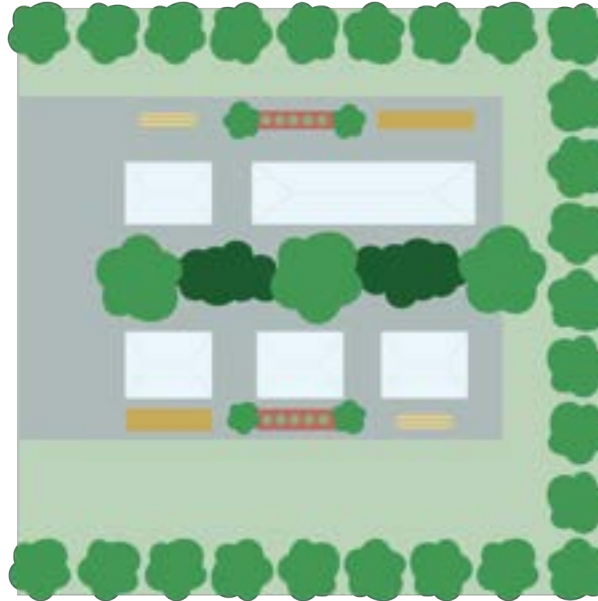
2.1 Navigation



Protected seating off a main walkway at a Queensland Independent school.
Photo credit: Hannah Richardson

03 Greenline

Introduction



The Greenline is organised around a central, linear green corridor that connects buildings across the school. This landscaped spine becomes the main movement route and a key shared outdoor space.

Building organisation: Buildings are arranged along this central green corridor, creating a series of connected spaces rather than one central courtyard. This layout supports easy movement between learning areas through a continuous outdoor setting.

Canopy: Trees and planting are integrated throughout the corridor, with a mix of canopy and lower vegetation creating shade and visual interest. This results in a greener campus where nature is part of everyday movement.

Programming: The corridor supports a mix of uses, including movement, socialising, outdoor learning, and small activity spaces. Larger sports facilities are still provided, but a range of smaller, flexible spaces are embedded throughout the green spine.

“We had this big shared corridor that went through the school and there were trees on the outside of these that would play a part in keeping out some of the sunlight but also just adding nature to the space.”

Young person, Adelaide Workshop

“All of those interstitial spaces between buildings that might not really be active spaces, they might be more passive spaces, but provide great outlook when people are inside them. So, from a classroom looking out of a window and seeing green, those spaces, I think, are also important.”

Practitioner 18



Government school, estab 2009, 1841 students, WA

“I chose calm and low energy spaces because after lessons you’re kind of tired and I feel kind of the need to relax after that. It helps you just calm down. You can chat with your friends.”

School M, Year 7F



Government school, estab 2012, 1687 students, QLD

Site Opportunities

Direct visual connection to nature.

Classrooms facing the green corridor provide students with regular views of nature which can support attention, calmness and overall wellbeing.

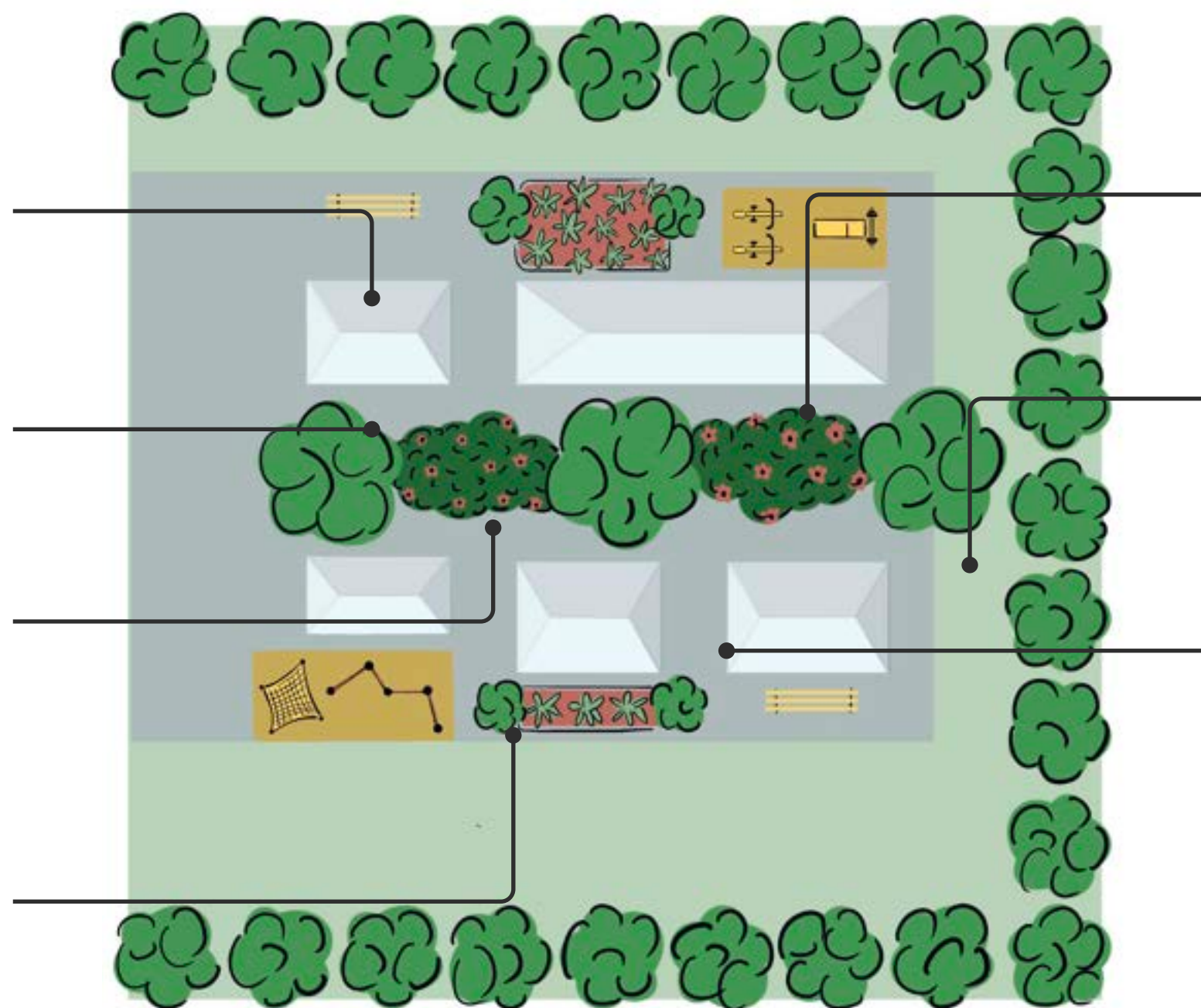
Easy access to outdoor learning. Outdoor spaces are close to classrooms, making it simple for teachers to extend lessons outside.

Cooler, more comfortable outdoor zones.

The presence of trees and planting helps moderate temperatures, creating comfortable microclimates that support physical activity, informal play and socialising, especially during warmer months.

Enhanced biodiversity and refuge spaces.

A diverse mix of planting materials – including understory and groundcovers – supports ecological value while also offering visual buffers where students can feel less exposed and find areas of quiet.



Site Constraints

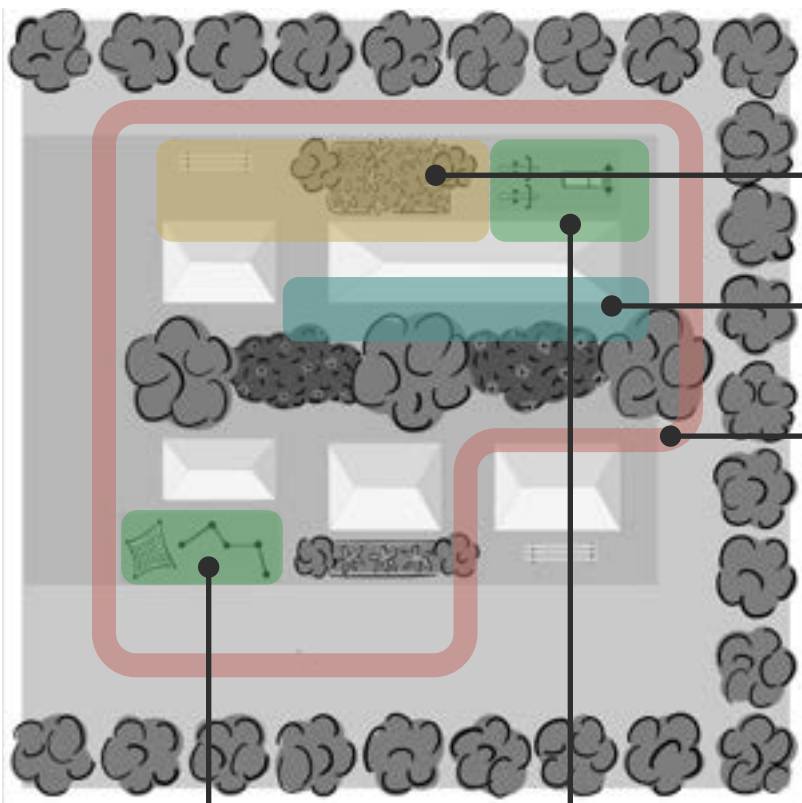
Increased maintenance requirements. More planting and greenery require ongoing care, including watering, pruning and upkeep to ensure safety and plant health.

Supervision challenges during breaks.

Students spread out across green spaces may be less visible than on areas such as ovals and ball courts, requiring more staff to be on roster for adequate supervision during break times.

Circulation and congestion risks. Busy movement along main corridors can create crowding if pathways are not wide enough or well designed. Careful attention to entry and exit points is needed to prevent bottlenecks – particularly during class transitions when movement through the central corridor is at its peak.

Wellbeing opportunities



1.3 Movement and play



Physical

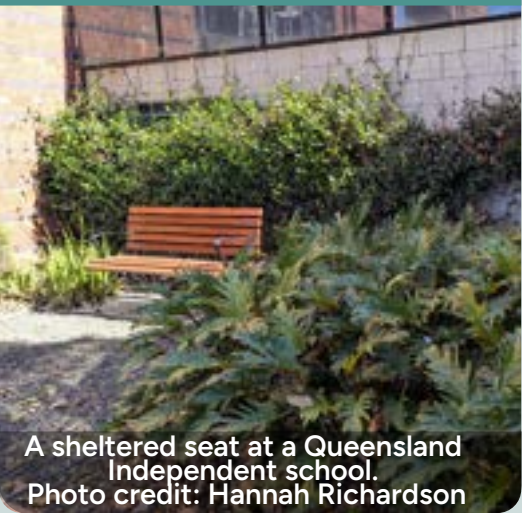
Offer physical activity opportunities beyond formal sports. Incorporate a spectrum of play types including playful landscape features, play equipment, walking tracks and spaces for nature play and age-appropriate risk-taking.



Emotional

Position nature-filled outdoor refuges close to classrooms to lower sensory load so students can down-regulate and return to learning.

2.2 Down regulation



Psychological

Include purposeful micro-infrastructure that fosters a sense of mastery. This could include a project wall, student-run planting beds, small performance nooks.

3.3 Competence



Social

Design walking loops specifically for socialising, including widening them to allow for groups and pause points along amenities.

5.1 Variety of social spaces



“[Natural spaces] they make you calm down, like trees when they wave. It’s calm and then the wind gust by your face and yeah, it’s pretty chill there.”

School M, Year 7M

04 Green spill

Introduction



The Green Spill centres on a green space that connects directly to larger open areas, creating a campus that feels open, leafy, and well connected to nature. The central green acts as a shared hub that “spills” into surrounding playing fields.

Building organisation: Buildings are typically arranged along one or two sides of the central green, helping to define the space while keeping it open to nearby fields. This creates strong connections between learning areas and outdoor spaces.

Canopy: Trees and planting are spread throughout the central space and into surrounding areas, rather than just at the edges. This provides shade, improves comfort, and gives the campus a strong green character.

Programming: Outdoor spaces support a mix of socialising, informal play, and everyday use, with shaded seating linking the central green to sports fields. The layout encourages movement, visibility, and regular interaction with nature across the school.

“We actually have probably one of the best outdoor education programmes that runs through the curriculum...We offer bushwalking as a sport...outdoor education is our most popular subject in the school...we’ve got a very strong Duke of Edinburgh programme here...we have bikes and [they’ll] go mountain bike riding too sometimes and the other times there in class learning bushcraft or compass work on map reading, that sort of stuff.”

Principal 10 (Greenspill school)

“The government is going back and looking at 70s and 80s high schools and refreshing them. And some of them have very good allocation of mature trees. So we work very hard to save those, and then try to create spaces in around them, that students can gather and sit within the shade, and experience [the benefits of] that kind of environment.”

Practitioner 14



Government school, estab 1985, 877 students, NSW



Catholic school, estab 1967, 1443 students, VIC

Site Opportunities

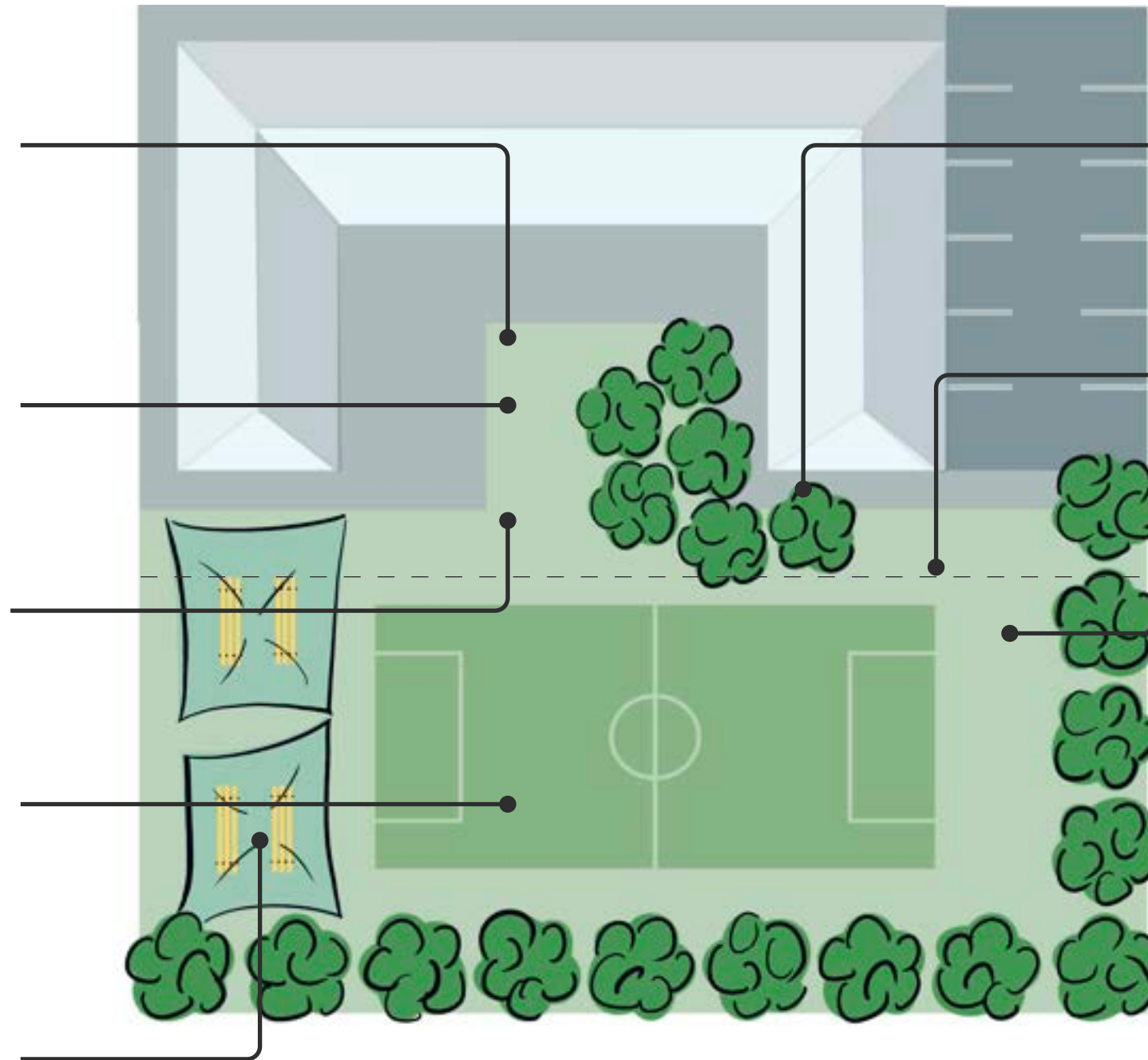
Visual connection to nature. A central green space with trees and lawn gives students regular access to nature, creating a pleasant environment for learning and socialising both inside and outside the classroom.

Close proximity of green space can make outdoor learning more accessible, as well as provides a greater range of spaces for students and staff to use during break times.

Potential for greater ecological connectivity. As a larger connected green space, there is potential to support biodiversity and creating quality habitats.

Strong sightlines across school grounds supports student orientation and safety.

Shaded social areas Seating and shade from both trees and structures create inviting spaces for students to gather, relax and spend time outdoors.



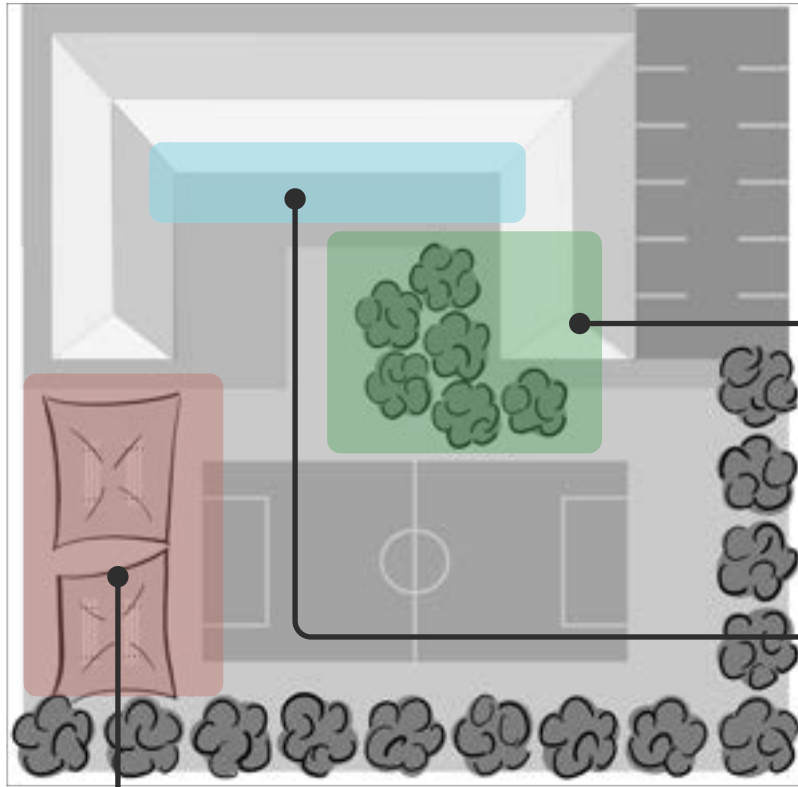
Site Constraints

Higher maintenance demands. Sometimes the vastness of space can make it seem underused, un-activated. More trees, lawn and landscaped areas require ongoing care, increasing maintenance workload and costs.

Fences can disrupt flow. If sports fields need to be shared with the community, fencing may be required to indicate areas that are out of bounds. This may make movement around the school ground less seamless.

Supervision challenges. Open, connected spaces can spread students across a wider area, making supervision more challenging - particularly during breaks or outdoor classes.

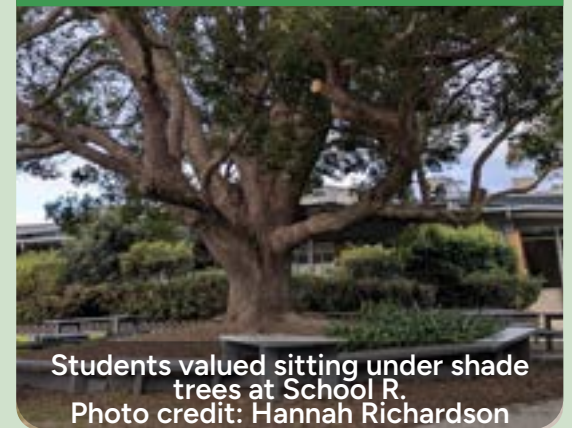
Wellbeing opportunities



Physical

Incorporate living shade to provide areas for rest and outdoor learning. Increasing vegetation, particularly canopy trees, provides amenity, cools buildings and lowers surface temperatures. Deciduous species promotes solar access due to leaf drop during winter months.

1.1 Environmental comfort



Students valued sitting under shade trees at School R.
Photo credit: Hannah Richardson

Cognitive

Design and group spaces that can be used for a range of purposes, including learning and social functions. Consider hardstand pads for items like trolleys and sitting arrangements where students can be cross legged, lie or perch on edges.

4.3 Ambiguity and variety



Sitting area at Mathew Flinders Anglican College.
Designer: Tract, Photo credit: Renee Green

Social

Integrate social spaces into amenities where students naturally gravitate. For instance, position seating close to high use areas such as canteens and sporting facilities to make connection easy and reduce students feeling conspicuously alone.



5. Location of social spaces



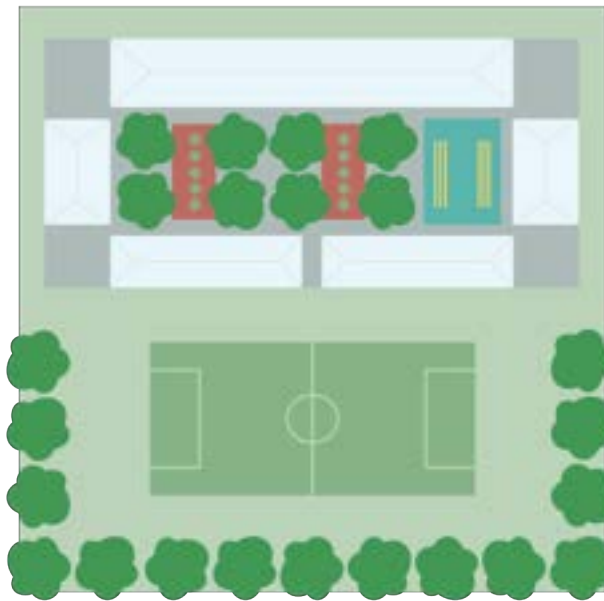
At School M, ping pong and seating are close to basketball courts.
Photo credit: Gweneth Leigh

“We’ve utilised the front of our school for our senior kids to try and create a bit more separation so they don’t have to worry about balls flying and different things like that. There’s more tables, there’s shelters out there for them. They can sit and have conversations and work with their friends if they want to.”

Principal 1

05 Green Heart

Introduction



The Green Heart features a large, landscaped central space that serves as the main social hub of the school. It provides a green, welcoming environment that supports student wellbeing, connection and everyday use with trees, garden beds, structured seating and shaded gathering areas.

Building organisation: Buildings are arranged around the central green, often in a cloister-like layout that creates strong visual and physical connections. This inward focus makes the green space a clear centre of school life, separate from larger sporting areas.

Canopy: Trees and planting are concentrated in the central space, creating a curated environment that provides shade, comfort and a sense of place. Elsewhere on campus, vegetation may be more limited and used mainly around edges or boundaries.

Programming: The central green is designed for socialising, quiet recreation and outdoor learning rather than active sport. Larger sporting facilities are typically located in other parts of the school, keeping the heart space calm and flexible.

“The moment you introduce trees or nature into the area, you invite it to be engaged with in a different way....It invites [students] to walk more slowly, and think about their environments. Less about a straight line, more about the journey...” Principal 30



Government school, estab 1958, 658 students, TAS



Anglican school, estab 1994, 1262 students, QLD



Government school, estab 1965, 745 students, ACT



Government school, estab 1961, 718 students, NSW

Site Opportunities

Strong social hub. The central green space gives the school a clear, shared gathering area where students can socialise and connect. Its enclosed layout helps it feel safe, welcoming, and easy to supervise.

Attractive and comfortable environment. Trees, gardens, seating, and shade are concentrated in one place, creating a pleasant space that students want to use. This improves comfort and encourages time spent outdoors.

Good visibility from buildings. Classrooms and staff areas overlook the green space, allowing easy supervision and regular views of greenery, which can support student and staff wellbeing.

Separation of sport and social areas. Keeping major sports areas elsewhere reduces conflicts between active play and quieter uses. This allows the central space to support a wider range of activities safely.



Site Constraints

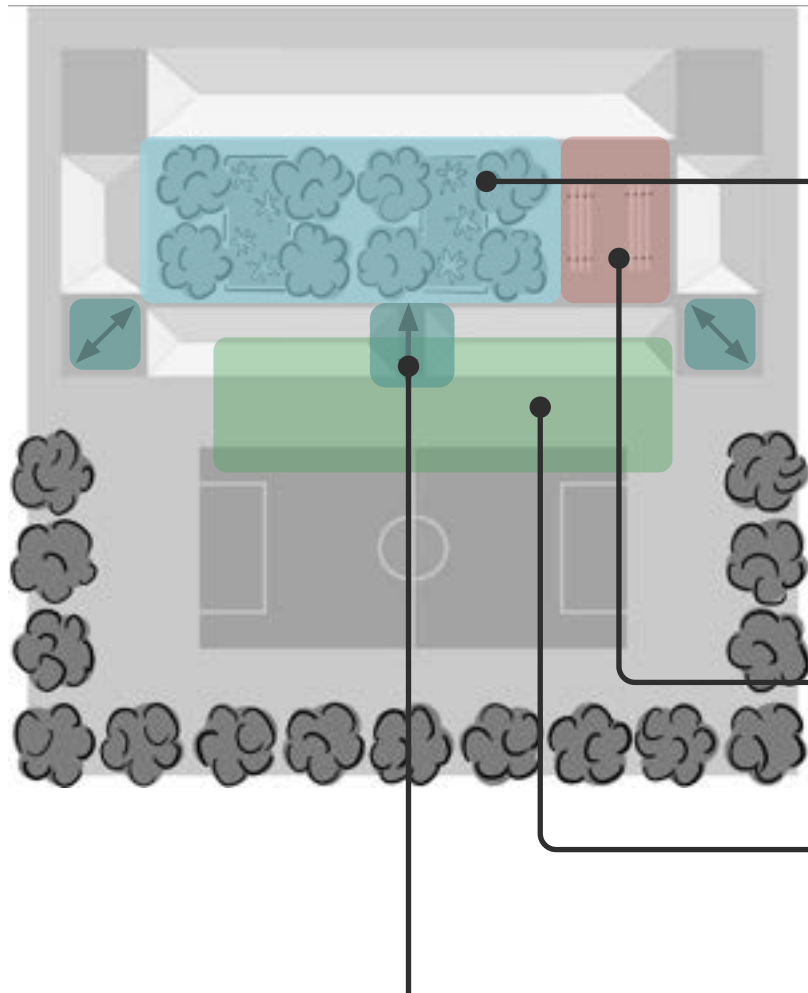
Limited room for future changes. Because buildings tightly surround the central green, it can be difficult to expand or add new facilities without reducing or disrupting this space.

Potential crowding at key points. Entrances and pathways around the central space can become congested during busy times, making movement and supervision more challenging.

Higher maintenance needs. Well landscaped areas with trees, gardens and seating require regular upkeep. This can place ongoing pressure on school maintenance budgets.

Distance to sports facilities. Main sports fields are located further away, which can increase travel time for classes and make supervision and equipment management more complex.

Wellbeing opportunities



Emotional

Give students at least two ways to enter and leave busy areas to reduce the feeling of being in the spotlight. Keep main circulation routes clear and uncluttered so movement is low stress.

2.1 Navigation



Entry to Compass Catholic Community School.
Designer and Photo credit: Swanbury Penglase



Cognitive

Design outdoor spaces to provide cognitive relief. Use nature as a calming device. Provide direct physical access from classrooms to outdoor courtyards to make it easier for students to access a brief mental reset.

4.1 Reduce cognitive load



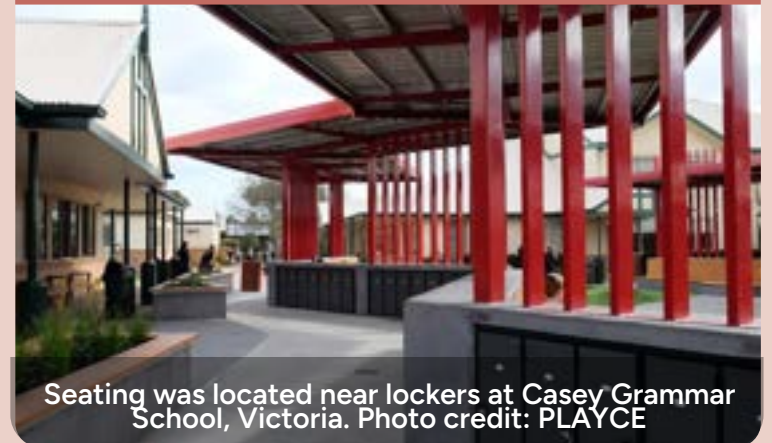
A seniors space. Regional government school in NSW. Photo credit: Principal 14



Social

Position social spaces and seating close to key amenities such as lockers, canteen areas and sporting facilities to make connection easy and reduce students feeling conspicuously alone.

5.3 Location of social spaces



Seating was located near lockers at Casey Grammar School, Victoria. Photo credit: PLAYCE



Physical

Create playful spaces where students can climb, balance, swing and hang. Insert playful touches to existing infrastructure, such as spinning seats, murals and natural materials.

1.3 Movement and play



Climbing structure at Woodcroft College, SA
Designer: Swanbury Penglase, Photo credit: Brad Griffin

06 Active Heart

Introduction



The Active Heart is organised around a large central courtyard with buildings arranged around it. The space consists predominantly of pavement or grass for purposes of sport and active play.

Building organisation: Buildings are clustered around a central courtyard, creating a clear, inward-facing focus. Smaller outdoor spaces may exist elsewhere, but they play a secondary role.

Canopy: The central area has limited trees and greenery. Most planting is placed around the edges or in smaller pockets between buildings. The main courtyard is largely hard-surfaced and designed for high levels of physical activity and high energy movement.

Programming: Outdoor use prioritises active recreation. The courtyard is often marked for ball sports and may include built shade structures. Other major sports facilities, such as playing fields, are usually located elsewhere on the site. The design places physical activity at the centre of school life.

“I guess, how do we give, how do we give some kids the room to play and be boisterous and just get their energy out and some kids to sit and reconnect with friends versus some kids just being far more reflective and sitting in quiet. I think that those things need to be gained. Differentiation is important in the classroom. It’s equally important in the playground. And if we’re not catering for that, then it’s, it’s raising the same difficulties that we face in a classroom.”

Principal 22



Government school, estab 2002, 833 students, NSW



Independent school, estab 1967, 132 students, VIC



Government school, estab 1989, 960 students, ACT



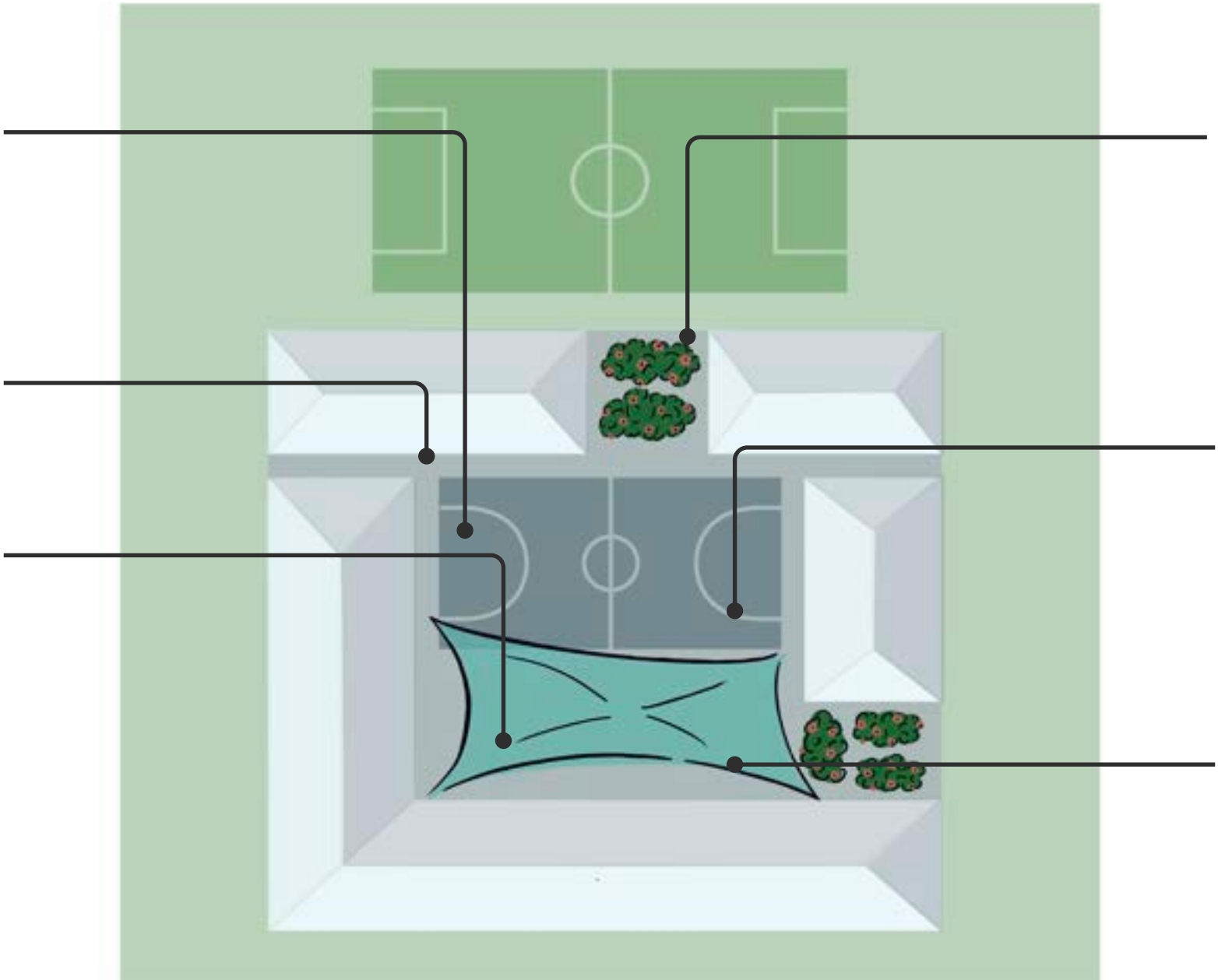
Government school, estab 1962, 767 students, TAS

Site Opportunities

A large, centralised activity zone that supports high-intensity use. Multiple games and activities can occur simultaneously, Its size can support age-based zoning, organised games, and informal recreation within a single, coherent space.

Good supervision. Surrounding buildings provide clear sightlines, making it easier for staff to monitor students.

Highly durable and flexible. Hard surfaces are robust, usable in most weather and easy to mark for structured activities. Manufactured shade structures can be added to improve comfort; the open configuration provides opportunities for student involvement in shaping or decorating the space.



Site Constraints

Limited shade and greenery. The lack of trees and vegetation in the central area leads to minimal shade, limited biodiversity, and higher surface temperatures. As such, these spaces can become hot and uncomfortable during warmer months and offer fewer opportunities for nature-based play or restorative outdoor experiences.

High wear and maintenance pressure due to concentrated use. With most activity directed into a single central zone, surfaces experience significant wear and tear. This can lead to reliance on synthetic or artificial materials, increased maintenance costs, and reduced opportunities for natural turf or planting to thrive.

Less variety in outdoor experiences. The focus on active, hard-surfaced play can reduce opportunities for quiet, exploratory, social or nature-oriented activities. Smaller pockets of vegetation around the edges may not fully compensate for the lack of varied landscape types, resulting in a less balanced outdoor environment.

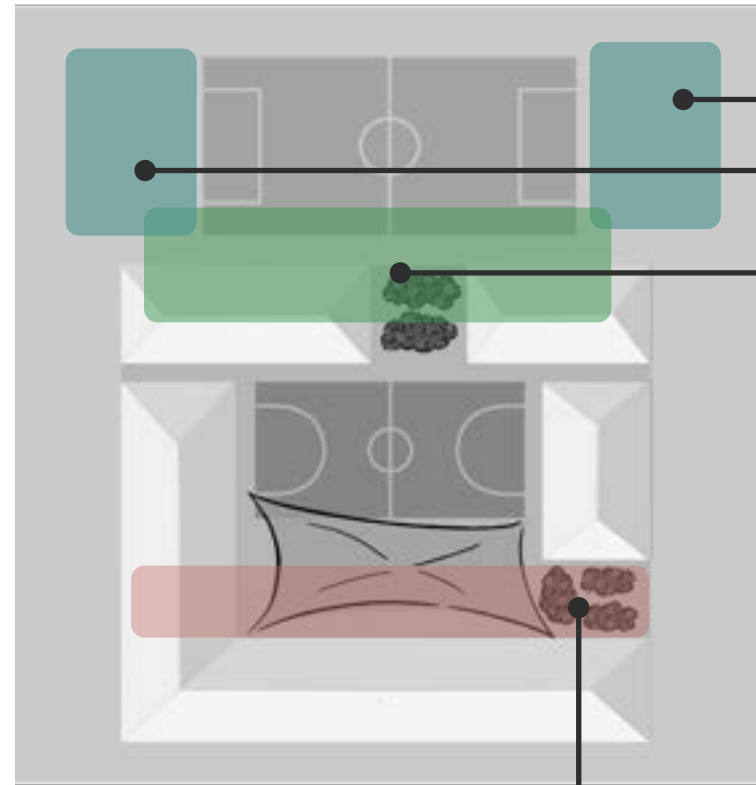
“Your netball court or basketball court in summer, it’s off limits because it’s too hot and in winter it rains so you lose it.”

Brisbane Workshop

“What schools often suffer from is too many concrete, too much concrete, and it’s too much too much grey. And not enough color. And that sort of thing.”

Practitioner 20

Wellbeing opportunities



“They need a garden somewhere. Our school has so much space, they could totally make a garden. They’ve made so many things that just don’t get used. Really pretty with gardens. But there’s no gardens inside the school.”

School L, Year 9-10F

Social

Provide a variety of seating configurations to accommodate different preferences and seating postures.



5.1 Variety of social spaces



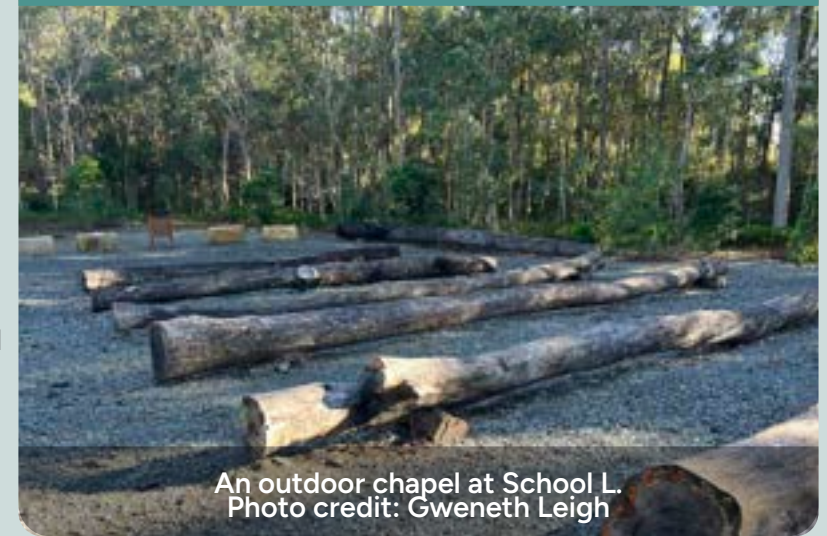
School M provided movable chairs.
Photo credit: Hannah Richardson



Emotional

Include some quiet gathering areas that feel slightly away from the classrooms, so students experience a sense of emotional distance and reset.

2.3 Privacy



An outdoor chapel at School L.
Photo credit: Gweneth Leigh



Physical

Create a share use zone that prioritises students and enables safe movement from the school to the playing fields.

1.3 Movement and play



A transition space between the classroom to the oval. Woodcroft College, SA.
Designer: Swanbury Penglase, Photo credit: Brad Griffin.

07 Patchwork

Introduction



The Patchwork features a large site where buildings and outdoor spaces are spread out with no single central focus. This creates a mix of different spaces of varying sizes and uses across the campus. The Patchwork can be reflective of larger school campuses that have undergone expansion or incremental growth over a period of years, resulting in multiple activity areas dispersed throughout the grounds.

Building organisation: Buildings are scattered across the site with open spaces formed in between them. There is no clear central hub, and movement and activity are spread across multiple areas.

Canopy: Tree cover varies across the site, often located along boundaries, around sports areas, or near buildings. There is no consistent landscape structure, so greenery can feel uneven or disconnected.

Programming: Outdoor spaces include multiple sports fields, courts, and smaller open areas, supporting a wide range of activities. Some spaces may lack a clear purpose, leading to uneven use across the campus.

It's just so open. There's just nothing there. And there's so much, I know it's like a hill, but there is flat space that they could do something with. I only go there to transfer, throw a ball, but then it gets really annoying. People try to throw a ball and then you get yelled at, throw the ball. Yeah.

School L, Year 9-10F



Government school, estab 1980, 1970 students, QLD



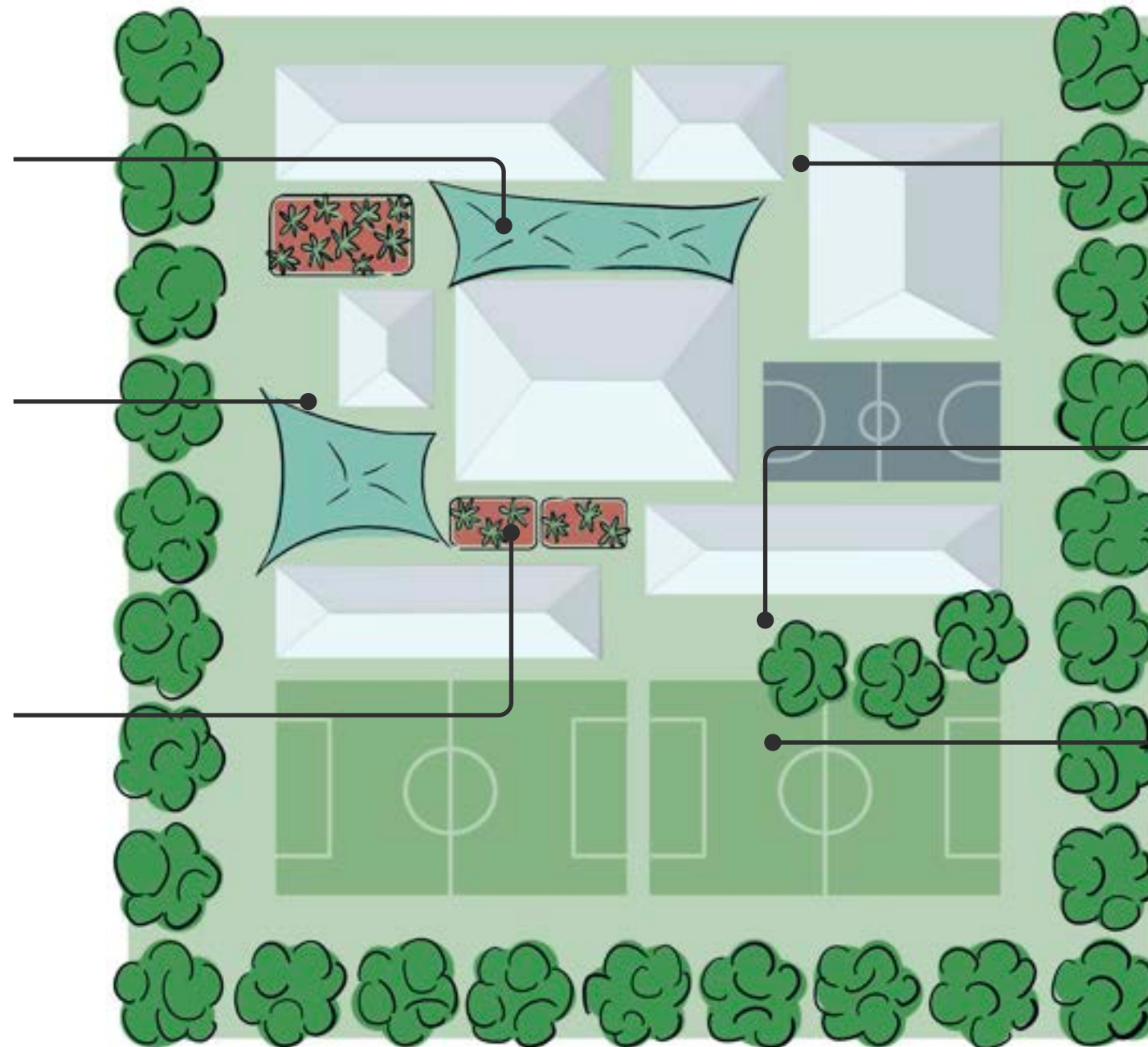
Government school, estab 2000, 735 students, NSW

Site Opportunities

Capacity to support a wide range of activities. Large sites can accommodate multiple sports fields, courts, and recreation areas, with room to expand in the future without major reconfigurations.

Flexibility for improvement over time and adaptive reuse. The layout allows schools to upgrade or add features such as gardens, shade or outdoor learning areas in stages, as needs change. This makes it possible to retrofit coherence over time and tailor specific pockets of the site to meet evolving needs.

Diverse micro-environments. Spaces between buildings can be used for different purposes. This could include areas for small social hubs and informal gathering, project-based learning, or shaded rest areas and quiet zones, contributing to varied outdoor experiences across the campus.



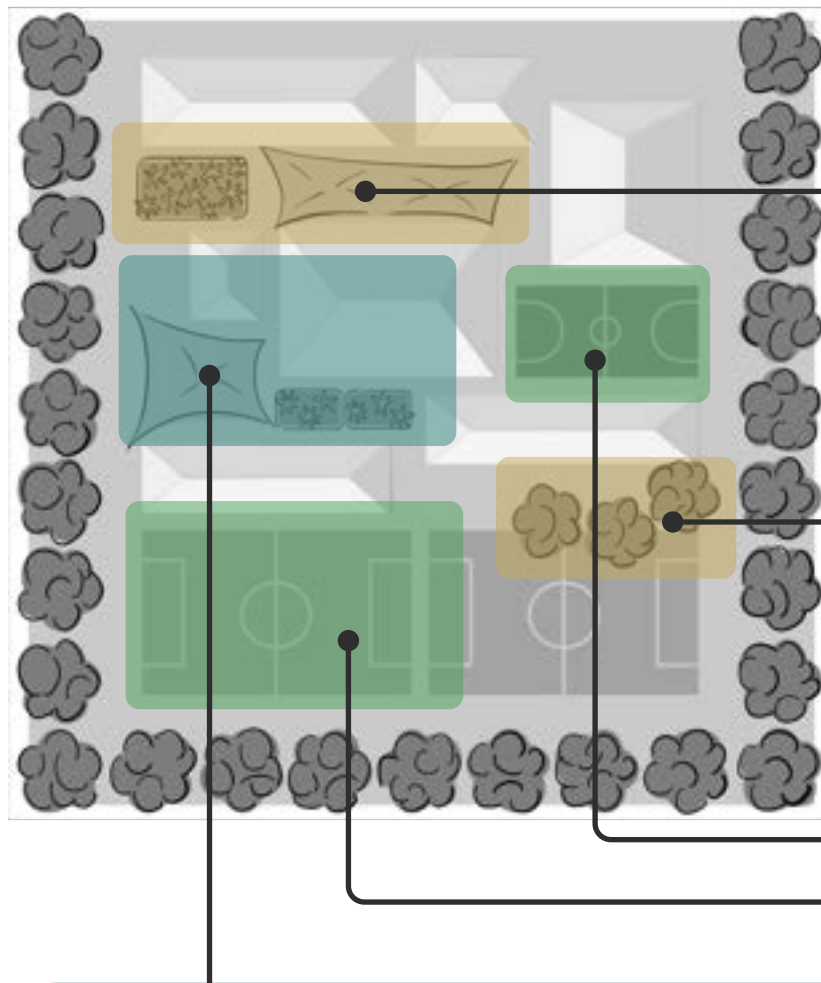
Site Constraints

Can feel disjointed and hard to navigate. Without a clear central space, the campus may feel spread out and some areas may lack a clear purpose. Pathways and routes to class can feel indirect, and the purpose of smaller open spaces may be unclear, reducing their usability.

Supervision can be challenging. Dispersed buildings and activity areas can create blind spots, long distances between key areas and an uneven distribution of students during break times. This can increase supervision demands and complicate the safe management of outdoor activity.

Inconsistent shade and quality of spaces. Because tree canopy and plantings are highly variable across the site, some areas may offer ample shade and amenity while others remain exposed or sparse. This unevenness can lead to discomfort in high-use spaces and make the campus feel visually and functionally disordered.

Wellbeing opportunities



Psychological

Offer a variety of ordered and organic spaces to provide students with choice on what best resonates with their needs.

3.1 Claimable space



Brighton High School, Hobart. Design: Play Street. Photo credit: Adam Gibson.



Physical

Offer a range of multi-purpose sporting spaces of different sizes that support a range of activities. Situate these zones away from quiet seating areas.

1.4 Sports



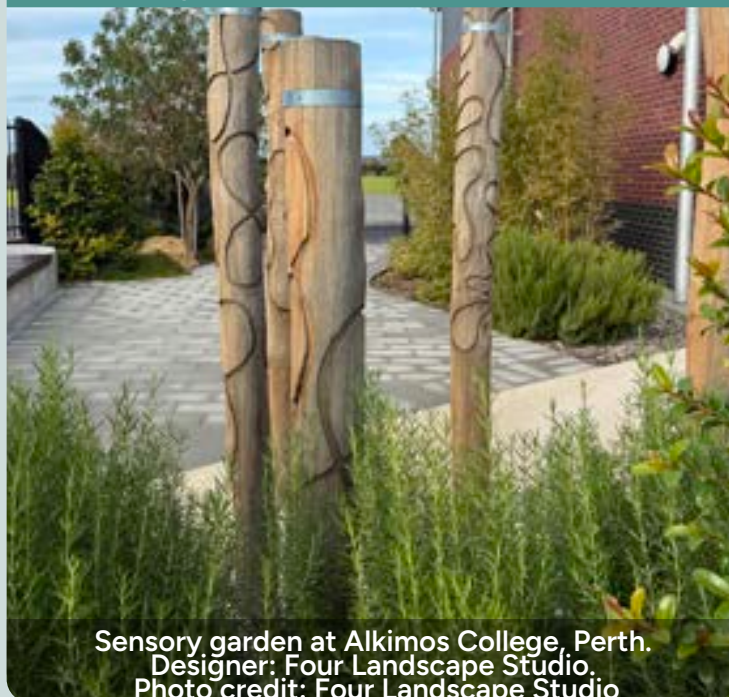
Climbing at Scotch College, Perth. Designer: Four Landscape Studio. Photo credit: Silvertone Photography



Emotional

Integrate opportunities for gentle sensory engagement that support calm and attention set away from high energy areas.. Incorporate tactile and mindful elements to invite touch and grounding. Finely textured plants, grasses or modest kinetic features can introduce quiet fascination without overstimulation.

2.2 Down regulation



Sensory garden at Alkimos College, Perth. Designer: Four Landscape Studio. Photo credit: Four Landscape Studio

“I think that defining zones is, is really quite important, but, you know, in a sort of very fluid way that it’s not sort of very harsh zoning, but through really fluid sort of transitions between, between spaces to designate areas for special activity, or for special functions...”

Practitioner 10

08 Hinge

Introduction



The Hinge is centred on a large, consolidated building that acts as the main hub of the school. Positioned centrally on the site, outdoor spaces are arranged around the edges – appearing to ‘hinge’ off the built form - rather than forming part of the central area. Outdoor activities unfold in a series of external spaces that radiate from the main buildings.

Building organisation: Buildings are grouped into a central cluster often linear in form, with most student movement occurring indoors or through covered corridors. Outdoor areas “branch off” from this central core, creating a clear separation between indoor and outdoor spaces.

Canopy: Trees and planting are generally located around the edges of the site or in pockets alongside outdoor areas. The central building zone has limited greenery, with vegetation mainly used to define and soften the outer spaces immediately next to buildings.

Programming: Active spaces like courts are placed close to the building for easy access, while quieter or landscaped areas sit further out. Larger sports fields are usually located toward the edges of the site, separating them from the main building core.



Catholic school, estab 1995, 1303 students, NSW



Government school, estab 1958, 1159 students, TAS

“I like to stay pretty far away...I normally stay by the...library because it's quieter. It's like not many people use the oval really. It's normally just like the boys who play soccer and they're like really violent.”

School R, Year 7-8F

“The challenge that I kind of wanted to solve is one of the issues of having very defined edges between certain typologies within the schoolyard.”

Student, Canberra Workshop

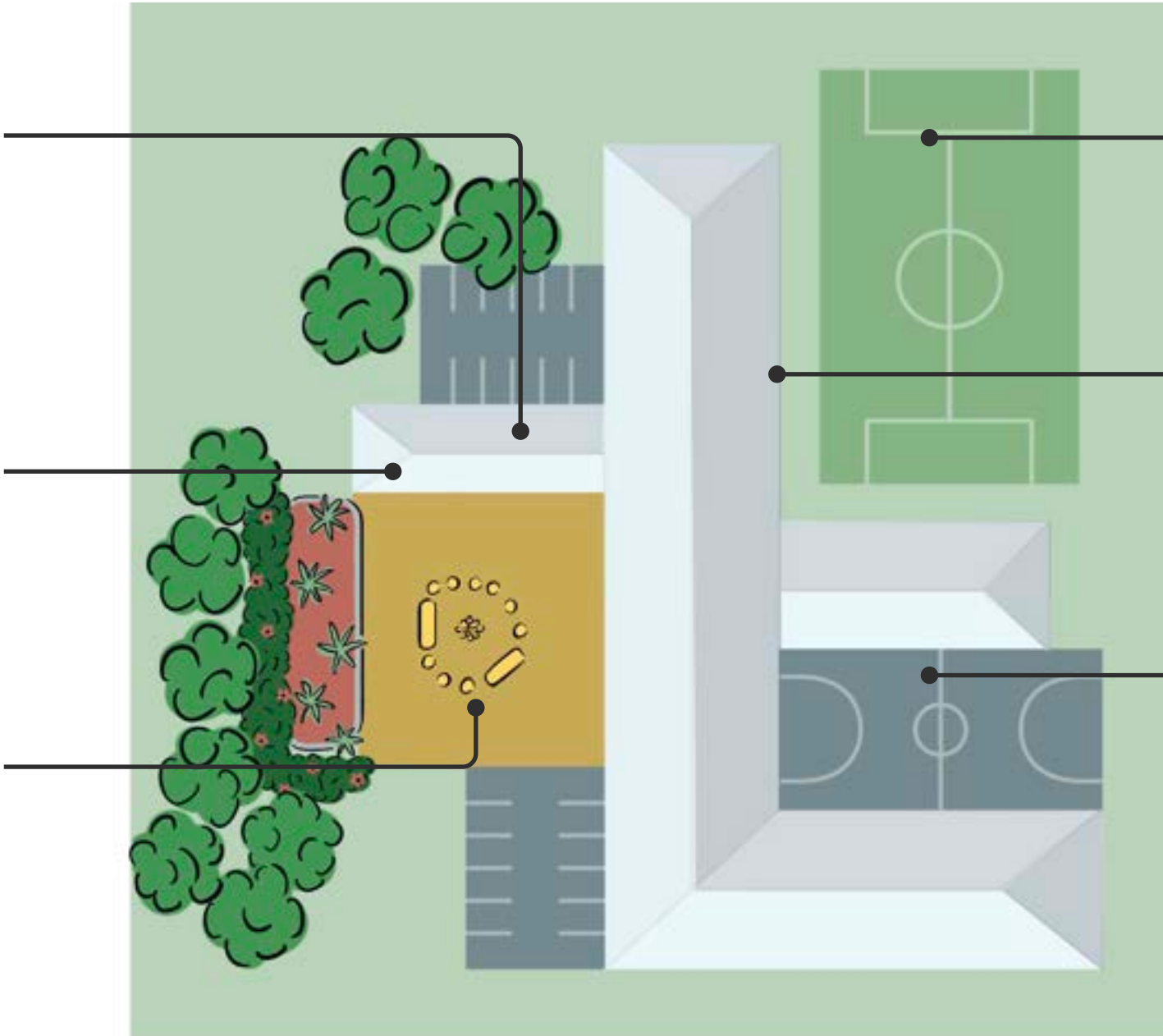
Site opportunities and constraints

Opportunities

Clear separation of spaces. The central building creates a clear distinction between indoor learning areas and outdoor spaces, allowing each to function effectively. This allows outdoor spaces to take on more distinct roles—active play, gathering, quiet reflection—without competing for central space.

Easy access to outdoor play and sports areas. Courts, play spaces and outdoor areas are located close to the main building, making them quick and easy for students to use. This proximity reduces travel time and supports high-frequency use of outdoor environments throughout the day.

Variety of outdoor spaces. Outdoor areas around the edges can be designed for different uses, including sport, socialising, and quieter activities, giving students more choice.



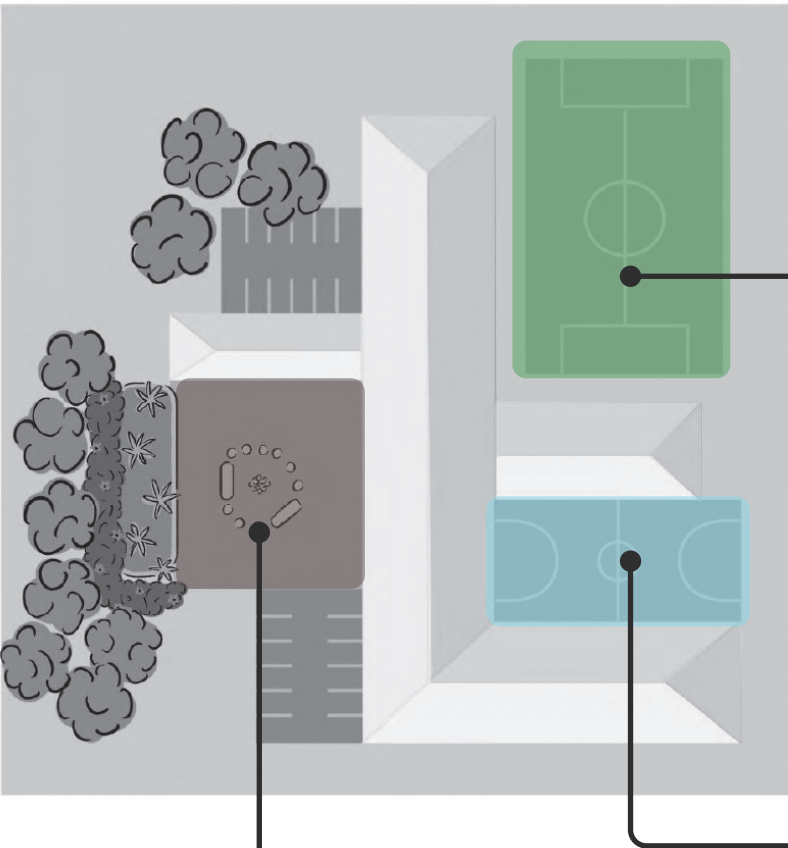
Constraints

No central outdoor gathering space. With buildings in the centre, there is no large shared green space. This can restrict opportunities for whole-school outdoor events or large communal activities.

Outdoor spaces can feel disconnected. Because outdoor spaces are more compartmentalised, movement between them often requires re-entering or navigating around buildings. This can make wayfinding difficult and harder to access a range of different schoolyard experiences.

Inconsistent shade and greenery. The amount of trees and shade can vary depending on the site, with some schools having limited greenery and less comfortable outdoor areas.

Wellbeing opportunities





Physical

Choose materials to reduce temperatures in summer. Put shade structures over the hottest hardstand or spaces with high volumes of students.

1.1 Environmental comfort



Covered playing courts at School L.
Photo credit: Gweneth Leigh

6.4 Shared school spaces



Example of a campus yarning circle.
Photo credit: Gweneth Leigh



Cultural

Create spaces that invite in the broader community for shared activities. To comfortably host gatherings such as to celebrate important milestones or commemorate significant dates.



Cognitive

Offer calm amenities within smaller courtyards. Adopt diverse materials with a preference for natural elements for open-ended use. Consider ground covers, rocks, logs, native planting. Add variety that can be walked, measured, sampled and tested in tasks.

4.1 Reduce cognitive load



Courtyard stream at a community college in Victoria.
Designer: Cley Studio. Photo credit: Peter Casamento

“Just using the outside space as a resource to build awareness around First Nations cultures and things. Even if you put in a plant and [someone] is like, what is that? And then someone can be like, oh, well that’s a bush apple, that kind of thing,”

Practitioner 1

09 Curated Courtyard

Introduction



The Curated Courtyard features several smaller, landscaped courtyards spread across the school rather than one central space. These create a series of connected outdoor areas that support a wider range of uses and experiences.

Building organisation: Buildings are arranged in clusters or layers that create multiple internal courtyards. This forms a network of outdoor spaces throughout the campus, rather than a single central hub.

Canopy: Trees and planting are integrated within each courtyard, providing shade, greenery, and a more comfortable environment. This can result in a cooler, more visually appealing campus with greenery embedded in everyday spaces.

Programming: Courtyards support a mix of uses, including socialising, outdoor learning, and quiet activities, in addition to sport. Larger sports fields and courts are usually located at the edges of the site, separate from these smaller spaces.



Catholic school, estab 1969, 454 students, QLD



Catholic school, 1986, 669 students, NSW



Independent school. estab 1959. 928 students. ACT

“What I’ve designed is... kind of a courtyard and it’s got a big garden that surrounds outside...It’s open socially... it’s just private from the rest of the school.”

Student, Canberra Workshop.

“In terms of these edges, if they can be transition... it’s that same sort of sense that there’s sort of a flow to it. So it’s not this abrupt...”

Brisbane Workshop.

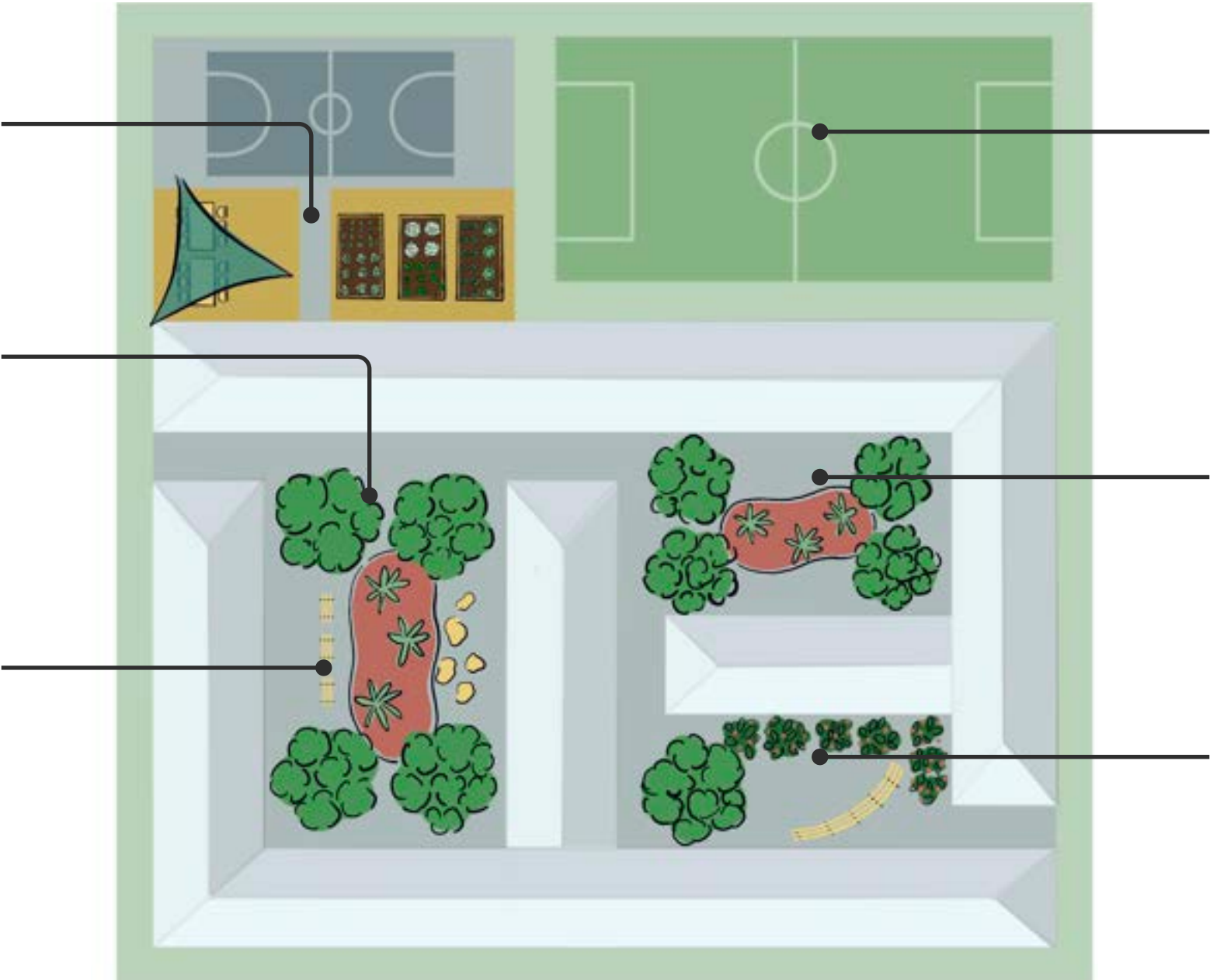
Site opportunities and constraints

Opportunities

Range of outdoor spaces for different needs. Multiple courtyards provide a variety of settings for quiet time, socialising, and learning, allowing students to choose spaces that suit them.

Greenery integrated into daily school life. When trees and gardens are built into these spaces they can create shade to improve student comfort. The presence of trees, garden beds, and curated planting within each courtyard can also create visual interest and improve environmental comfort.

Better student choice and social balance. Having several similar spaces allows different groups to spread out or year levels to gravitate to preferred spaces. This helps to reduce crowding and support positive social interactions, giving students the choice of outdoor space that best matches their activity, energy level or social preferences.



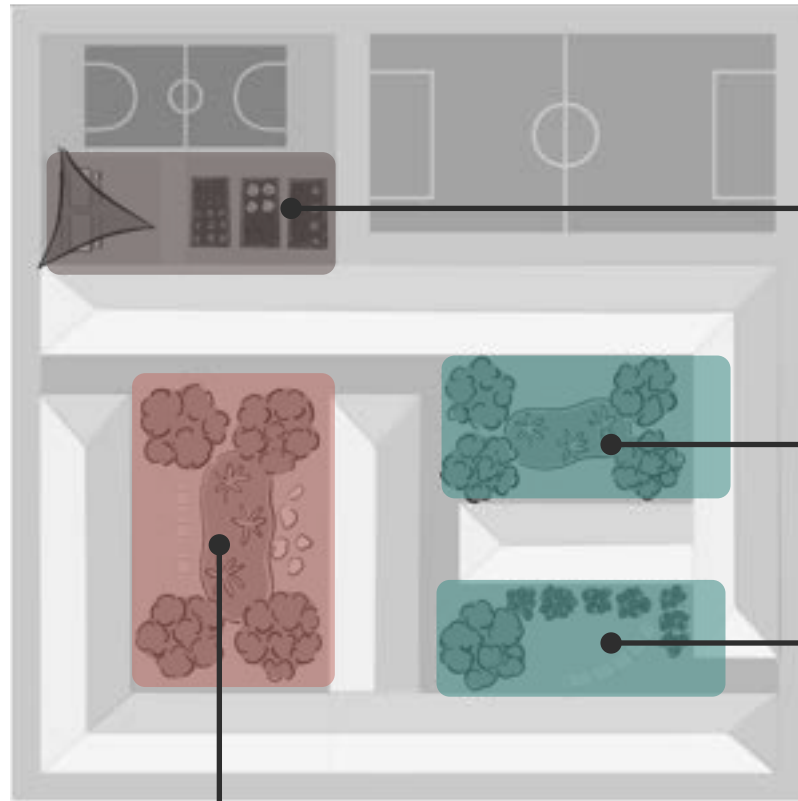
Constraints

Limited space for large sport areas on campus. Smaller courtyards mean major sports facilities are usually placed at the edges of school sites, leaving the central campus without a contiguous open field or expansive hard surface. This can increase travel distances and concentrate high-intensity activities away from the main teaching precinct.

Higher maintenance demands. Managing several vegetated courtyards, each with trees, beds, and bespoke program areas, demands regular ongoing maintenance. Irrigation, pruning and garden upkeep may require more time and resources.

Less space for whole-school gatherings. With no single large central area, it can be harder to bring all students together or support large, schoolwide events. The site may also feel spatially divided if courtyards are not well connected.

Wellbeing opportunities



Social

Use seating options that can be scaled up and down for different group sizes. Incorporate permeable edges and several entry points so students can drift in and out of groups more easily.



5.2 Scale of social spaces



The Sanctuary, a student-designed space used for solo use and group gatherings at a regional government school in NSW. Photo credit: Principal 16



Cultural

Embed student participation in contributing to the schoolyard such as through ongoing roles in planting, monitoring and caring for school landscapes. Support curriculum links through care and seasonal observation.

6.1 Belonging



J J Cahill Memorial High School.
Designer and Photo credit: Tanya Wood.



Emotional

Students can feel self-conscious at entry and arrival points and would benefit from seats and sheltered places to pause while waiting for friends or classes to begin.

2.1 Navigation



Seating cluster creates a pause point near the main walkway and stairs at School R. Photo credit: Gweneth Leigh.



The Schoolyard Greenprint
2026

The Schoolyard Greenprint

Volume 3

Design Guide



Practical guidance to transform schoolyards
into wellbeing-focused learning landscapes

Contents

Authors

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Health Research Institute, University of Canberra

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Acknowledgement of Country

The Health Research Institute at the University of Canberra acknowledges that it stands on Aboriginal land. We pay our respect to the Ngunnawal people, the Traditional Custodians of the land on which this work has taken place. Country shapes many of the spaces we move through, especially our schools, where it is a powerful teacher that invites curiosity, learning and responsibility. We appreciate the privilege of living on this Country and consider its future grounded in respect, understanding and reconciliation.

Enquiries

For enquiries or more information on the Schoolyard Greenprint please contact the Schoolyard Greenprint team at the Health Research Institute at the University of Canberra via email: schoolyardgreenprint@canberra.edu.au.

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The Schoolyard Greenprint



About the Schoolyard Greenprint

The transition to secondary school involves not only new routines and relationships, but also a shift in how students experience outdoor spaces. Moving from playgrounds to playing fields changes how students build connections, manage emotions, and navigate belonging. The **Schoolyard Greenprint** responds to this change by positioning outdoor spaces as essential to wellbeing and inclusion.

Developed over two years with input from students, educators, designers, and community members across Australia, the Schoolyard Greenprint provides a coordinated suite of resources to guide better schoolyard design. Grounded in student voice and research evidence, it helps schools understand what young people need from outdoor environments, explored through the following four key documents:

- Overview:** Explores how outdoor spaces influence student health and wellbeing.
- Typologies:** Guides planning through different campus layouts, showing how design shapes activity, social interaction, and connection to nature.
- Design Guide:** Offers evidence-based principles and wellbeing design strategies
- Engagement Toolkit:** Provides tools to capture student experiences and evaluate how well spaces are performing.

Together, these resources offer a roadmap for creating schoolyards that support diverse student needs. They equip principals, designers, and communities with practical guidance to advocate for and deliver outdoor environments that help students feel safe, connected, and able to thrive.



About Volume 3: Design Guide

The Greenprint Design Guide provides a comprehensive, evidence-based framework for designing school outdoor spaces that better support student development and learning. Guidance is organised around six aspects of wellbeing: physical, emotional, psychological, cognitive, social and cultural needs, and sets out specific design guidelines and practical solutions for each.

Welcome

The Greenprint Youth Voices, a group of 5 young adults who have shaped the Greenprint, welcome you to this document.



Chloe Richards

Gamilaroi woman
Lives on Wiradjuri country,
New South Wales,
Rural school



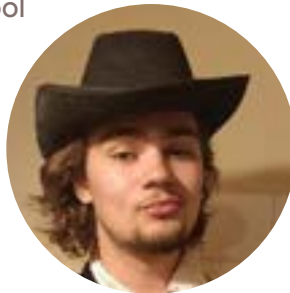
Emily Garrett

Lives on Yugambeh land,
Queensland,
Suburban school



Finlay Robinson

Lives on Ngunnawal land,
Australian Capital Territory,
Suburban school



Hunter Jackson

Lives on Wiradjuri Land,
New South Wales,
Rural school



Rhy Baumann

Lives on Kurna land,
South Australia,
Suburban school

Our role

We have had a diverse schoolyard experiences, having attended schools from Queensland to South Australia, rural to urban, both independent and government. Despite this, we all agree that the current quality of schoolyards had an impact on our day-to-day wellbeing while at school, and that the quality of schoolyards across Australia can be improved.

As young people, we hope that this document is used by and with young people so they thrive in schoolyards. We hope that these documents inspire you, especially young people, to consider future schoolyards differently. We think the content in the following documents will provide school executives and designers with practical solutions to schoolyard problems that many students, us included, have experienced.

The Greenprint Youth Voices has been a continual source of insight in developing the Greenprint. We have spent time talking to other students and young adults, ensuring that the information in the Greenprint accurately reflects our experiences. This approach upholds the methodology of working with young people to achieve better outcomes for young people.

The future of schoolyards, in our words

We want schoolyards that are safe. We want schoolyards that are open, not crowded, sunny, grassy, natural, with some sort of shade or cover for if it rains. We need safe spaces in our schools for times of stress and hardship so that we can regulate ourselves. We want schoolyards that give everybody space but still connection. We want schoolyards that function in many ways, spark creativity and show an element of joy.

As young people we want schoolyards that:

- inspire young learners while providing a greener and more inclusive space to do so.
- are more sustainable, nurturing and innovative future. Making change for future generations.
- provide students free access to areas that support engagement between the environment (gardens, paved shaded areas, murals/art), each other (social areas) and ourselves (exercise, sport and study).
- create greener spaces, focusing on the development of students' wellbeing and ensuring we experience an enriching range of activities within schools that also provide inclusive and accessible spaces for our learning.
- create outdoor education spaces where students can succeed in all aspects of life.
- are green outdoor spaces where all students can get their daily dose of nature to support their personal development and wellbeing

Thank you for caring about a schoolyard in your life. We hope this guidance inspires you as much as this journey has inspired us.

“Caring for the schoolyard is emblematic of caring about learning, and about student wellbeing and staff wellbeing.

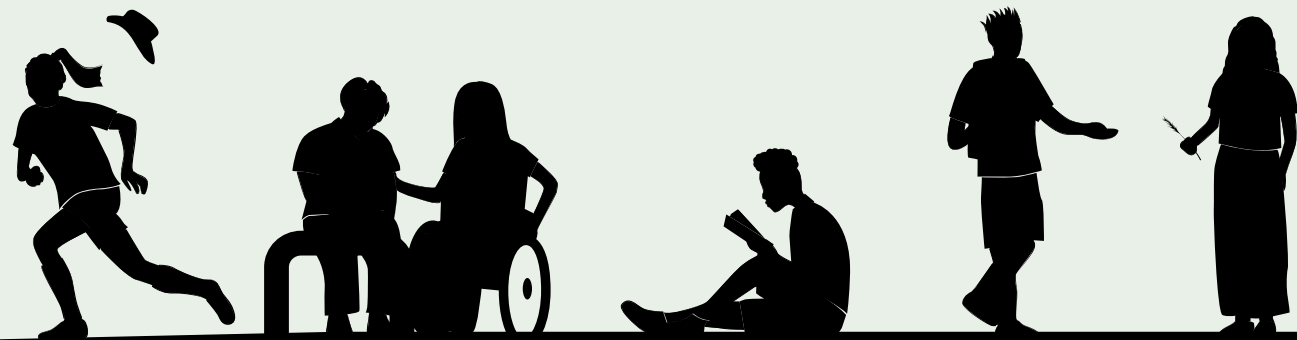
And you can’t say that often enough.”

Andrew FitzSimons, Principal

The Greenprint Team

The Greenprint team wishes to thank the students and staff of all the schools who participated in our project. Without you, the Schoolyard Greenprint would not have been possible.





Introduction

The current state

Co-design has been central to this project; we began by hosting a workshop with our approximately 20+ member Reference Group in November 2024, who articulated the challenge we needed to solve. The group brought together: educators, designers, health and wellbeing experts, accessibility and inclusion advocates, parent representatives and school sector leaders. The feedback below reflects some of the insights from this session.

“we get feedback from parents,
the playground can feel like a battle ground”

Anti-bullying advocate

Why schoolyards need rethinking

As Australia’s climate changes, schoolyards are becoming more uncomfortable, yet “keeping students in classrooms during breaks because of bad weather is difficult for all.” (Independent schools advocate). As a result “students & parents [are advocating] for increased shade” (Cancer prevention practitioner). Shade is not only about sun protection; it supports “relaxation, creativity, comfort and safety” as well as physical activity and learning (Cancer prevention practitioner). Time outdoors does not always provide the recharge students need.

In many ways, schoolyards have remained the same while indoor environments and students’ needs have rapidly changed in the last 40 years. Participants described schools “still operating under the same systems of the 60s and 70s” with old campuses “surrounded by concrete at every turn” (Anti-bullying advocate). Others noted that “the brief hasn’t changed” even as expectations of learning, wellbeing and inclusion have shifted (Accessibility Consultant).

Schoolyards could better meet the developmental needs of students. As one member noted: “when outdoor spaces are designed for specific ages and developmental needs they can be highly successful” (Independent Schools Australia). Schoolyards are often dominated by traditional sport: “For those that are interested in movement [that’s not formal sports], there are not many options, particularly for girls” (Reference Group member). Students need more varied outdoor environments, “a place where they can sit in solitude” (Anti-bullying advocate) because “not everyone wants to sit at the big table” (Neurodivergence advocate).

Yet, as our cities become denser and enrolments grow, “a school can find it difficult to have a large enough footprint for outdoor spaces” (Neurodivergence advocate). This means schools are being asked to do more with less outdoor space, while students need more diverse and restorative places to spend time during the school day.

Without evidence nothing will change. Designers, government and schools alike know that schoolyards matter but observe that “outdoors [is] seen as left over” (Independent schools advocate) “instead of being essential to learning” (Designer). They also acknowledged that schoolyards are not like standard urban environments that people can choose to leave. Rather, the design community needs more “understanding of what schools need and what works with different age groups” (Independent schools advocate).

Future state

Schoolyards that grow wellbeing

As parents, teachers and designers, we want schoolyards to meet students’ needs each day: comfort in all weather, play that’s not childish, quiet when everything is overwhelming, a discrete spot after a bad test result, a place that speaks of their history, a hammock to lie in. Because we want schoolyards to shift from “a place of judgment” to “a place of safety, where every student has the room to be themselves” (ant-bullying advocate) and students “feel ready to re-enter the class learning space” (Occupational therapist).

How the Greenprint responds

The Schoolyard Greenprint responds to stakeholders call for action: clearer guidance, stronger evidence, and co-design with young people.

Involving young people has been our priority. As one member noted, “incorporating student voice in the design of schoolyards is essential,” especially for students who currently avoid these spaces, because they can reveal “crucial barriers that may go unnoticed by adults” (anti-bullying advocate).

Stronger evidence and clearer guidance. Stakeholders called for “more industry recognised guidelines ...when presenting to clients and developers” (Accessibility consultant). As a result, each chapter provides guidelines and practical solutions, supported by qualitative and quantitative evidence and case studies of excellence that explain how to improve your schoolyard.

The Design Guide is organised around six domains of wellbeing, because “trying to be one size fits all doesn’t work” (Independent schools advocate). This includes physical, emotional, psychological, cognitive, social and cultural needs.

“[we need] guidelines informed by data that demonstrate to the client
and the people with the money why it is worth their investment.”

Reference Group member

The Schoolyard Greenprint Framework

Schoolyards that grow wellbeing



About this document

The Greenprint Guidelines

The Design Guide is a comprehensive framework for designing schoolyards that better support adolescent development and wellbeing. It is organised around six key domains—physical, emotional, psychological, cognitive, social, and cultural needs—and provides 22 guidelines with practical design solutions for each.

At its core, the guide emphasises that schoolyards are critical learning and wellbeing environments, not just recreational spaces. It argues that outdoor design should respond to the distinct developmental needs of adolescents, which differ from those of younger children and adults.

Taken together, the advice provided advocates for diverse, flexible, and inclusive school environments that empower students, support wellbeing, and reflect contemporary educational and social needs.

How to use this document

The advice provided through the Greenprint Design Guide is organised based on the visual framework on page 10 and featured below. Each chapter provides a summary of developmental needs, accompanied by design guidance, case studies and practical solutions. This is further amplified through student personas, who reflect the insights shared by the 500+ adolescents who contributed to this research.



Student personas

Why use personas

Personas help adults make better design decisions based on real student experiences. Design standards can be interpreted as a list of required items, but the item itself is less important than the student need it meets. Personas help designers address a spectrum of student need when site, budget or design constraints limit the provision of specific spaces or features. When it is not possible to co-design with students, such as new builds, personas bring student perspectives into the design process while protecting the anonymity of the students who contributed to this research. When engaging with students, personas can support them to consider perspectives beyond their own. Further guidance is in the **Greenprint Engagement Toolkit**.

Personas: needs and constraints

Physical



Isla

Needs

- Movement to regulate her mood
- Variety and novelty
- Safe challenge
- Physical play

Pain points

- Boredom
- Active options are limited to sports
- Boys and older kids dominate the oval meaning others get left out
- After a rough soccer match, she needs to rest and drink but there isn't anywhere to do that outdoors

Emotional



Alex

Needs

- Calm, shade, low sensory stimulation;
- One-to-one or alone near others
- Permission to be still
- Dignified toilet access while they figure out their gender identity

Pain points

- Noise and crowds are overwhelming, they become disregulated, affecting others
- Schoolyard feels hot and exposed
- Feels judged when alone
- Sits in a stairwell to get privacy

Psychological



Sylvia

Needs

- Her own spot
- To contribute to proposed changes in the schoolyard
- Autonomy and spaces to claim
- Accessible spaces

Pain points

- Blocked or rough pathways
- Unspoken territory rules about where she can't go
- Being displaced (especially entering senior years)
- Gets frustrated when she can't access spaces like other students

How they were developed

These personas represent the needs of the over 500 students who participated in the Greenprint research. They were drafted by the Greenprint Youth Voices based on lived experience, survey data and focus group sessions.

How to use them

Each persona represents a realistic bundle of needs and pain points that should be accounted for in schoolyard designs. They illustrate a spectrum of student experiences and provide designers with a tool to use in responding to these varying needs.

Cognitive



Marcus

Needs

- An outdoor study space
- Clear spatial boundaries and transitions
- A space to pursue hobbies
- Order, fairness, and consistency in shared spaces
- Clear wayfinding

Pain points

- Ambiguous or rapidly changing rules
- If there are no structured options break becomes aimless
- Goes to the library but it's full

Social



Noah

Needs

- A hangout spot with his mates
- A lounging chair or hammock
- Casually shoot hoops while socialising
- A space to rest after a bad test result
- Good sightlines to find friends

Pain points

- Gets in trouble for socialising in the senior's hub
- Can be loud and rough, intimidating younger students
- There's not enough space for his friends at the picnic table

Cultural



Shreya

Needs

- To feel she belongs
- To express her creativity in the schoolyard
- To connect to her ancestors and cultural plants
- To lead ceremonies for the school
- When it's parent-teacher time, to bring several aunties along and talk outdoors

Pain points

- The school building was once an orphanage and community elders don't feel comfortable there



Chapter 01

Physical Needs

1 Physical needs

Students undergo significant physical change during adolescence. Their need for physical activity, rest, food and shelter are distinct from those of children and adults. Having a range of spaces that accommodate different group sizes and activities can help students learn how their bodies are changing through varied forms of movement and use.

Adolescents also grow a greater sense of personal space during this period. They reported wanting to be away from crowded areas such as lockers or tuck shops. This is particularly the case for students outside dominant groups such as girls, Queer and neurodivergent communities.

Changing bodies also creates the need for greater privacy in accessing bathrooms, particularly for students who menstruate.

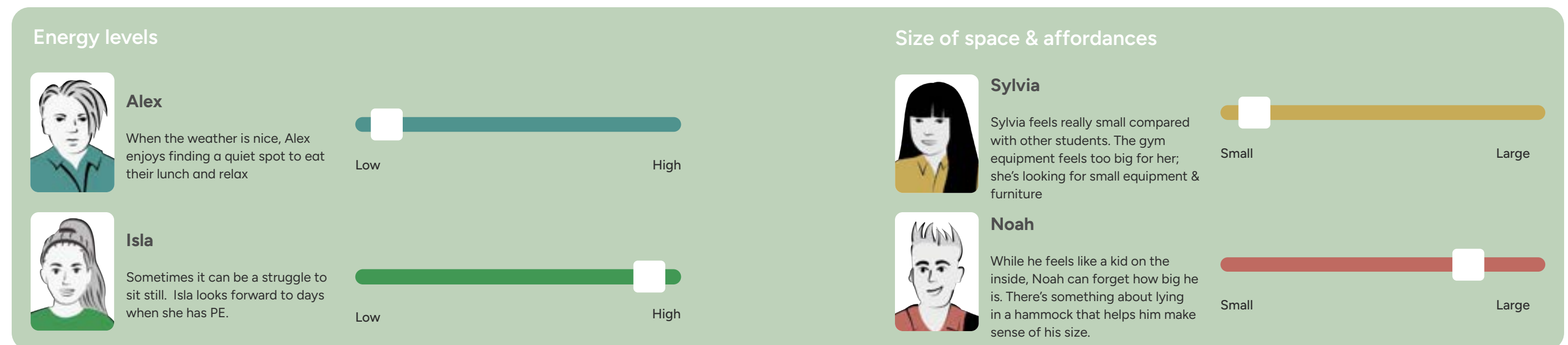
Play continues to be a developmental need during adolescence, but it often shifts toward more social forms as students become more aware of how they are perceived.

Biologically, teenagers are predisposed to later sleep and rest cycles than adults due to shifts in circadian rhythms. Among the more than 1000 people involved in this research, places for rest was one of the most commonly requested schoolyard improvements.

Children can be more physiologically vulnerable to heat stress than adults. Typical urban schoolyard designs, often dominated by hard surfaces and lacking vegetation, can make them extremely hot and expose students to unsafe levels of heat (Antoniadis et al., 2020).

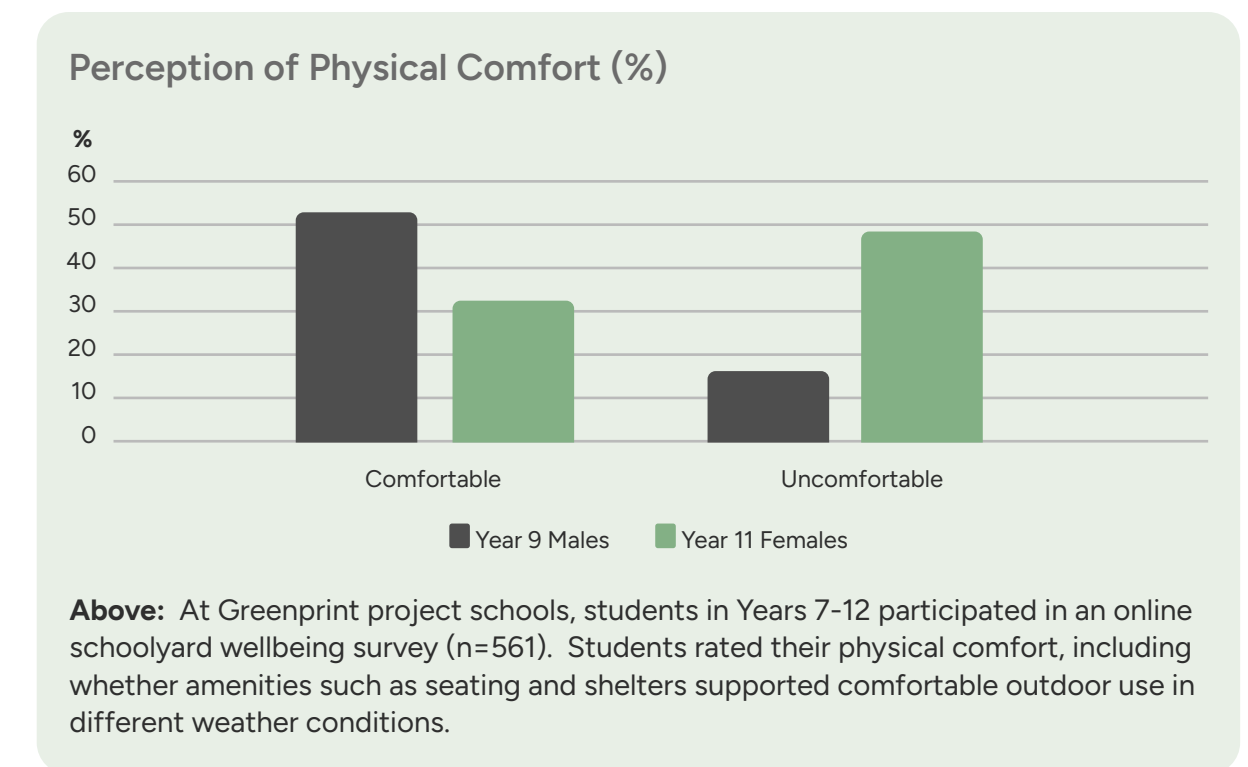
How to design for student needs

Below: When designing for the physical needs of students, there are two significant spectrums to design for: energy levels and size. Energy refers to a student's need for opportunities for physical activity, such as sport. Size refers to the significant range in physical size from age 12 through to 18. Students vary on both spectrums; a single student, such as Isla, could one day be energetic and the next need rest.



Evidence

Schoolwide surveys results at Greenprint schools indicate that females, especially older female students, feel less physically comfortable in schoolyards. This could be because the seats and social spaces do not meet their needs for friendship groups that change in size or configuration. On site visits, female students were often observed sitting on the ground in uncomfortable settings.



The Active Explorer



Isla

Age 12, Year 7

Pronouns she/her

"lunchtimes
[are] incredibly,
incredibly boring."

School L, Year 9–10F.

Isla loved her playground in year 6. By contrast, her new schoolyard feels boring. Exercising is how she regulates, socialises and gets ready to return to class.

At high school there are wide open spaces where Isla feels on display, and uncomfortable in a skirt. She moves constantly and gets in trouble for jumping from the picnic table to retaining wall.

Isla sees how older students dominate the oval and how sitting still becomes the default for many girls.

Her school decided to put in a swing but there were lots of rules. These frustrate Isla, as she wants to swing with her friends but there's a rule of one person per swing.

In summer months, the synthetic playing field is too hot to use. Black pellets get in Isla's shoes. The area has experienced drought and it's often very hot in the school, especially the quadrangle in the centre where there is a lot of concrete.

Isla's high school was designed to house 1000 students, it currently has 2000 students and 58 demountables on site.

Isla is worried that they will lose their oval and her exercise options will be restrained.

Isla wants schoolyards that recognise growing bodies, changing confidence, and the importance of active play beyond sport.

When spaces support safe risk taking and physical expression, Isla regains joy, confidence and energy.

How to design for Isla

- More diverse exercise options such as ping-pong, a half netball court or a volley ball net.
- Risky play like a climbing wall or parkour set
- Ambiguous spaces such as a rope to climb a hill, a creek with stepping stones
- Informal activity like a small grassy area for casually kicking a ball
- Rest options after a game such as a hammock surrounded by vegetation with a bubbler nearby.
- Larger social spaces with mounds so her friends can sit on the ground.
- Smaller spaces and furniture reflecting that she's still just 12, like a tunnel to crawl through or netting to lie on.
- Activity that's social such as a walking loop wide enough for her friends or swings that take more than one person.

Meet.....they are.....16, female.....
Name your student.....About your student: age, gender, demographics etc.....
.....doesn't have many friends.....
they sometimes feel.....bored.....
.....Feeling in schoolyard.....
One day when.....the boys in the year level are.....in the schoolyard
.....acting intimidating, loud, and physical.....
.....What happened?.....
What they needed was.....a place to sit in a small group.....
.....somewhere to play and hangout.....
.....the boys that are intimidating.....
.....What did they need from the space?.....
It was important that the space.....has aspects of play and
.....mental stimulation, grass, seating, not so
.....loud.....
.....What qualities / functions / features were important?.....
So that.....
.....What is the impact or outcome? What is the moral of the story?.....

School L Teacher
story telling

Guidelines

1.1 Environmental comfort

Deliver reliable shade, rain and wind management across all high-use outdoor areas. Aim for a minimum of 30% living shade across campuses, particularly in highly used areas. [Page 30](#)

1.2 Maintenance

Design spaces to minimise maintenance, particularly by choosing native endemic plants. Choose robust natural materials and locate them out of the sun and rain. Maintain outdoor spaces to communicate their value and encourage positive perceptions of safety and use. [Page 36](#)

1.3 Movement and play

Offer physical activity opportunities beyond formal sports. Incorporate a spectrum of play types including playful landscape features, play equipment, walking tracks, loops, and spaces for nature play and age-appropriate risk taking [Page 42](#)

1.4 Sports

Offer a range of multi-purpose sporting spaces of different sizes that support informal activities other than traditional competitive sports [Page 46](#)

1.5 Rest

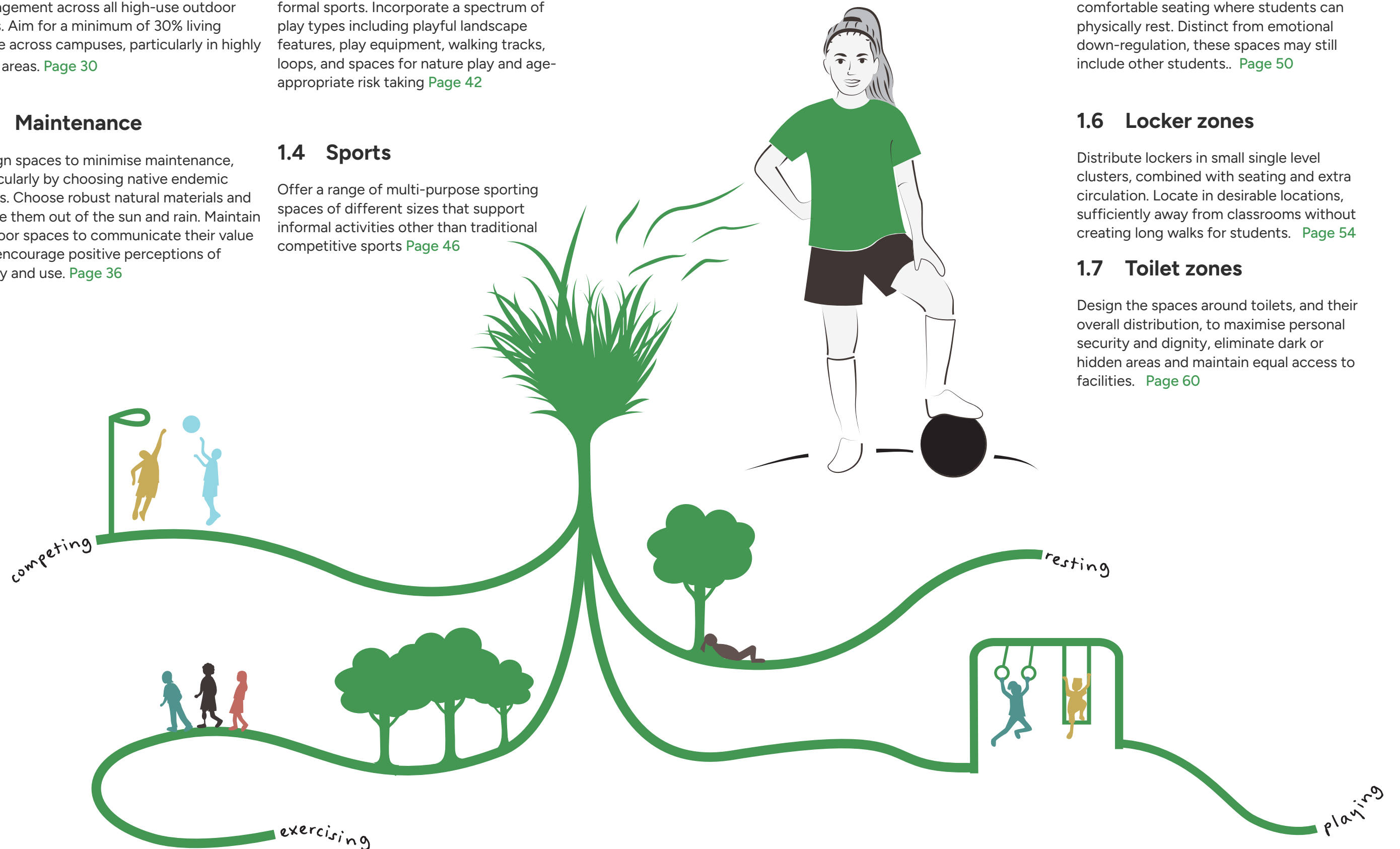
Provide shady semi-enclosed spaces with comfortable seating where students can physically rest. Distinct from emotional down-regulation, these spaces may still include other students.. [Page 50](#)

1.6 Locker zones

Distribute lockers in small single level clusters, combined with seating and extra circulation. Locate in desirable locations, sufficiently away from classrooms without creating long walks for students. [Page 54](#)

1.7 Toilet zones

Design the spaces around toilets, and their overall distribution, to maximise personal security and dignity, eliminate dark or hidden areas and maintain equal access to facilities. [Page 60](#)



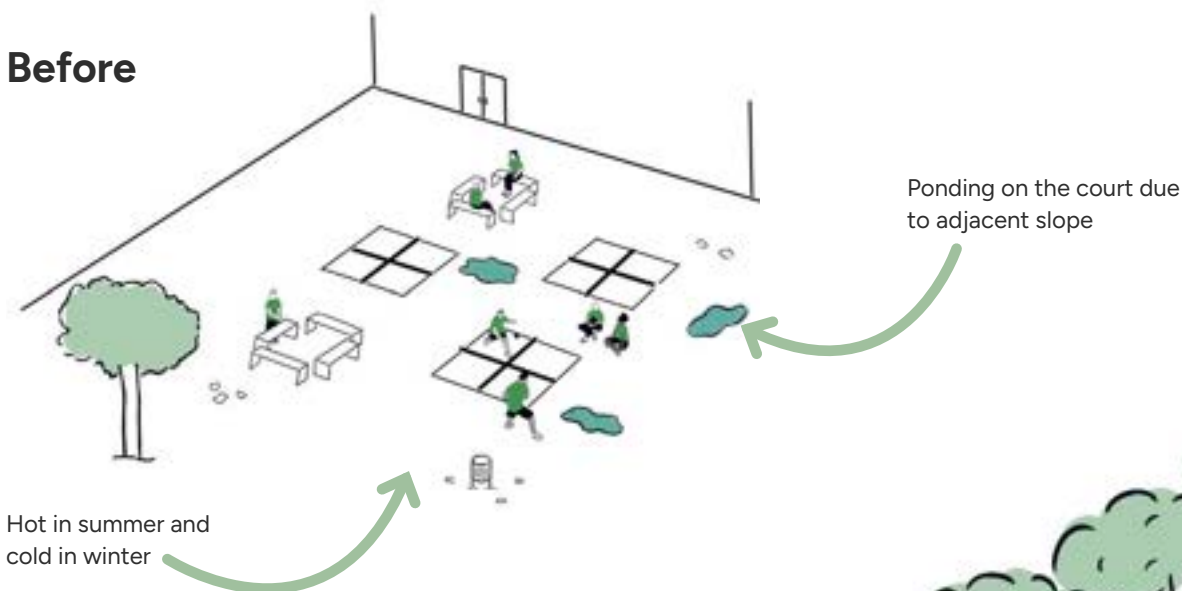
Applying the guidelines

“my favourite bit about high school was the undercover [area] we played a lot of table tennis with a lot of culturally diverse people.”



Health and Wellbeing Workshop

Before



After



“She wanted to be a part of the experience, but she didn’t want to walk straight through it.”

Adelaide workshop

1.1 Environmental comfort

Deliver reliable shade, rain and wind management across all high-use outdoor areas. Aim for a minimum of 30% living shade across campuses, particularly in highly used areas.

Student insights

As Australia's climate changes, students' experience of school outdoor spaces is becoming more extreme, diminishing its restorative effects. Many students must be outdoors during breaks, regardless of conditions, which are often dominated by hardscape. One participant noted: "I don't think concrete is... [good]. That's way too hot, especially in Australia" (Canberra Workshop). For students living in apartments or townhouses, the schoolyard may be their only daily access to the outdoors.

Students describe how poor weather protection limits their enjoyment of outdoor areas: "when it's cold like today, we all just stay inside because there's nowhere outside that's warm enough or covered properly" (School M, Year 8F). Older students appear particularly sensitive to weather when moving between classes in the rain. Inadequate sheltered space can also intensify social competition as students vie for the few protected spots available.



School 5 in NSW: dominance of hardscapes makes this space hot in summer and wet in winter

"When it's cold like today, we all just stay inside because there's nowhere outside that's warm enough or covered properly."

School M, Year 8 F

Principal insights

For principals, a lack of weather protection creates challenges beyond student comfort. When it rains, they have to "ring bells and let kids into the buildings" (Principal 2), which results in increasing boredom and behavioural issues. One principal highlighted: "kids [are] trying to find a quiet, warm, dry space in a hallway or under a stairway where they leave rubbish or cause issues or walk along hallways and bang on doors and upset staff." (Principal 5)

Principals want to provide all weather options for students outdoors but face barriers. While they prefer natural shade "you can't let the kids go into the trees because of the falling branches," (Principal 4) and yet "...you don't want to be sticking up the aluminium COLAS all over the place either" (Principal 2). Principals are also unsure how to increase tree cover with one

asking: "where do we plant trees?...How do we get this [school] more green?" (Principal 5) They confront significant costs for structural shade: for "covered walkways...we got a quote ... it comes back as 1.4 million" (Principal 4.). Drainage is also a challenge, especially on ovals which become "muddy patches without any grass, like it was terrible" (Principal 6). While some principals have addressed this through artificial turf, this creates its own problems:

"we had an ambulance called every single day [in the first week] for incidences for kids falling down and, you know, injuring themselves on the Astro turf."

Principal 6



School 8 in NSW: ponding on the oval prevents its use

1.1 Environmental comfort

Practical solutions

1.1.1 Implement a range of shade solutions across campuses, particularly high-use areas such as canteens, lockers and courts.

While prioritising living shade, include shade structures and sails, particularly in the early stages of growth when trees are small. Consider using the internationally recognised 3-30-300 benchmark for incorporating vegetation across campuses; this encourages at least 3 mature trees visible from a building and 30% canopy coverage over a campus. Near buildings, structures and infrastructure, opt for tree species with compact root systems.

Alternatively, consider training vines along cable trellises or other green façade systems to effectively shade buildings while preventing roots from damaging infrastructure.

1.1.2 Promote airflow and visual access to vegetation.

Ensure cross-flow ventilation by positioning built elements with gaps for airflow. Design paths and open areas to be plant filled, with sightlines from buildings to visually connect the school with the surrounding natural landscape. Add landscape 'backs' to seating to reduce exposure.

1.1.3 Use deciduous tree species to support sun access, particularly along north facing building edges to provide shade during summer and light in winter. Leaf drop from deciduous trees can bring more sunlight into classrooms and outdoor areas during winter months.

1.1.4 Build windbreak systems in areas of large open space.

Plant groves of smaller trees around lawns and larger trees adjacent to main roads to create windbreaks. Interlocked roots and connected canopies can minimise blow-down risks and form shade and wind barrier faster than one large tree specimen.

1.1.5 Create microclimates using a layered planting scheme.

A common mistake is to plant too few lower or mid-storey plants. Aim for a ratio of 1 canopy or small tree: 3–5 mid-storey shrubs: 5–10 lower-storey plants to promote ecological function and visual interest. Natural groundcovers help to lower surface temperatures, keep the soil cooler and reduce water loss. When possible, use plant species that naturally occur in the area to support native animals, including birds and pollinating insects.

1.1.6 Choose materials to reduce temperatures in summer. Put shade structures over the hottest hardstand or spaces with high volumes of students. Replace or limit dark impermeable asphalt with cooler resin-bound aggregates, light coloured permeable pavers, stabilized gravels and timber decks.

1.1.7 Incorporate materials that absorb water and manage run off when it rains.

Direct excess water into garden beds and vegetated swales. Add small bioretention or rain gardens at downpipes, where water ponds, or uphill of spaces where students want to sit or play, to capture water and create drier spaces for students. If possible, opt for permeable paving to manage run off and reduce heat island effects.

“I think awnings are really, really important... We hung awnings off everything... Transformational.”

Andrew FitzSimons, Ex-Principal



This school kept this creek making it a feature of the schoolyard at a community college in Victoria. Photo credit: Peter Casamento

Compact root systems

Invasive root systems are roots that grow sideways and damage buildings or infrastructure.

Trees with invasive roots

Willow	Extremely water-seeking roots that travel vast distances
Fig	lateral systems can crack foundations and heave heavy concrete
Poplar	Fast-growing roots that actively exploit pipe vulnerabilities and create dense thickets through aggressive suckering.
Camphor Laurel	Creates a dense, invasive root mat while chemically suppressing surrounding vegetation
Liquidambar.	frequently displaces hardscapes, including driveways, curbs, and footpaths

Permeable pavement: Hard, trafficable surface designed to let rainwater pass through into underlying soil rather than running off. This includes porous asphalt or concrete or modular pavers with open joints. It reduces stormwater runoff and can provide temporary subsurface storage and filtration of pollutants as the water infiltrates

Resin-bound aggregates: Gravel bound with resin to form a smooth, durable, permeable surface.

Vegetated swales: Shallow, planted channels that slow and filter stormwater.



Permeable paving. Photo credit: NITIN SHAH on Unsplash

1.1 Environmental comfort

Case study

Woodcroft College, South Australia
by Swanbury Penglase

The challenge: To recover schoolyard areas that were flood-prone and largely inaccessible during periods of rainfall.

The solution: A floodable bioswale was incorporated into the school ground. This included a cut out creek bed lined with gravel and riparian plants to keep pooling water away from main areas and filter water into the drainage system.

The benefits: The bioswale naturally manages flooding space creating a flexible space for student exploration and use. The area is now an asset for the school as students can play and learn about the cycles of water.

“Woodcroft were fascinating in their approach to landscape: they were prepared to flood their outdoor learning area.”

Marguerite Bartolo, Associate Landscape Architect at Swanbury Penglase

Flood tolerant plants
Native vegetation has deep roots which prevents erosion and makes it tolerant to periods of drought and flooding.

Prevents flooded areas
A shallow rock-filled channel captures water and directs it to the creek bed.

Cleaner storm water
Stormwater is filtered and released at a slower rate into drainage systems and waterways.

Permeable surface
Water soaks through stones, rocks, pebbles and sand through to the storm water drains. This avoids muddy patches compared with lawn.



Bioswale creek bed when dry
Photo credit: Peter Barnes Photography



The same creek bed in flood
Photo credit: Swanbury Penglase

Outdoor learning space
Incorporating a dry creek bed which can flood into the play spaces allows for a range of structured and unstructured play and learning experiences. Says designer Marguerite Bartolo, “If you are willing to engage with safe risk, it is fascinating where you can take a landscape”.

What is a bioswale?

Sometimes known as a rain garden, a bioswale is a shallow landscaped channel designed to manage stormwater runoff by directing water to preferred areas, slowing and filtering it into the ground. Native vegetation prevents ponding and soil erosion.

Which plants?

Check with your local nursery or landscape architect for flood tolerant plants for your school’s climate zone. Best native plant types include:

- grasses i.e. Kangaroo Grass (*Themeda triandra*)
- sedges i.e. Tall sedge (*Carex appressa*)
- rushes i.e. Pale Rush (*Juncus pallidus*)
- ferns i.e. Alpine water fern (*Blechnum penna-marina*)
- shrubs i.e. Hop Goodenia (*Goodenia ovata*)
- small trees i.e. Swamp Banksia (*Banksia robur*)

1.2 Maintenance

Design spaces to minimise maintenance, particularly by choosing native endemic plants. Choose robust natural materials and locate them out of the sun and rain. Maintain outdoor spaces to communicate their value and encourage positive perceptions of safety and use.

Student insights

Well-maintained spaces convey to students that their school cares for them. When spaces are unclean, have graffiti or rubbish, students can feel unsafe and avoid these areas. As a workshop participant in Brisbane concluded, “how these spaces are being maintained has a bigger impact on how students feel in them than the actual design itself”. This can be achieved by choosing high quality and durable materials, weeding, hedging, pruning and providing disposal. Similarly, opting for native or endemic plant species increases the likelihood that these plants will survive.

Research suggests that girls and people who have experienced trauma are particularly sensitive to the safety cues conveyed by well-maintained spaces. For women and girls, cleanliness “ranked highly as critical attribute for making a space feel welcoming and inclusive” (ACT Government & PLACE Laboratory, n.d., p. 17). For people who have experienced trauma, “[c]leanliness relates to a sense of control ... but also to safety and security” (Owen & Crane, 2022, p. 21).



Rubbish at School R nominated by male students as negative.



Neat garden areas at School R nominated by female students as positive.

Principal insights

For principals, maintenance is a priority: students “feel comfortable because it is looked after” (Principal 1), and schools need to be “clean when visitors arrive” (Principal 2). At JJ Cahill Memorial High School, greening the front entry was linked to improved school reputation: “the school intake for Year 7 enrolments has tripled... and it’s attributed to this” (Tanya Wood, Landscape Architect).

Maintaining spaces, however, is challenging. One principal noted greenery must be “easy greenery ... because there’s no one there [to maintain it]” (Principal 6). Without maintenance, some spaces become unsafe or hard to supervise and, as a result, become out of bounds. Trees are seen as a liability: “you have got to keep auditing them because of falling limbs” (Principal 2).

Principals see green spaces as high maintenance due to hedging, mowing, weeding, irrigating and raking leaves. As a result, some principals replace natural materials with artificial ones. As one

principal explained: “did our GA [general assistant] cut the grass enough? Probably no, because they’ve got to do so many other things” (Principal 1). The benefits of low-maintenance native planting are not always well understood.

School staff express frustration when gardens are designed without considering student behaviour. One principal observed students “get a bit silly and they pull plants out and ...climb all over it” (Principal 2). Desire lines are common as students take the shortest route, regardless of gardens. One teacher observed:

“I don’t like [how] the infrastructure inhibits the movement of the students... [disciplining] can erode your relationship with the students ... [when that] could be engineered away.”

School M, Staff

“ I had hired 60 goats during the during the Christmas holidays and some fencing and just let the 60 goats go to town on that area just to try and hazard reduce it.”

Principal 7

1.2 Maintenance

Practical solutions

1.2.1 Select materials that are robust and fit for purpose. Opt for natural materials such as timber or stone. Protect equipment like picnic tables from rain and sun exposure to maximise their lifespan. Avoid metal or powder-coated materials if possible. If unavoidable, place out of the direct sun or rain.



Choosing timber makes these seats more comfortable as they are cooler in summer and warmer in winter. Photo credit: Brad Griffin.

1.2.2 Adopt strategies to prevent tree roots from damaging infrastructure. Near paved areas, use strata vault systems to provide adequate soil volume and avoid damage caused by root expansion. Where there is insufficient soil space, train climbing vines on trellises to increase vertical greenery. Ask your local nursery for advice on appropriate plants for your school including trees that do not drop limbs.



At an independent school in Victoria, a wire structure (on the left) can support vines, creating a shade alternative to trees. Photo credit: Peter Casamento.

1.2.3 Opt for native and endemic plant species, particularly for smaller trees, shrubs and flowers. These species are more likely to survive and require less maintenance. If limb dropping is a concern, prioritise small Australian native trees such as wattles, kurrajongs or blackwoods. Use plant species that are drought tolerant and require minimal upkeep. Native species have the benefit of attracting birds and native pollinators, providing opportunities for awe and learning.



Hardy native plants are more likely to survive and require less maintenance compared with lawns, hedges or deciduous plants that drop leaves at this independent school in Victoria. Photo credit: Peter Casamento.

1.2.4 Budget for irrigation, drainage and long-term horticultural care - including pruning, fertilising and pest control. Irrigation is particularly important while new plants are establishing. Healthy, well-established trees provide ongoing comfort and outdoor learning opportunities for students.

1.2.5 Involve students in schoolyard upkeep. Whether as a class or co-curricular activity (such as green teams), student landscape stewardship reinforces expectations around caring for the school environment and can nurture a sense of community and site ownership.

1.2.6 Boundaries: Integrate shade, seating and planting into site boundaries; add artwork elements at intervals to break up and soften long fence runs. Thoughtful edge programming helps activate these perimeter spaces, enhance passive surveillance and support stronger connections between the school and its surrounding community.

1.2.7 Coordinate placement of bins for trash and recycling near high use areas like canteens. Locating bins close to where students gather makes it easier to immediately dispose of waste and reduce the accumulation of litter on the ground. Composting facilities are better placed further away, such as near landscape maintenance areas.

Shade

Shade provides essential ultraviolet (UV) protection while also delivering broader co-benefits for learning and behaviour. Beyond traditional shade structures and standard tree planting, a range of innovative solutions can mitigate extreme heat and enhance microclimates in Australian school settings.

Needs

Students consistently expressed a strong preference for shaded, nature-based settings over exposed hardscapes: "Garden spaces where you can just sit and you can watch and you can be serene, you can include yourself in nature. It's great for mental health, physical health, just nice space like that," (Canberra Workshop).

Students directly link natural shade to mental clarity and stress relief, stating, "It just helps me calm down... I think greenery is good" (School R, Year 11M).

Challenges

Principals highlight a systemic failure to choose sustainable, cooling green infrastructure: "lack of shade [is an issue], you know, rarely is there enough shade and you know what they do? They put up hard shelter rather than vegetation..." (Ex Principal, Workshop 5)

Principals prefer natural shade but acknowledge that trees require significant, ongoing operational resources: "You have got to keep auditing the trees because of falling limbs ... how do you manage sun safety and provide enough shade for 850 kids? ..." (Principal 2).

Three successful examples

1 The tree grove kissing canopy

The aim: To provide natural shaded areas for students when large trees are not a possibility.

The solution: Plant a group of budget-friendly native saplings very close together. Install a shade sail structure for the interim while the trees establish themselves.

Benefits: Over a couple of seasons, the entangling of small trees' root systems provide wind stability while their touching - or 'kissing' - branches form a dense, cooling canopy. The space provides an outdoor study nook and hang-out space. Growing research shows direct contact with a shaded, biodiverse ecosystem lowers academic anxiety and restores mental focus.



St Kilda's Primary School in Victoria uses a green screen to provide critical shade for an outdoor learning and play area. Designer and photo credit: Law Architects



An independent school in Victoria. Designer: Croxon Ramsay, Photo credit: Dianna Snape

2 The green screen

The aim: To provide natural shade to an area where students congregate or where classrooms receive harsh sun. Design solutions are needed that allow natural daylight to the area and adjacent classrooms to avoid a dark, institutional feel.

The solution: Install a network of lightweight mesh structures which creates the framework for using vines - a biological sunshade. While the climbing vines grow rapidly to cover the mesh, the open geometric weave ensures the large area is filled with natural filtered light.

Benefits: The green facade provides cross-ventilation, filters UV rays, and prevents heat buildup. Such living structures can reduce student stress levels and creates a soothing environment that supports both physical energy release and mental focus.

"We need seating and shaded play plus relaxation areas"
School L, 9-10 F



The 'kissing canopy' of a mature tree grove at a Qld independent school. Photo credit: Gweneth Leigh



3 The built shade structure

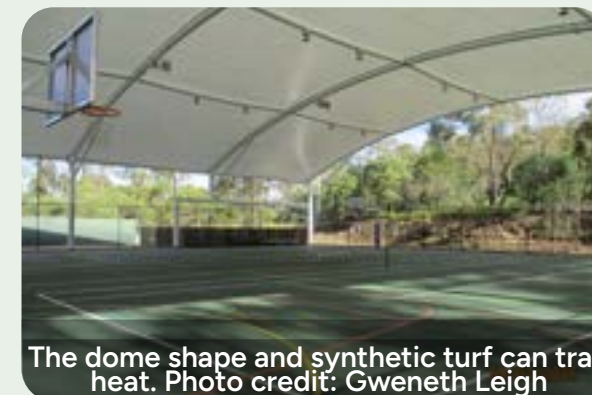
The aim: The primary eating area features a dome-shaped COLA over synthetic grass. Although it blocks UV rays, the enclosed dome can trap hot air and humidity. Underlying turf can also retain heat, making the space uncomfortably hot.

The solution:

Option 1: Retrofit the area by painting the surrounding hardscape with a light-coloured, solar-reflective cool pavement coating. Over the tables install a modest, modular skillion-roof shade structure featuring high-side openings and spaced timber slatted panels.

Option 2: Retrofit the COLA with fans that actively circulate hot air away from the student eating area. If feasible plant trees around the COLA to cool circulating air.

Benefits: The angled skillion roof vents heat and humidity outward while spaced timber slats block UV rays and promote airflow. Combined with a cool-painted floor, this lowers temperatures so students can eat comfortably without heat stress.



The dome shape and synthetic turf can trap heat. Photo credit: Gweneth Leigh



A skillion-roof shade structure at Woodcroft College in South Australia. Photo credit: Brad Griffin

1.3 Movement and play

Offer physical activity opportunities beyond to formal sports. Incorporate a spectrum of play types including playful landscape features, play equipment, walking loops, and spaces for nature play and age-appropriate risk taking.

Student insights

Students want age-appropriate play options, such as “parkour... stuff to climb... jump around... mini trampoline things.” (School M, Year 8–9M) including “natural play equipment instead of manmade... it’s more fun” (School M, Year 8–9M). Often, however, the play options in high schools are either too “kiddish” or don’t exist at all: “even a cool chair that you can swing around on... just something more inviting and interactive” (School R, Year 7–8F). Without age appropriate play options, students feel that “lunchtimes [are] incredibly, incredibly boring” (School L, Year 9–10F).

Play and movement options are particularly important for girls and gender diverse students because “there’s not really anywhere if you just want to play something but not sports” (School M, Year 7F). They want diverse options such as “a climbing

space, a swing...” (School M, Year 8–9F). or “a little obstacle course... something cool” (School M, Year 8–9F).

The neurodivergent community emphasised the importance of movement for self-regulation and look for options which are socially acceptable. For example, swings which provide vestibular regulation or walking loops which one designer observed: “with specialist schools, there’s a need for a loop that can be walked over and over” (Excellence Workshop).

“there’s not really anywhere if you just want to play something but not sports.”

School M, Year 7F

“I’d like “a little playground. Not too kiddish but a bit more for older people...”

School M, Year 7M



These miniature trampolines are popular at School L

Principal insights

Principals recognise the benefits of play to “build strong connections and ...support their wellbeing” (Principal 3). Particularly imaginative play like the when the “kids scrunch up... glad wrap... and try and throw it in the garbage bins... I feel that’s a playful [thing]” (Principal 3). For some students, walking and nature-play are also important: “having walking tracks around the school I think would be something that would be really good” (Principal 7). Offering play means “when they have to sit in the classroom for 53 minutes, they can sit and concentrate” (Principal 1). As a result, “you don’t get the boredom, and the physical [altercation] stuff happening” (Principal 2).

Yet there are significant challenges to facilitating play. While “primary schools do it so well... [there’s] an assumption that high school [students] don’t want to play” (Principal 3). Yet principals note that teenagers need “a play environment... appropriate for their age, maturity and... growth rate” (Principal 3). They gave examples such as parkour, large swings suitable for two people and ping pong tables. On small sites, separation of these uses was identified as important to reduce cross-interference (Working Group).

Implementation is constrained by budgets and safety concerns. As one landscape architect noted: “I got a phone call saying they wanted to take this [play space] out... he said, we don’t think it’s going to pass the pub test” (Miriam Shevland, Landscape architect). Involving school communities early in the design process can help ensure that play spaces are both well accepted and aligned with safety expectations.

For those advocating for teenagers to be more physically active, play and walking can encourage movement:

“It could be a walking track around the school and gives the permission to walk That leads itself to movement ...”

Tamatha Harding, Women’s Sport Australia

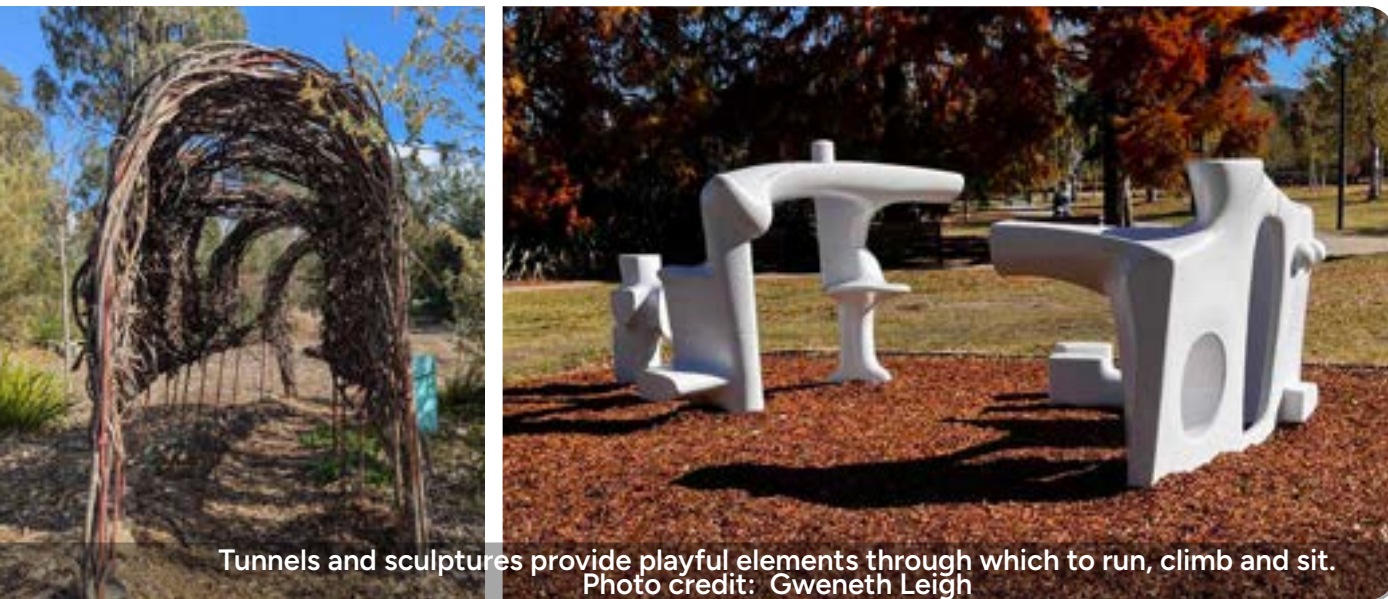
“So like our kids, if they don’t find something to do, they get up to mischief.”

School R, Staff

1.3 Movement and play

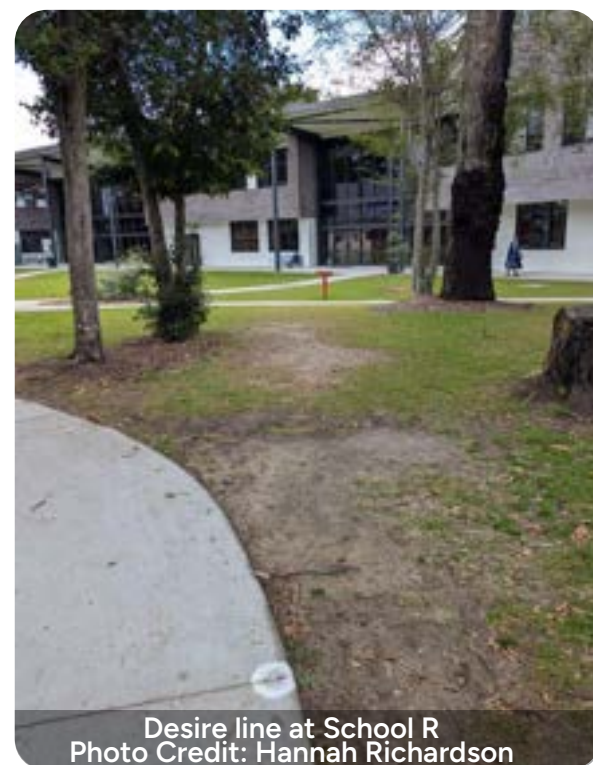
Practical solutions

1.3.1 Create playful spaces where students can climb, balance, swing and hang. Alongside traditional play equipment, use natural elements such as logs, rocks, dry creek beds and small level changes (such as mounds). Insert playful touches to existing infrastructure. For instance, spinning seats, murals on building facades, ledges for balancing, natural materials and loose parts for manipulation. Where appropriate, consider performative opportunities such as a mini-stage or raised platforms (with power access) for dance, music or theatre.



1.3.2 Ensure impact absorbing surfaces are provided below play areas, especially where movement introduces risk of falls from height. Consider clearance distances to other fixtures, equipment, buildings and fencing, as schoolyards need to meet government safety standards.

1.3.3 Include a variety of walking loops to encourage physical activity and 'slow-speed socialising' during breaktimes. Include sufficient width of footpaths to allow for small groups to walk together and for people to pass each other. Ensure they are looped or have desirable destinations where a dead-end is unavoidable. Design for students' tendency to take the shortest route, regardless of vegetation. If possible on existing sites, follow the desire-lines that have been created by students.



“we’ll try to make it so it’s a landscape that is playful rather than [creating] a playground”

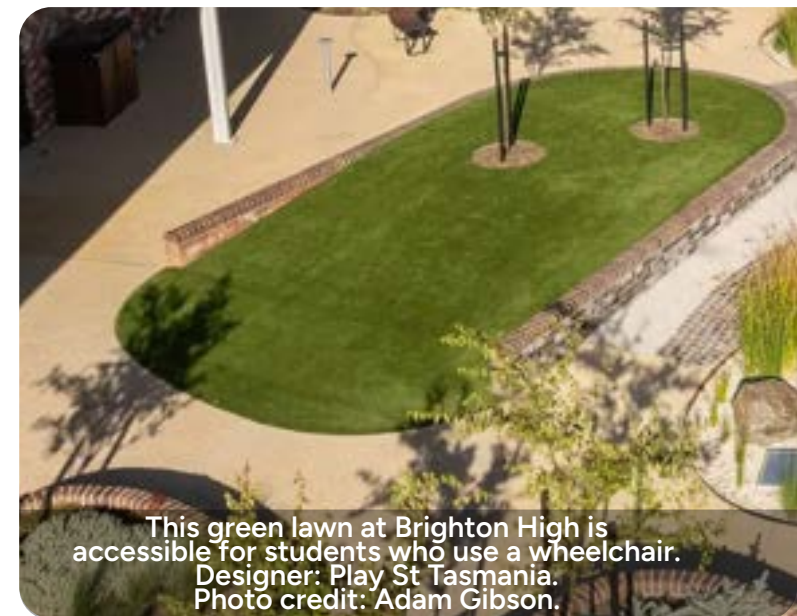
Andrew Thomas, Four Landscape Studio

1.3.4 Provide play equipment designed for adolescent and adult bodies that does not appear childish. Options may include spaces for parkour or adult-sized swings. Seek playground safety advice, as teenagers typically use equipment in more varied and high-intensity ways than younger children.

1.3.5 Ensure play equipment is inclusive especially for students with disabilities. This includes nature play features and the paths that provide access to them.

1.3.6 Provide end of trip facilities for students who choose active travel to school including bike or scooter storage and change facilities, especially for older students. Where relevant, coordinate with local councils to provide active travel paths to school which are separate from traffic, shaded and enable passive surveillance from surrounding homes, businesses or other public spaces.

1.3.7 Pursue safe crossings/shared-use agreements with relevant councils to access nearby parks or community gardens for regular lessons such as science or outdoor education.



“Even a cool chair that you can swing around on...just something more inviting and interactive.”

School R, Year 7-8F

Parkour: Movement activity focused on vaulting, balancing and traversing obstacles.

1.4 Sports

Offer a range of multi-purpose sporting spaces of different sizes that support informal activities other than traditional competitive sports.

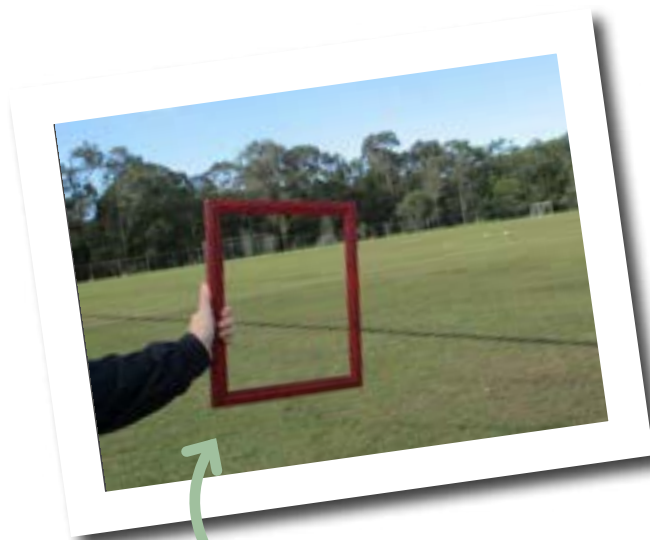
Student insights

Many students want to exercise, noting the benefits physically and more broadly: “it just takes our minds off the stress of school and all that, especially when assignments are building up” (School R, Year 11M). However, not all students want to engage in a formal competitive game. Rather, they seek options “that can be used for lots of different things” (School M, Year 7F). As one designer explained:

“When an active group of young women want to set up a temporary game of badminton, they need an open flexible area ... so that they can practice their sport interest that isn’t the generic sport choice and ... have fun to play freely”

Gender and Inclusivity Workshop

Small, informal or alternative sporting options such as ping-pong and Gaga courts can help nudge some reluctant students towards being physically active. Girls, in particular, describe anxiety about outdoor sporting facilities. A Youth representative explained: “these wide-open spaces add an extra layer of anxiety as you feel watched” (Reference Group). As a result, “after Year 7, the only female students using active spaces are the most confident ones” (School R, Staff).



At School L, the school oval was unpopular with female focus group participants.



Ping pong tables at School M were especially popular with female students

Principal insights

Principals see sport and physical activity as critical: “there is that link between physical activity and wellbeing” (Principal 5). The benefits include the “impacts it’s had on student emotional and mental wellbeing” (Principal 7). These had flow on effects for managing behaviour: “When pent up energy can’t be spent productively then kids act out” (Health and Wellbeing Workshop).

Principals note the challenges for equitable access to sporting facilities, which can be “dominated by males” (Principal 5). They look for creative ways to encourage girls and others to exercise, including having “a basketball court that was girls only” (Principal 6) and offering other sports such as volleyball or badminton. These options, however, can be expensive and require significant space or resources.

Designers and advocates point to multi-use spaces and less competitive sport options as benefiting less sporty students, particularly girls. This could include ping-pong or half basketball and netball courts. A women’s sport advocate emphasised:

“for a sport like tennis, if they don’t have courts at the schools, they won’t offer that sport. But there are modified ways to play tennis. Or multi faceted spaces that allow a range of sports.”

Tamatha Harding,
Women’s Sport Australia

“Students in Year 7 feel like there are no play spaces in the SS [senior school]... Both genders expressed they would like exercise options that are not formal sports”

School R, Staff

1.4 Sports

Practical solutions

1.4.1 Provide informal, small-scale spaces for ball sports that complement larger curriculum-based areas such as ovals and courts. These might include quarter-sized netball or basketball courts, handball courts or small grassed areas for casual football kicking, positioned a safe distance from buildings. To maximise their use and minimise conflicts, schools can establish clear norms for how these spaces are intended to be used. For example, by explicitly communicating that they are designated ball-sports zones.

1.4.2 Incorporate informal sport spaces in places where students already or are likely to gather. For example, a short walk from popular social areas and between buildings so that students can easily access them and don't need to relocate to formal sport spaces.

1.4.3 Cluster active play zones together (such as handball courts) and separate them from quiet seating areas to reduce cross-interference. Where this is not possible, provide low, visually permeable screening between play and rest spaces. Suitable options include hedges, low walls or trellises with climbing plants.



Sports spaces at Alkimos College, a public school in Perth, have been distributed through the campus and include both formal sports spaces such as the oval and informal sports such as a half netball court (this picture) and ping-pong tables (pictured below)
Designer: Four Landscape Studio. Photo credit: Andrew Thomas



This school in Canberra includes a bike track and unprogrammed green space suitable for casually kicking a ball. Photo credit: Marta Day



1.5 Rest

Provide shady semi-enclosed spaces with comfortable seating where students can physically rest. Distinct from emotional down-regulation, these spaces may still include other students.

Student insights

Adolescents have an increased need for rest and sleep and a natural shift toward later circadian rhythms during puberty. This is compounded by increasing study, emotional and extra-curricular demands throughout high school.

Space to rest is one of the most consistently requested improvements noted by students at all three case study schools. According to one student: “we just want to sit down, catch our breath and ...relax instead of going to class sweaty and puffed out” (School L, Year 11-12M). This was requested by a broad range of students including girls, boys, active and less active students. When this is not provided, students seek alternative restful spaces such as stairwells or indoors where they can recline and recuperate.

There are a range of features that participants note contribute to a restful environment. These include a smaller space with a sense of enclosure, some privacy through low level gardens, furniture that is more relaxing such as hammocks, and noise management. As one participant summed it up: “space to rest and relax, especially in the outdoors would be really amazing and having benches that are covered and have back rest ...” (Brisbane Workshop)

This space is restful for students, although only provided indoors at School R.

Principal insights

Despite being a high priority for students, rest was not something frequently mentioned by principals. Some do recognise the benefits of rest, particularly rest outdoors that is comfortable and nature filled. For example, one principal described: “I purchased picnic blankets that the kids can go and borrow... then go sit on the lawn at recess and lunchtime” (Principal 7). These types of affordances, however, seem not to factor particularly highly in built environment directions from relevant authorities, with one principal expressing frustration that an unsafe basketball court was required by authorities to be replaced “like for like” with another basketball court rather than a more desirable “passive seating” space suitable for rest (Principal 11).

Principals note the challenge of offering restful spaces, particularly when these are designated for specific student groups. For many principals, restful spaces which are small and screened are harder to supervise. One principal cautioned,

“...kids would love a little nook and cranny... [but it's] challenging for teachers... [it interrupts the] line of sight... we're concerned about what they're up to”

Principal 11



“Most of the seating in our area is near a busier place and it's not easy to relax...I don't want it to be in a very high traffic area.”

School L, Year 11-12M)

Meet... Fayod they are... 16 Male Sporty & Out going
Name your student About your student: age, gender, demographics etc
loves to hangout with their people, Super Joyful
they sometimes feel... A bit bored & overstimulated
Feeling in schoolyard
One day when Fayod had a long night because he had training
What happened?
and at school the next day he couldn't focus properly and
also fell asleep at school. The teachers weren't impressed and got's from attention
What they needed was... Fayod needed a place to relax and rest his body
What did they need from the space?
It was important that the space had shade and was outdoors and
What qualities / functions / features were important?
away from the chaos at the courts and oval. Quiet with
the trees swaying and birds chirping
So that Fayod was able to relax during break time and when
What is the impact or outcome? What is the moral of the story?
it came to lesson 5 he was energetic and ready to learn

Extract of survey form completed by student

1.5 Rest

Practical solutions



1.5.1 Use natural semi-permeable screening to give students a sense of shelter while still allowing staff to observe movement and activity. Use elements like low hedges, layered shrubs or lightweight vertical screens to soften views and reduce sightlines without creating hidden spaces.

We designed a “classic prospect and refuge kind of thing where... you can recede back into a space, but then you’ve got this oversight.”

Catherine Rush,
Rush Wright



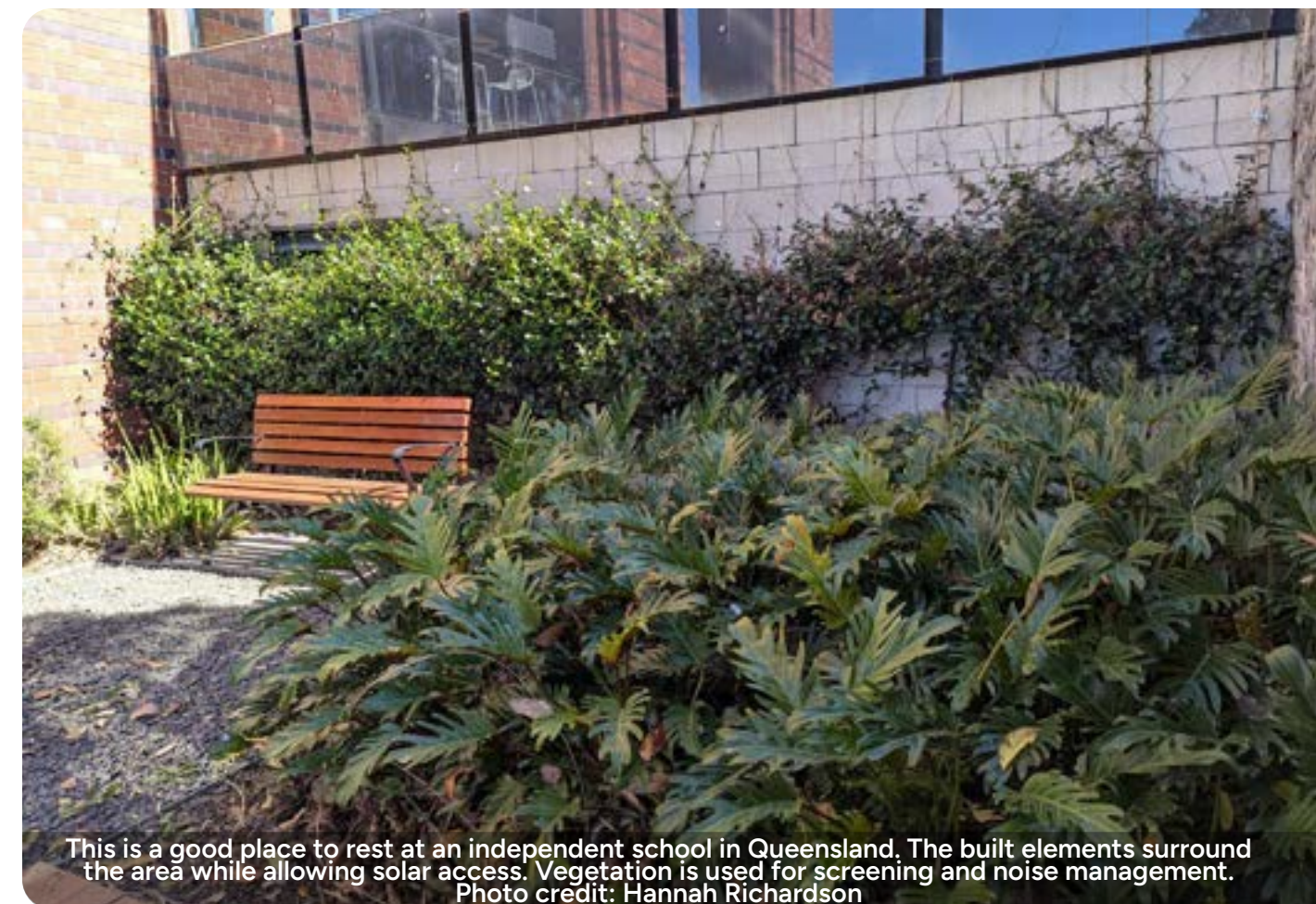
1.5.2 Provide spaces that allow students to adopt more relaxed postures, including reclining and lying down. Options may include bean-bags, reclining seats, hammocks, nets or other soft seating. Small decks for lying on or timber structures with gently sloping backrests can also support comfortable, informal rest.

“you just hang out...it was designed as almost combining lounges with play [and] social elements...these little cargo nets, they are just hang out nets”

Aaron Wallis,
PLAYCE

1.5.3 Include bubblers and water bottle refilling stations adjacent to rest facilities. Chilled filtered bubblers encourages water intake on hot days and can reduce consumption of sugary drinks.

1.5.4 Ensure spaces are physically comfortable in all weather conditions. See section 1.1 above regarding weather protection and heat management.



1.6 Locker zones

Distribute lockers in small single level clusters, combined with seating and extra circulation. Locate in desirable locations, sufficiently away from classrooms without creating long walks for students.

Student insights

Lockers are social zones, offering students a sense of ownership. At school L, lockers were designated to year groups, helping students locate and connect with their friends during breaks. As students develop a sense of identity, a locker is perhaps the only space that they own at school. Because “it’s very territorial” their locker feels like their “spot” (School R, Year 9–10F).

Lockers are also a practical destination where students can quickly access food or shelter. According to one student, “I don’t want to get my food out of my locker and then have to venture to the other side of the school” (School L, Year 11–12F). Lockers can also become default seats. For example, at School L students said they “sit on the lockers, but it’s really uncomfortable” (School L, Year 9–10F). This was considered problematic by the school.

Lockers, however, can also create stress and crowding, amplifying social hierarchies with some perceived as “good” and others “bad”, particularly when lockers are stacked or located far away. At School R, centralised lockers created bottlenecks: “I have to spend like 10 minutes waiting to get into my locker area because it’s so crowded” (School R, Year 11M). In response, some students hid their bags in changerooms.

Participants want to shift lockers from utilitarian to social infrastructure. In Canberra, one workshop participant declared: “I am looking at lockers in a positive light. I see them as a really nice [opportunity for] social space” (Canberra Workshop).

Crowding around lockers is “really annoying...It makes me feel a little bit sad because I just want to go straight to my locker and get out of there.”

School L, Year 7–8M

Principal insights

Not all schools have lockers, but when they do, lockers often present logistical and behavioural challenges for principals. Decisions about where to locate lockers are highly site specific, depending on school size, slope and culture. Schools often grapple with whether to centralise or distribute them and whether to put them indoors or outdoors. According to one principal, “locker areas out in the open is, you know, it makes a significant difference to how students might perceive that safety...avoiding, you know, indoor locker areas that are sort of cut off” (Principal 28).

Because lockers become a draw card during breaks, they often result in congregations of students around them. For example, students at School L sat on their lockers, which the school felt was inappropriate, risked damage and created supervision issues. At School R, outdoor lockers that were not easily visible for supervision posed safety concerns. One teacher noted, “Last year a fight broke out in [the locker] area while [the supervising] teacher was on the other side. That’s what I’m actually worried about” (School R, Staff). Teachers also have to manage fairness and access to lockers, for example who gets lockers perceived as “good” and how to manage crowding. At School R, staff felt lockers could be better designed: “if lockers are built into other infrastructure then it could be used effectively, introducing shade options” (School R, Staff).

“The other thing is avoiding things like clumping, lockers or amenities where antisocial behaviour concentrates. So, you know, just making sure that you have design solutions that also have that passive supervision of sink areas or don’t clump the lockers together in blocks and things like that.”

Practice 7

1.6 Locker zones

Practical solutions

- 1.6.1 Distribute a series of small-scale locker clusters where it is practically feasible within the school site.** Replace one large locker bank with several small, single-tier clusters; avoid continuous runs along the full building frontage. Keep locker clusters away from door thresholds and stair heads.

1.6.2 Locate near to (but not immediately next to) classrooms to create psychological distance while also allowing easy access. Put clusters near classrooms for seniors' fast access, but not immediately adjacent to teaching spaces; give a short, obvious route to create psychological distance and reduce doorway disruption.

1.6.3 Separate from other zones that draw large volumes of students. Evaluate main circulation patterns to locate in areas with easy access while avoiding bottlenecks. Do not co-locate lockers with other high-traffic areas such as canteen queues, active sporting zones such as handball, or narrow entries.
- 1.6.4 Provide additional circulation space around lockers.** Add extra circulation (footpath space) so students can access lockers without blocking movement in main walkways. Keep main circulation paths wide and buffer with planting or low screens to separate queueing from locker use.

1.6.5 Include nearby amenities to encourage students to stay and use the space. This could include bubblers and seating or leaning rails located beside, but not in, main circulation routes.

1.6.6 Equalise quality. Keep identical shelters across clusters serving the same year level so students don't feel there are premium spots. Where shade/rain protection is a drawback, duplicate cover so crowds don't funnel to a single area.

Native plant species

Planting species that are native to your area are more likely to survive because they are suited to local conditions. Native species deliver broader environmental benefits by contributing to biodiversity, limiting weeds and supporting native animals. Biodiverse green spaces in schools also provide opportunities for curriculum and learning, especially where greenspaces use native and endemic species. At JJ Cahill Memorial High School in NSW, landscape architect Tanya Wood collaborated with the school community and a local nursery so that students participated in propagating, planting and monitoring plant growth in a series of wellbeing gardens:

“we put in over 1000 critically endangered eastern banksia scrub species... the health of the plants and the vigour of the plants [is high], because they're obviously meant to be there. IndigiGrow, the nursery, is now talking about setting up an on-site nursery on the school site, which forms another layer to their education because they can propagate the plants there. It'll be linked to geography lessons and other lessons and science with the students.”

(Tanya Wood, Landscape Architect, TWLA)



Banksias are a native plant that are drought and flood tolerant, with many different endemic species across Australia. Photo credit: Hannah Richardson.

Locally specific advice. You can find out about local endemic species through your local council, many of which publish guidance on relevant local species.

State/Territory	Guide
ACT	Trees and plants for the ACT (ACT Government “Climate Choices” guidance)
NSW	Indigenous Plants of Greater Taree MidCoast Council
VIC	Indigenous Plant Guide (City of Casey & Cardinia Shire Council)
WA	A planting guide for the Perth coastal region (Perth NRM)

1.6 Locker zones

Case study

Casey Grammar School, Victoria
by PLAYCE

The challenge: To incorporate lockers in a way that reduced crowding and enabled students to connect with friends.

The solution: A courtyard-style design with outward facing lockers and an inward facing social space.

The benefits: A comfortable and safe space for students to hang out while easily accessing their lockers. Lockers double as a low wall against which to align seating to provide a calmer and quieter social space for students.

Physical Needs

“We wanted to make sure that lockers were equitable. So no good lockers or bad lockers: they’re all just lockers.”

Aaron Wallis, Director at PLAYCE

School R Lockers

These are dark and hard to supervise. Lower lockers are less desirable, while crowding can increase stress. Social spaces are not nearby meaning a lot of traffic to and from lockers.



Casey Grammar's locker area and social space
Photo credit: PLAYCE

Seating on edge of thoroughfare

Provide 'pause points' while students are at their lockers. Says designer Aaron Wallis, "we wanted to make the seating less prescriptive so the students can determine how the space is used".

Providing enough space

Lockers facing out to a generous thoroughfare make them easy to access while separating the busy locker space from the quieter inward-facing social space.

Shelter with visibility

Protection from weather allows students to comfortably spend time in the space. Clear sightlines through the space allow teachers to supervise.

Social seating

The shape of the seating is designed to allow students to use the space in a playful way while lounging.

Multipurpose: locker and seat backing

The locker height of 900mm allows them to be multipurpose, providing storage while creating a backdrop for seating.

1.7 Toilet zones

Design the spaces around toilets, and their overall distribution, to maximise personal security and dignity, eliminate dark or hidden areas and maintain equal access to facilities.

The scope of this project focuses on outdoor design and how it supports appropriate toilet provision, including the placement and access of toilet facilities within outdoor areas.

Student insights

Many teenagers feel uncomfortable approaching and using toilets. At a time when students are experiencing both rapid physical change and evolving sexual and gender identities, dignified toilet design becomes increasingly important. Girls, in particular, can feel embarrassed when bathroom entry points or ancillary functions (like hand-washing) are exposed to public view. For students, distributing toilets across campuses reduces travel distances from classrooms and play areas, prevents any single location from becoming overcrowded, and gives students choice. Screening around toilets and basins provides privacy while sightlines across basins to the outdoors allows supervision which makes the space feel safer.

“where do I hate? ... For real. The bathroom.”

School M, Year 8-9F

“all my family friends, are not sending their kids to the school because they found out the bathrooms aren't uni sex.”

School M, Year 8/9 F

Principal insights

For principals, the design of toilets and their entries creates significant issues with managing behaviour, vandalism, vaping and phone use. According to one principal, “The toilets are a really significant problem... there's lots of vandalism and damage” (Principal 9). Principals explained that large, centralised toilet blocks with no visibility from supervising teachers are the main causes of these issues. For example, “as soon as the bell goes [for] recess or lunchtime, all the kids go to the toilets to turn on their phones so that they can't, you know, can't be seen” (Principal 4).

Principals advocate for a new design approach to toilets including entries, common areas and sightlines. As one principal emphasised, “What is actually needed [is a] design where teachers can observe without breaching privacy, and [also] like getting rid of the common areas within toilets. I think it is really important in schools because it's those common areas that are really unsafe to young people” (Principal 2). Some principals point to single stalls as a solution: “if I had the money, I would actually look at redesigning [them] so they have single stall toilets that open out onto the playground” (Principal 9).

“If you ask most of my students, where is it that you feel unsafe at school ... it's toilets”

Principal 2

Meet Blaise they are a student, 14, a woman and
Name your student About your student: age, gender, etc
they are very anti-social and easily overstimulated
they sometimes feel uneasy, scared and only comfortable in
Feeling in schoolyard a small space with friends they know
One day when they walked into the bathrooms and they
What happened? of students in there were eating on their phones and
not giving people privacy to use the toilets and for it's indoor
Deport
What they needed was a calm space to use the bathroom when
What did they need from the space?
they could have used the playground so they don't have places
for people to use or to go to so they use the bathrooms
It was important that the space needs more things and hangouts
What qualities / functions / features were important?
so people don't use the bathrooms
So that it gets very overcrowded and loud so people can't
What is the impact or outcome? What is the moral of the story?
use it

Extract of student story
card from School R

1.7 Toilet zones

Practical solutions

1.7.1 Distribute small blocks or single stall options rather than relying on large consolidated facilities. This provides greater choice for students and reduces feelings of overwhelm, an issue raised by LGBTQIA+ and neurodivergent students. Current design standards recommend individual, self-contained cubicles with full-height walls and doors that open directly onto a shared circulation area. This allows schools to choose female, male and gender-neutral toilets. Large consolidated blocks of toilets can concentrate risk. By contrast, multiple small facilities located near each learning cluster and positioned in visible, easy-to-reach locations minimises travel time and improves safety. If choosing to include basins outside of cubicles, position them so that students' upper bodies are visible to teachers.



Small toilet block at Malmsbury Primary School in Victoria provides privacy while allowing for teacher supervision. Design: Searle Cross Waldron
Photo credit: Emma Cross

1.7.2 Where hand-washing is visible: Position or screen basins to provide some privacy. For example, add slatted screens that block direct views around basins while keeping eye-level supervision from one side. This supports cultural modesty and privacy needs (adjusting headscarves, washing hands) without making a secluded alcove.

“All they need is ... a cubicle to go into and maybe a privacy screen that has the wash basins and everything, but you don't need an internal common space that teachers can't supervise.”

Principal 2

1.7.3 Design entries for dignity, accessibility and a clear way out. Give students a choice of approach including one that avoids crowded or performative zones. These are particularly important for neurodivergent students. Ensure these are accessible for wheelchairs and students with a disability. Aim for short, unobstructed routes, including ≤ 40 m targets from any major outdoor social or learning space.

Use permeable screening to block direct views into the doorway while preserving oblique supervision. Legible wayfinding and colour contrast at toilet entrances ensure students don't have to pause under public gaze to figure out where to go.

Maintain oblique, passive surveillance from staff paths or windows along both approach routes. Research shows that visibility is associated with safer behaviour and could reduce bullying.

1.7.4 Provide micro waiting or queuing places set back from the toilet entrance. Create small pause points, perch seats or rest rails, under filtered shade, a short distance (for example 2-5 m away) from each toilet entry so students can pause outside main pathways and out of direct gaze. This diffuses students' sense of being on show.

1.7.5 Immediately outside toilets: Provide filtered shade and splash-tolerant, low-glare paving with good drainage, as well-kept, clean entrances will encourage use.



Toilets integrated into an outdoor learning space at an independent school in Victoria.
Designer: Cley Studio
Photo credit: Peter Casamento



Small toilet block at Malmsbury Primary School.
Photo credit: Emma Cross
Designer: Searle Cross Waldron



Chapter 02

Emotional Needs

Emotional needs

Introduction

Adolescence is a time of major emotional growth, including the development of emotion regulation, empathy, and resilience. Emotional intensity and mood changes are common due to hormonal and brain development. As thinking skills improve, adolescents become better at separating thoughts from feelings, allowing for more reflective and complex emotional experiences, including mixed emotions.

Resilience also strengthens, helping young people cope with stress and recover from challenges. This is supported by positive relationships, school connectedness, and community support. At the same time, empathy and perspective-taking grow through increased social awareness and peer interactions.

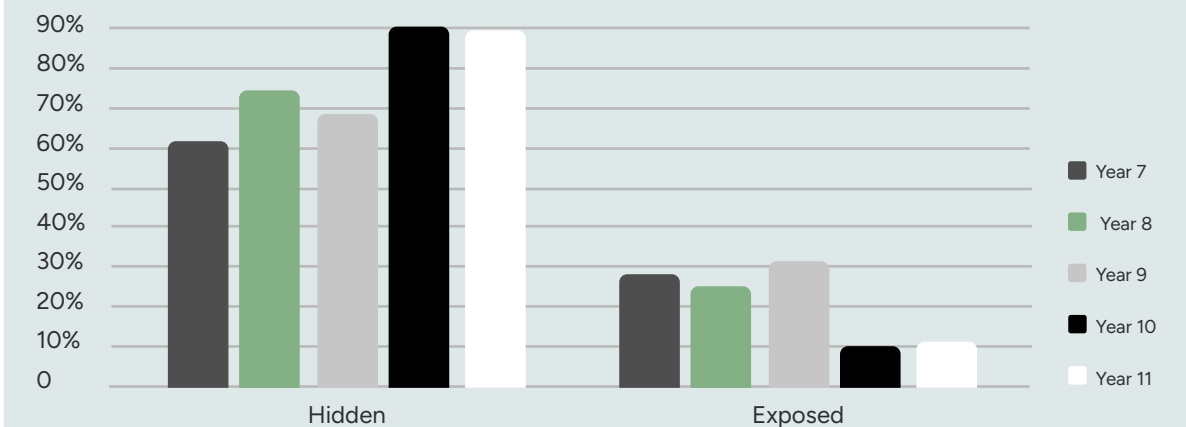
Adolescence is also a key period for identity exploration. Young people experiment with behaviours, roles, and relationships to understand themselves and their place in the world. This often involves balancing a desire for independence with the need for belonging and acceptance.

How to design for student needs

Below: When designing for the emotional needs of students, it's important to consider students' responsiveness to sensory input such as sounds, lights, textures and smells. Those with high sensory sensitivity - like Alex - may find noisy and bright environments challenging, which can affect their ability to focus and learn. At the same time, students differ in their preferences for outdoor features that provide novelty, exploration and imaginative play.

Evidence

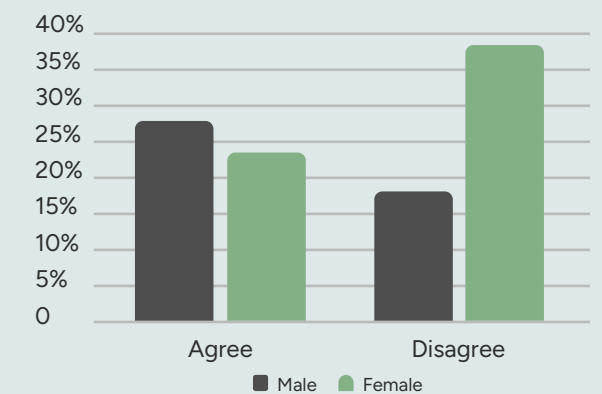
We asked 69 students: **"Do you prefer schoolyard spaces that are hidden or exposed?"**



Above: When students are stressed or overwhelmed, access to calm, quiet places that capture and sustain attention can help restore focus and concentration.

Right: When asked about their perceptions of the schoolyard as a place of discovery, interest, and fascination in school-wide Greenprint surveys (n = 560), female students rated the schoolyard significantly less favourably than male students.

I am fascinated by the schoolyard



Sensory sensitivity



Alex

Still figuring out their gender, busy lunchtime crowds near the canteen can feel loud and intimidating.



Isla

Isla has a large group of friends and doesn't always realise how loud she is.

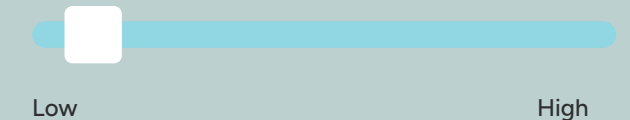


Need for novelty



Marcus

New environments and objects without a clear purpose are stressful. Coming from a refugee background Marcus is scared of acting in ways others may disapprove of.

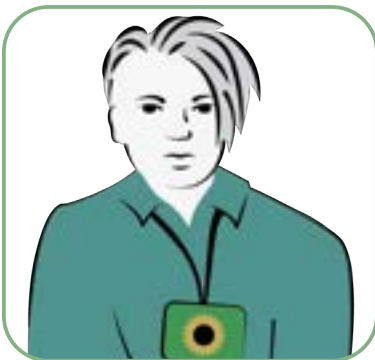


Noah

Noah is looking for a challenge, he's bored with the schoolyard, he'd love a ninja track.



The Quiet Recharger



Alex

Age 14
Pronouns: they/them



For Alex, breaktime is about recovering. Noise, crowds, and heat can be a lot, so Alex looks for calm spaces where they can breathe, think, and reset. Sometimes they'll sit with one close friend, sometimes just nearby others, and sometimes completely alone. Alex doesn't want to be excluded, they want to observe and enter when they are ready.

Being in nature is important to Alex yet they can't access it at lunch. There's a natural area on the side of the school used during class but it's out of bounds during lunch. Alex feels a walk through these trees and hearing the birds would help them down regulate at lunch.

Because comfortable spaces are dominated by louder and more popular students, Alex sits in front of a doorway or in a stairwell to feel safe, enclosed and like they belong.

Alex wants to exercise but doesn't feel like they belong on the oval. They would like to walk or swing but they are worried other students will judge them as strange.

"I would sit in the doorway, because ...no one would bother you"

Brisbane Youth Workshop

How to design for Alex

- Quiet zones with soft grasses that make gentle sounds, different textures to touch, moveable seats to avoid harsh sun to support their neurodivergence.
- Seats in convex or L-shapes so friends are nearby without looking face-to-face
- A swing to regulate that's big enough for an adult body and a friend
- A walking track or ping-pong for exercise that's not gendered
- Gender neutral toilets or stall only toilets with screening over the basin as Alex is still figuring out their gender and toileting is confronting
- A space that's LGBTQIA+ supportive without outing Alex before they are ready.

Meet... Jim ...they are... A 14 year old male
Name your student student at msc About your student: age, gender, etc
they sometimes feel... left out and bored
Feeling in schoolyard
One day when... Jim was left out of a game in the schoolyard
What happened? of soccer he got really sad and
had no where to go to be private
What they needed was... a small private place
What did they need from the space? where students can go to dial down
and let out their emotions
It was important that the space... is small, is in a
What qualities / functions / features were important? private area and is accessible by
all students
So that... Jim can calm down and progress
What is the impact or outcome? What is the moral of the story? what has happened, this could help students
be more calm.

Storycard completed by
a student at School M

2.1 Navigation

Design school entries, thresholds to key spaces, and circulation routes so students can move around easily and calmly. Make it clear where to go, offer both larger direct routes and smaller meandering paths. Maintain clear sightlines and avoid blank building edges. [Page 74](#)

2.2 Down regulation

Design quiet, nature-rich outdoor refuges close to classrooms to lower sensory load so students can down-regulate and return to learning. [Page 80](#)

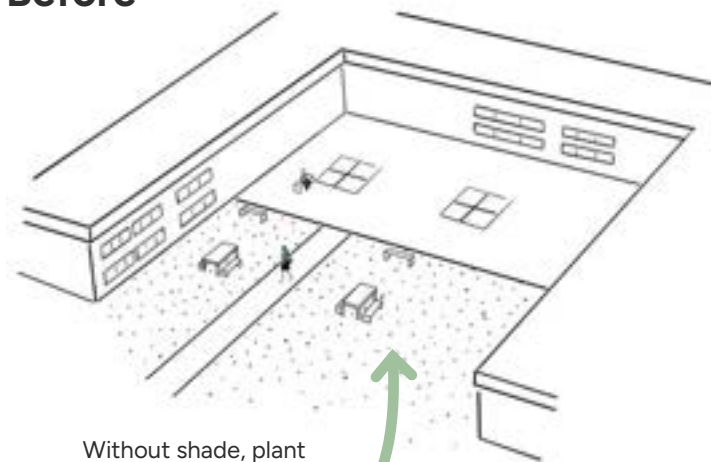
2.3 Privacy

Provide semi-private and more secluded spaces where students can decompress or reflect while still keeping spaces visible for supervision. [Page 88](#)



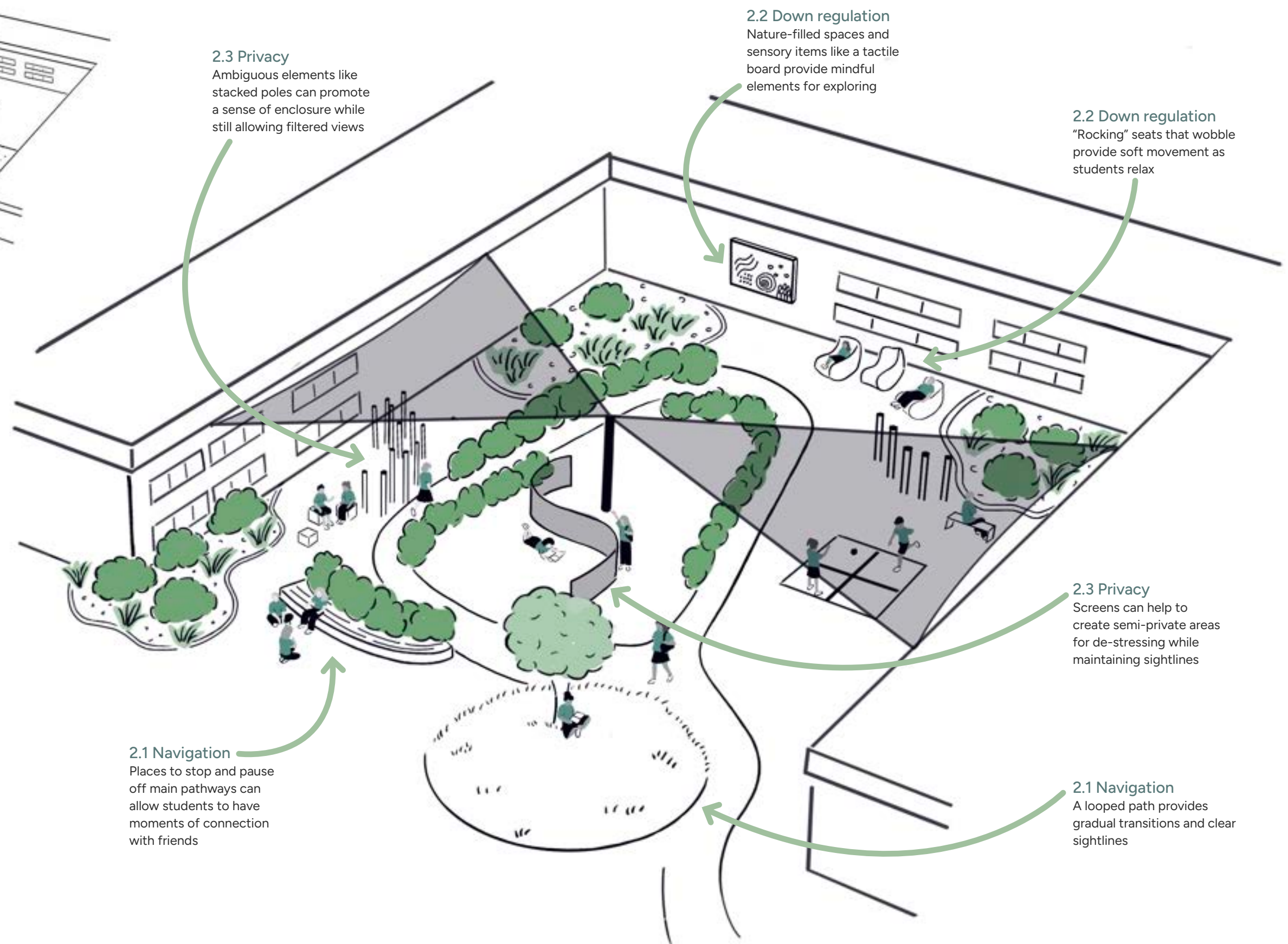
Applying the guidelines

Before



Without shade, plant buffers and thoughtful seating, courtyards can be loud, bright and leave students feeling exposed

After



2.3 Privacy

Ambiguous elements like stacked poles can promote a sense of enclosure while still allowing filtered views

2.2 Down regulation

Nature-filled spaces and sensory items like a tactile board provide mindful elements for exploring

2.2 Down regulation

"Rocking" seats that wobble provide soft movement as students relax

2.1 Navigation

Places to stop and pause off main pathways can allow students to have moments of connection with friends

2.3 Privacy

Screens can help to create semi-private areas for de-stressing while maintaining sightlines

2.1 Navigation

A looped path provides gradual transitions and clear sightlines

2.1 Navigation

Design school entries, thresholds to key spaces, and circulation routes so students can move around easily and calmly. Make it clear where to go, offer both larger direct routes and smaller meandering paths. Maintain clear sightlines and avoid blank building edges.

Student insights

High schools can be larger and more complex than primary schools, making the transition overwhelming. Said one Year 7 student, "It was quite stressful to make the transition... we got lost... it was so big" (School M, Year 7F). Clear definitions between spaces, simple circulation routes and sightlines can make a big difference. Priority areas are school entries and transitions between major hubs such as the canteen, lockers, toilets and oval.

Crowded areas, long or narrow walkways and blind corners can feel unsafe for students who feel less physically or socially powerful, especially younger, female, gender diverse and neurodivergent students. One student felt "overwhelmed... [it's] highly stressful... [I was] afraid of being shoved" (School M, Year 7F). Another student worried "you'll just get trampled on" (School L, Year 7–8F).

When transitions are not designed well, students can experience anxiety. At School R female students felt lost: "at lunchtimes I couldn't find some of my friends... I felt alone" (School R, Year 7–8F). Students found ways to avoid uncomfortable areas. Explained one student, "If there's an option... I would go a long way [around]" (School R, Year 9–10F). Designing clear transitions helps student feel safe and choose when to enter a space. To one workshop participant, good sightlines meant "you have an exit strategy [and] you have an arrival strategy" (Adelaide Workshop).

Principal insights

Principals recognise how daunting schoolyards can be, especially for younger and neurodiverse students. One noted they can feel intimidated "when they've got these big bodies and loud bodies around them" (Principal 5). Yet principals are unsure how to design transition spaces that better support students.

Managing crowds through key transitions is a core challenge. During short breaks, schools need to move students out of class, provide food, activity or rest, and return them ready to learn. One principal concluded: "it's the transition areas in the playground, I think don't work" (Principal 2). Some principals are grappling with over enrolment. For example, one school designed for 1000 students had over 2300 students: "our playground is organised chaos at the best of times" (Principal 1). Crowds create conflict, particularly when students intentionally "bump someone ...you end up with the fisticuffs and filming and everyone cheering" (Principal 2). This principal tried adding signage to address behaviour, "but at the end of the day, it's signage" (Principal 2). Poor circulation layout and inadequate space can intensify crowding during transitions, contributing to challenges around student movement and behaviour.

School entries are important to principals, as they communicate the school's values and help transition students into the school for the day. Principals prioritise these spaces and want them to be beautiful and calming.

"You almost need a way to approach from the side so that you have an exit strategy, you have an arrival strategy, and what do you need when you get there to feel secure?"
Adelaide Workshop

Meet... Christina.....they are... 13... years... 8... female.....
Name your student About your student: age, gender, demographics etc

.....
they sometimes feel... lonely... when... she... couldn't find her...
..... Feeling in schoolyard
..... friends... at break time.....

..... in the schoolyard
One day when... Christina... came back from a music lesson... she...
..... What happened?
..... went to... where her friends eat and they weren't there...
..... she kept looking but she couldn't find them.....

.....
What they needed was... to... be... comfortable to go to people...
..... What did they need from the space?
..... and either... if they had seen her friends or sat with...
..... them for that break.....

.....
It was important that the space ... was... welcoming and made...
..... What qualities / functions / features were important?
..... her feel comfortable to sit other people.....

.....
So that ... she wouldn't feel lonely at break time when she...
..... What is the impact or outcome? What is the moral of the story?
..... couldn't find her friends.....

Storycard completed by student

2.1 Navigation

Practical solutions

2.1.1 School entries: The school entry is a critical transition point that shapes students' sense of wellbeing at the start of the day. These spaces should foster calm through thoughtful integration of nature, including canopy trees, hedges and ground cover that provide comfort and shade and reduce noise.

Students can feel self-conscious during arrival and benefit from seats and sheltered places to pause while waiting for friends or classes. Entry spaces should allow students to wait without feeling exposed or 'on show', offering both visibility and privacy through subtle screening.

School entries also carry symbolic value. For principals and staff, they communicate a school's ethos and culture. For parents and the wider community, they signal a commitment to student wellbeing and inclusivity through high-quality, welcoming environments. Thoughtfully designed entries set the tone for the school day and strengthen the school's relationship with its community.

2.1.2 Maintain clear sightlines. Make the shift from one space to another easy to understand by maintaining clear sightlines. Use gradual thresholds instead of abrupt changes in level, light or enclosure to help students feel oriented and comfortable as they move, instead of on display to their peers.



Front entry at J J Cahill Memorial High School in Sydney.
Designer Tanya Wood.
Photo credit: Simon Wood.

2.1.3 Prioritise circulation, legibility and wayfinding, especially in key locations such as entries, canteens, sports courts and toilet facilities. Use multi-modal wayfinding strategies, including signage, block numbers, colour cues, planting as spatial markers, and open sightlines from the main entry and reception. When planning new schools or new buildings at existing schools, map out circulation patterns, volumes and timing of movement to test proposed footpath widths, avoid bottlenecks and maximise sightlines. Design footpaths to follow existing desire lines.

2.1.4 Make spaces easy to understand at a glance. Clearly indicate which areas are for walking or moving and which areas are for hanging out or playing using consistent path materials, clear edges, obvious entry points, such as changes in material or grade.

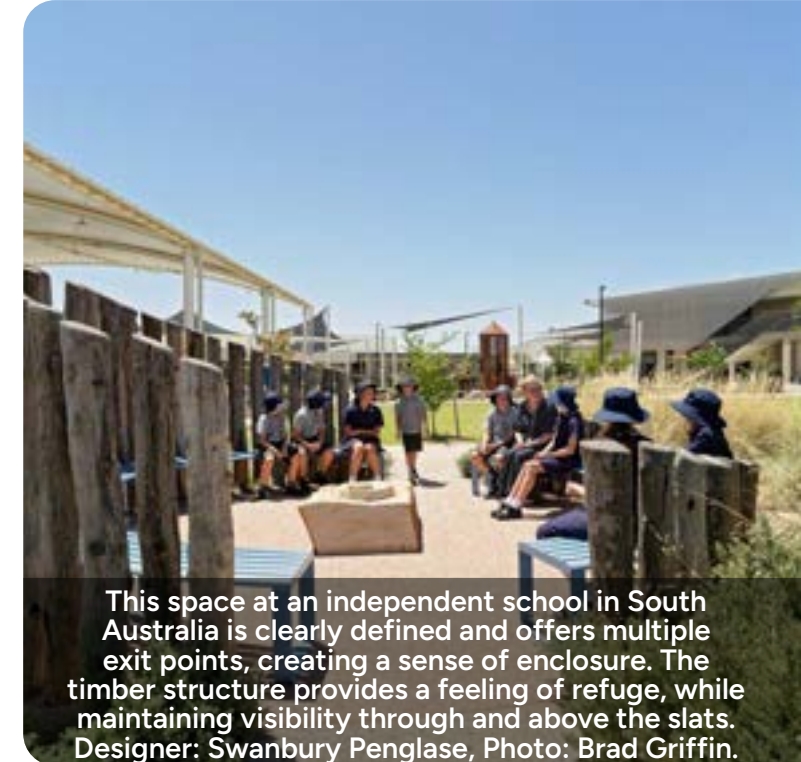
2.1.5 Provide multiple access points to enter or exit a space, such as a direct route and quieter edge route, for discrete movement. Keep main circulation routes clear and uncluttered so movement is low-stress. Use material changes sparingly to distinguish primary routes from informal or quieter paths.

2.1.6 Design walking loops so students don't feel trapped or conspicuous. Where dead ends are unavoidable, add a destination at the end such as a seat, bubbler, artwork, garden, or view to nearby natural feature.

2.1.7 Use curved paths for meandering and straight paths for main thoroughfares. Gently curving path alignments can slow walking speed while still providing directional cues. Straight and direct paths are appropriate where large numbers of students need to move efficiently, such as along primary circulation routes.

2.1.8 Include pause points at key transitions where students can linger, such as verandas, covered landings or small sheltered edges. Locate off thoroughfares to avoid anxiety and conflict.

2.1.9 Strengthen indoor/outdoor connection. When designing new buildings, prioritise indoor/outdoor permeability such as through wide sliding doors.



This space at an independent school in South Australia is clearly defined and offers multiple exit points, creating a sense of enclosure. The timber structure provides a feeling of refuge, while maintaining visibility through and above the slats. Designer: Swanbury Penglase, Photo: Brad Griffin.

2.1.10 Create calm edges along buildings to support comfortable movement. Avoid placing loud, crowded or visually busy elements (such as long runs of lockers) along the full length of main walking routes. Similarly, long blank walls can make students feel on show. Introducing elements like seating, planting or artwork breaks up these edges and can disperse noise.

2.1.11 Consider outdoor zones tailored to specific year levels, particularly younger cohorts, to foster a sense of ownership and psychological safety.

Dead-end paths: Routes that terminate without through-connection, which can cause confusion and crowding.

2.1 Navigation

Case study

Compass Catholic Community, South Australia
by Swanbury Penglase

The challenge: Some of the school cohort have complex needs which would benefit from movement.

The solution: A walking loop with numerous paths, wide enough to accomodate multiple people and pause points to stop and reflect.

The benefits: Provides a calm spatial transition as students move around the campus and allows for regulation by movement.

“Much of the regulation and teaching actually happens while walking out at this particular campus.”

Marguerite Bartolo, Associate landscape architect at Swanbury Penglase

Clear line of sight

Open space creates sight lines for students who may otherwise feel uncomfortable by the uncertainty created by obstructed views.

Numerous pathways

Offering more than one path provides options if students do not feel comfortable joining or passing a particular group.

Wide open paths

Path widths of 2-2.4m can support students walking abreast with a fellow student or educator. Students can also pass other people at a comfortable distance.



Compass's campus plan for walking loops

- directional change points
- places to pause



Compass Catholic Community's walking loop paths
Photo credit: Brad Griffin

Low level boundaries

Low walls and plantings prevent the obstruction of views and and help define spaces.

Pause points: *Small widened places to stop, wait or choose a direction without blocking flow.*

Places to stop and pause

Moments of pause such as this picnic table allow people to stop along the path.



2.2 Down regulation

Design quiet, nature-rich outdoor refuges close to classrooms to lower sensory load so students can down-regulate and return to learning.

Student insights

A high priority across all three study schools was space to down regulate. This was requested by highly active and passive students, senior students of all genders. They need this because they are “tired from their schoolwork” (School M, Year 8-9F) or competitive sports, or recovering from a “bad test result” (School R, Year 11M) or “family issues” (School R, Year 11F).

Nature is core to a down regulation space. One wanted “to spend time in nature and rejuvenate ...with many natural areas, such as trees and ...not concrete” (School R, story Year 11-12M). Students also want relaxing seating and to be “further away from the main walkways” (School L, Year 11-12M). When these spaces are not available, students often retreat indoors to libraries; as one student put it: “you don’t want to be in the library... you want to sit under a tree” (School R, Year 9-10F).

Some students, particularly girls, seek down regulation through walking. One student was frustrated: “if you wanted to walk around... it is really restricted...” (School M, Year 8-9 F).

One teacher wrote a story about Nate who lives “between two homes and feels misunderstood” he needed “a time/space away from others to move...to work off his energy...[and] return to class [to learn]” (School L, teacher story).

Principal insights

Principals acknowledge the importance of calm spaces, particularly if a student is neurodivergent, has experienced trauma or is having a tough day. Without sufficient calm outdoor spaces, there’s conflict indoors: “we have quiet spaces within the library but ... there’s 300 kids in there, like it’s madness” (Principal 1).

One Principal doubted whether students would use quiet spaces noting “it’s only teachers [who] use them...You wouldn’t actually find kids going and sitting there... [because] kids see that as rather, you know, boring ...the concept of green spaces or the outdoors” (Principal 4).

Providing and managing calm spaces, however, is challenging. Principals grapple with providing access for vulnerable students while ensuring “they’re not locked into that [area]” (Principal 2). Principals worry about unsafe behaviour in these spaces because “kids can hide... around the bushes” (Principal 9). As a result, one school with a wellbeing space was “fairly strict if it gets abused.” (Principal 8).

With growing enrolments and reduced outdoor space, equitable access is a concern: “I can’t afford to lose a big space ... If it’s only [for] 5 or 10 [neurodivergent] kids” (Principal 1). One principal worried that students might take advantage of these spaces: “that just gives the other kids more excuses to be out of class” (Principal 4).

Meet... Eva they are yr 12 + living out of home
Name your student About your student: age, gender, demographics etc
are to family violence
they sometimes feel... overwhelmed in the schoolyard
Feeling in schoolyard
One day when... she was overwhelmed she went
What happened?
to the well being hub to self regulate
What they needed was... breathing space
What did they need from the space?
It was important that the space... was quiet + tranquil
What qualities / functions / features were important?
green, natural

Story card written by a principal
(Illawarra Principal Workshop)

Sensory load: The total amount of sensory input a student experiences; high load can be stressful..

2.2 Down regulation

Practical solutions

2.2.1 Deliver nature-filled down regulation spaces at least 4 m depth. Prioritise simple, navigable layouts. Enclose with natural boundaries or **visually permeable** screens rather than high fences that can communicate a sense of exclusion.

2.2.2 Position immediately adjacent to a classroom so that students can easily access the space with limited disruption to others. Position within staff sightlines to improve safety through passive surveillance.

2.2.3 Use nature to create calming sensory spaces. Use vegetation to create places that feel restful and gently engaging, for example greenery that students can watch, listen to or touch. Include natural features such as canopy trees, hedges and ground cover which reduce glare, absorb sound and provide soft fascination.

2.2.4 Reduce noise and visual stimulus through location and material choice. Locate away from more exposed, noisy zones such as courts, canteens or major thoroughfares. Use planting, **landform** and materials to reduce noise. Adopt neutral colours so students aren't bombarded by visual input.

“I have two secondary students at home with auditory processing disorders and know how hard it is to focus and isolate what the teacher is saying when there is background noise.”

Reference Group 5

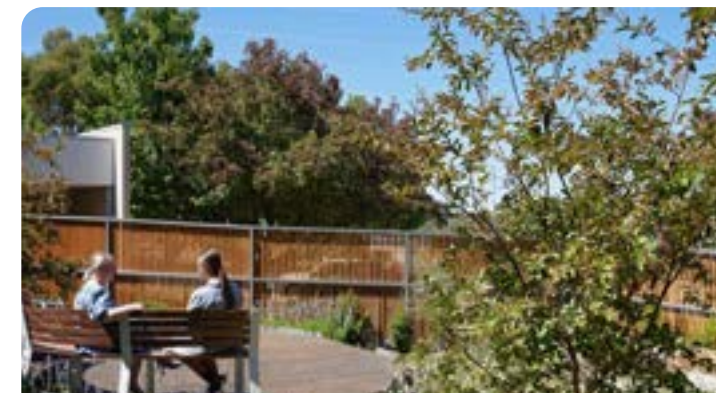
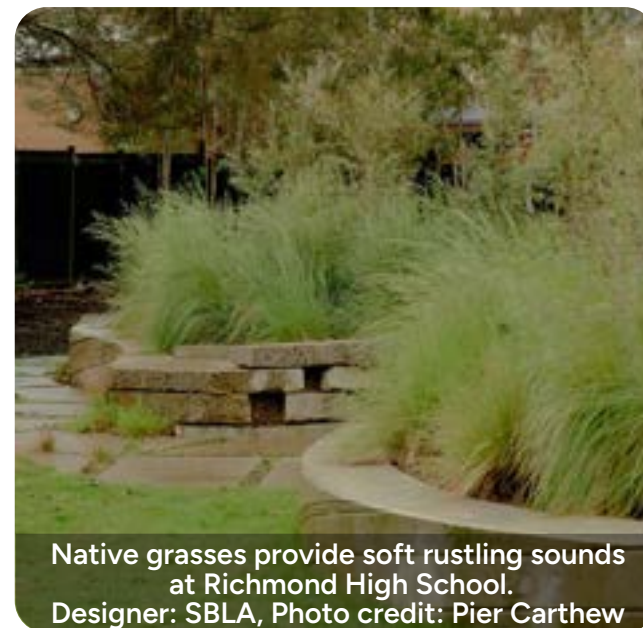
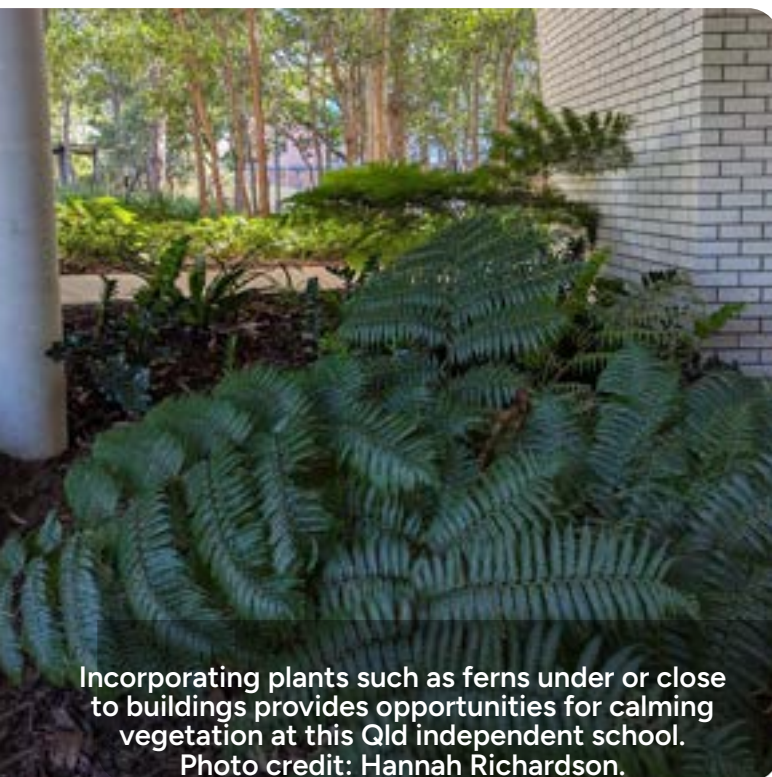
2.2.5 Offer calming amenities within these spaces. Movement can be highly regulating for neurodivergent students. Prioritise movement that is socially acceptable such as hammocks, swings or rocking chairs. Ensure impact absorbing surfaces are considered under swings or hammocks.

2.2.6 Build in adjustable elements so students can fine-tune comfort. For instance, a portable umbrella or movable screen, adjustable shade, loose cushions or movable seating to help match different sensory needs.

“Small seating or furniture that can be moved not only enables creation of social spaces, but supports regulation and modulation. The heavy work to move, shift, pull the seating can help settle and organise the neurological system for calm and learning.”

Catherine Daly, Reference Group 5

2.2.7 Integrate tactile and mindful elements, for gentle sensory engagement. Use a limited palette of textures and tactile finishes, such as smooth timber, glazed brick, bark surfaces and soft grass. Incorporate subtle sensory cues including mildly fragrant plants. Finely textured plants or grasses and other materials can introduce movement, gentle sounds and quiet fascination without overstimulation. Where possible, include vegetation and habitat elements that attract native birds, as birdsong can provide a strong link to nature and other living systems.



At the wellbeing garden at Woodcroft College, SA, native grasses and a fountain producing gentle sounds that help to regulate and provide soft fascination. A circular seat can be moved depending on the sun's direction to adjust sensory stimulation and lavender provides a mild fragrance. Designer: Swanbury Penglase, Photo credit: Brad Griffin.

Visually permeable: A quality of a space or boundary that allows clear views through it (such as a fence), maintaining sightlines for safety, connection and ease of movement while still defining space.

Passive surveillance: Everyday visibility from paths, windows or staff areas that improves safety without overt monitoring.

Landform: The shape of the ground—mounds, terraces and slopes—that influences play, drainage and sightlines.

2.2 Down regulation

Case study

Alkimos College, Western Australia
by Four Landscape Studio

The challenge: The school wanted to provide a calming space for neurodivergent students without making them feeling excluded.

The solution: The creation of an outdoor down regulation breakout space directly adjacent to classrooms.

The benefits: Students can easily access space during lessons without interrupting class. Sensory features assist in down regulation. The space is also highly visible, reducing the likelihood of inappropriate behaviour.

“It’s a big sort of green central space... with a whole heap of plants and trees... the mental health components associated with proximity to the natural landscape were considered.”

Andrew Thomas, Director at Four Landscape Studio

What is down regulation?

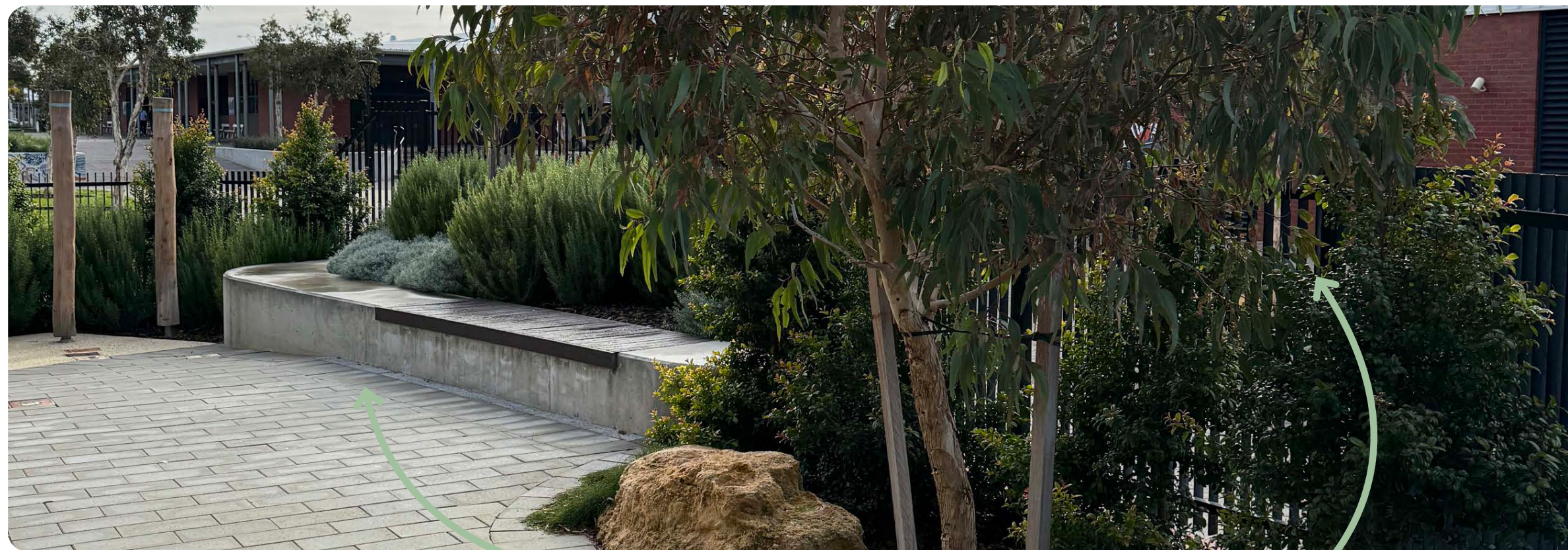
Design features that help students to calm and reduce sensory load.

What is soft fascination?

Soft fascination (from Attention Restoration Theory) is the quality of gently engaging, low-demand stimuli most often found in nature that hold your attention effortlessly while leaving mental bandwidth free for reflection and recovery.



Sensory plants & materials
Carved totems provide mindful tracing. Edible and scented plants and a selection of smooth and rough textured materials allow students to engage in sensory experiences.



Down regulation space
A sensory courtyard was included for neurodiverse students. This semi-private space includes hedging to create a sense of enclosure while being close to the classroom for quick breakouts in view of teachers.

Vegetation to support calm
Using plants with different textures and contrasting foliage can provide ‘soft fascination’ when students feel overwhelmed.

Queer community

Supporting queer students in the schoolyard during adolescence can be complex. There are a range of successful methods to support queer students while maintaining their need to disclose their identity when they are ready to do so.

Needs

Some queer students created their own safe spaces when none were available.

One described "I would sit in the doorway, because ...no one would bother you, and that's where we would sit for the entirety of year 11 and half of grade 12" (Brisbane Youth Workshop)

Many participants emphasised that support requires a whole-school approach rather than isolated safe zones:

One described that the safe space "needs to be everywhere, it doesn't need to be one corridor or one breakout space" (Adelaide Workshop).

Options for queer inclusion

Because queer students are not a homogenous group, inclusive schoolyard design requires multiple approaches and environments.

Belonging: Celebrating inclusion through murals and signage can help students feel welcome, regardless of whether they specify the queer community.

General wellbeing spaces to support queer students to disclose when they are ready. Some schools have instituted general wellbeing gardens open to all students. These are ideally located near a counsellors office or other space with clear supervision.

Small social spaces: Queer students report when receiving comfort from close friends, they benefit from low-intensity, neutral zones such as landscaped seating circles.

Visibility: For many queer students, access to teachers and queer role models is important. When accessing school outdoor spaces, they benefit from clear sightlines - for example seating outside a window - and spaces with multiple exits (see Guideline 2.1 Navigation).

Down regulation: Queer students report needing private spaces to manage a time of life that can have high emotions, such as through calm, green spaces and sensory gardens (see Guidelines 2.2 Down regulation).

Informal sports: Queer students spoke of wanting spaces that are not 'coded' as masculine or feminine such as walking tracks, swings, or areas to casually kick a ball (see Guideline 1.3 Movement and play).

Challenges

School leaders grapple with how best to support queer students. Said one workshop participant: "an ongoing debate is if it is more appropriate to design spaces that are designated for LGBTQIA+ students or integrated safe spaces into the schoolyard" (Adelaide Workshop).

Others emphasise the importance of dedicated safe zones: "It's important that they've got somewhere that they feel safe and is theirs" (Principal 10).

Meet Mathieu
Name your student (he / she / they) are 26, Non-binary, being bullied, bullying
Circle their pronoun. Describe the student: age, gender, history

Social outcast, isolated, and wanting to fit in
who sometimes feels lonely, isolated, and afraid

One day when Mathieu was sitting in the shade at lunch, they were approached by a teacher and told to go play but didn't want to go out in the crowd, the teacher asked why they couldn't exercise why

What happened?
What was needed was less force, more attention, a space to feel welcomed
What did they need from the space?

with things to do, interact with either a book, animals, or something to do away from the crowd while still being a part of something

It was important that the space felt spacious, welcoming, warm, or [inviting]
felt restricted for access to those that would ruin it

So that he felt welcome and safe

What is the impact or outcome? What is the moral of the story?
Safety

Workshop participant story card describing the need for a safe space in the schoolyard. (Queer Youth Interview)

2.3 Privacy

Provide semi-private spaces where students can decompress or reflect while still keeping spaces visible for supervision.

Student insights

Students consistently requested more private spaces to process emotions especially during stressful periods. As their emotional lives become more complex, students also become more self-conscious about expressing emotions in front of others. The need for privacy was expressed across male and female students but appeared to intensify in the middle years, especially for girls. As one girl put it: “I’d add... maybe a really nice and calm area somewhere... just hidden away... seating and then really nice nature” (School M, Year 8–9F).

When private spaces aren’t available, students seek privacy elsewhere. One workshop participant concluded there were “no private spots outside [so] people would

just find their own... under stairwells, behind buildings” (Canberra Workshop). Girls at both School L and School R retreated to change rooms for refuge. As one student described in a story “she was overwhelmed, she was looking for a place to stay so she went to our pool change rooms, [what she needed was] a place to go in nature with shade that was semi-private and quiet...[so] she could properly rest, feel better” (School R, Year 9–10F).

Students who feel exposed or out of place often seek out privacy, including girls, queer and neurodivergent students. One workshop participant concluded: “LGBTQIA+ students frequently report seeking out private spaces in order to feel safe to be themselves” (Adelaide Workshop).

“I want friends to help boost [me] up in a secluded environment.”

School R, Year 9–10M



At school R this space provides some privacy for middle school girls.

Principal insights

Principals acknowledge that “the playground can be quite a big, intimidating place” (Principal 10) and recognise some students “just need a minute to not be around and be visible” (Principal 8). When this can’t happen, Principals observe students seeking refuges in toilets, stairwells, under classrooms (Principal 4) or in libraries where “it’s safe. You’re not out in the open” (Principal 9).

However, Principals worry about safety in private spaces. As one cautioned:

“sometimes the kids like to hide away... we’re concerned about what they’re up to”

such as graffiti, rubbish and anti-social behaviour (Principal 11).

Landscape practitioners too worry about visual privacy, opting to provide “auditory” rather than visual privacy. One practitioner pointed out: “It’s just dangerous to have privacy,” as a result “we don’t do it, but you can get, as we were saying, some acoustic privacy” (Tanya Wood, Landscape Architect).

Principals believe that large open spaces are easier to supervise and worry about “hidey-holes” where students “hide around the bushes and things like that” (Principal 9). For Principal 10, an existing small space with seats and shelters “is out of bounds too, because again, I can’t get enough teachers [to supervise].”

Successful semi-private spaces balance acoustic privacy with clear sightlines to support both student safety and supervision. Vegetation or fountains can provide auditory privacy, so “you could have a chat there and no one would be able to hear you” (Principal 9). Similarly passive surveillance can be maintained when students “walk past four glass offices to get there” (Principal 8).

“[there is a] need for calming spaces. Privacy [is] very important - do we have enough spaces that feel enclosed while still offering adequate supervision?”

School R, Staff

2.3 Privacy

Practical solutions

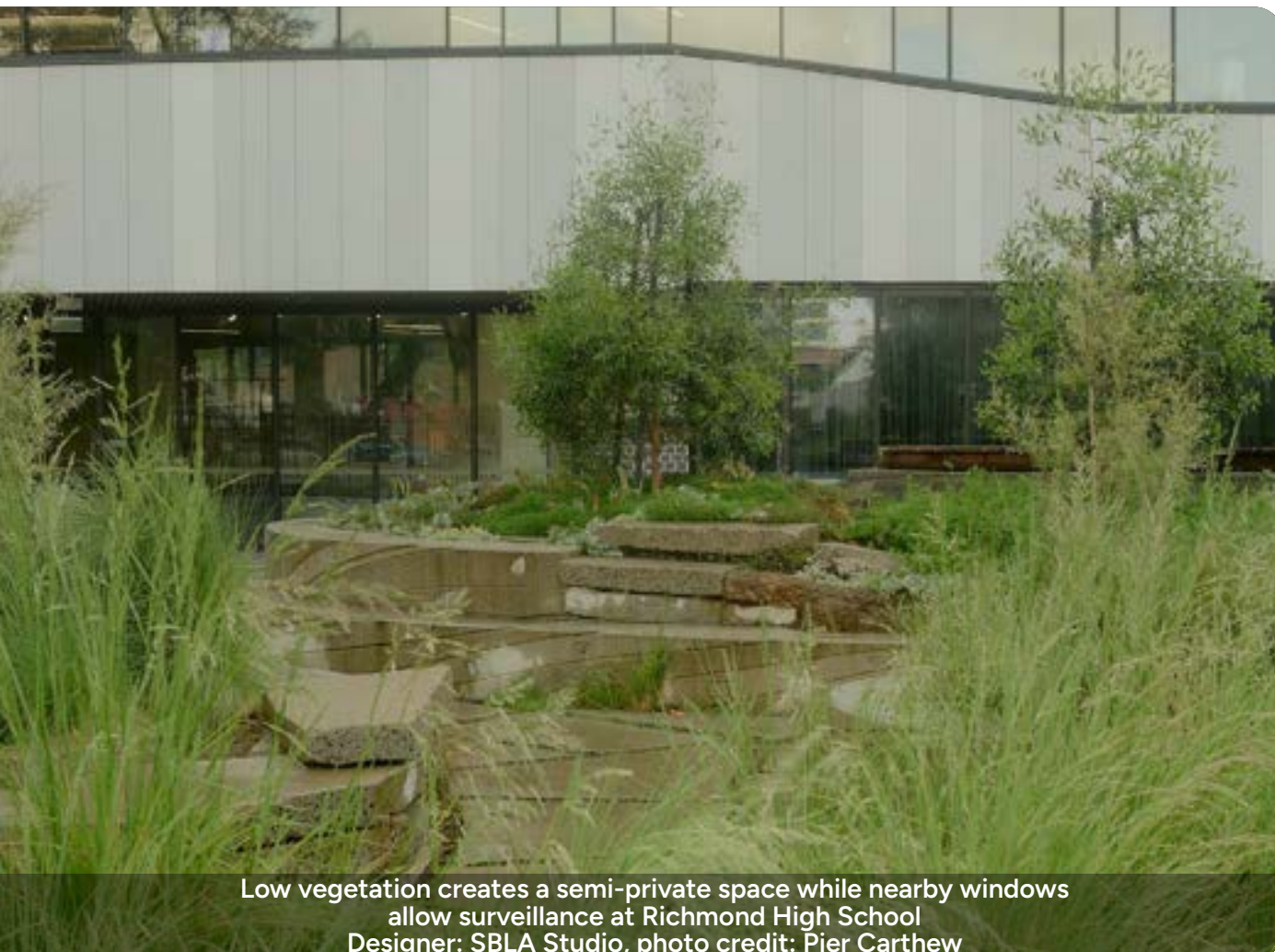
2.3.1 Provide semi-private spaces without fully enclosing them and that are slightly removed from main areas such as quadrangles or thoroughfares. Aim to screen students from direct views, for example, by shielding the lower body or seating zone.

2.3.2 Place semi-private spaces where supervision is naturally possible. Locate them within passive view of staff circulation routes, windows or staff rooms, not in blind spots or dead ends. Prune and hedge vegetation to prevent unintended concealment over time.

2.3.3 Provide psychological distance from classrooms. Include a few social spaces or retreats that feel slightly away from classrooms, so students experience a sense of psychological distance and reset.

“Privacy moments increase [a] sense of safety.”

Canberra Workshop



Low vegetation creates a semi-private space while nearby windows allow surveillance at Richmond High School
Designer: SBLA Studio, photo credit: Pier Carthew

“This space is popular with students ...supervision is difficult with staff needing to strategically place themselves to be able to see most students.”

Principal 14



A private space that is hard to supervise: Photo provided by NSW public principal.



Low vegetation around this small space at Pedare Christian College in South Australia provides some privacy while nearby windows ensure passive surveillance from staff.
Designer: Swanbury Penglase. Photo credit: Brad Griffin.



Chapter 03

Psychological Needs

Psychological needs

Introduction

As adolescents navigate the transition from childhood to adulthood, they have strong developmental needs to express autonomy, explore their emerging identity and feel a sense of ownership. As a result, they benefit from environments that offer choice, risk, and communicate adults' sense of trust in them. These conditions help them to feel as independent emerging adults.

As they navigate hierarchical peer dynamics, adolescents value spaces that feel like "theirs." Limited access to appealing areas can heighten competition and exclusion, while diverse, inclusive spaces strengthen belonging and reduce social pressure.

With impulse control still developing,

adolescents are drawn to reward-seeking and risk-taking, which support peer connection, confidence, and stress management. Providing safe, structured opportunities for challenge and social interaction is essential. Wolfe et al. (2006) argue that risk behaviours are not merely impulsive acts, but often serve functional purposes, including gaining peer acceptance, asserting independence, and coping with stress.

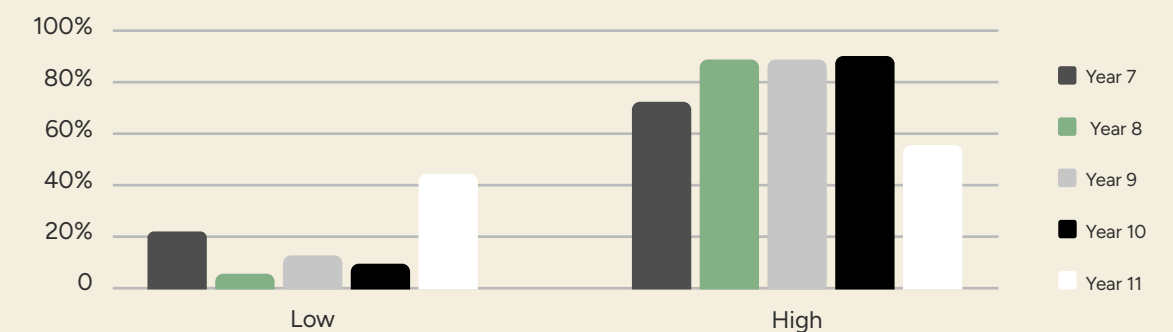
Finally, changing academic and social demands can affect self-esteem, motivation, and belonging, making supportive relationships and consistent environments critical for maintaining wellbeing.

How to design for student needs

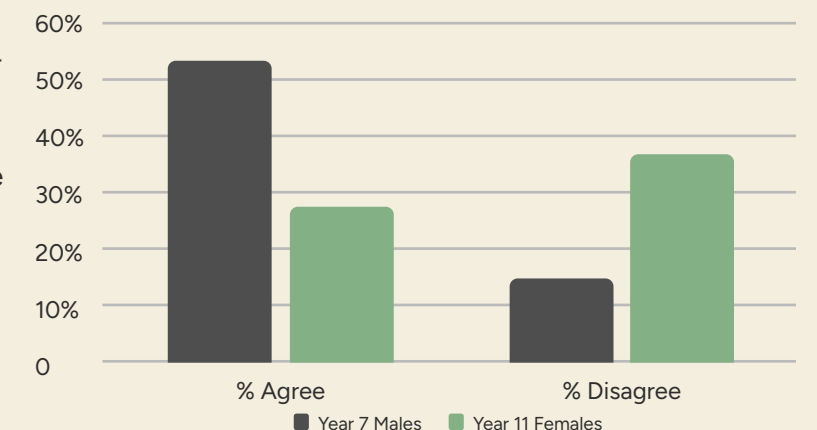
Meeting the psychological needs of students can be achieved by designing for two key spectrums: risk appetite and territoriality. Some students seek risky play to release energy while others already feel depleted from social or other risk. Territoriality refers to how strongly students attach to a place: some roam, while others feel safest when they belong to a familiar spot.

Evidence

Risky play: students consistently request more risk. During focus groups students completed a questionnaire regarding types of play and across genders and age groups expressed a strong preference for schoolyard challenge and risk-taking.



Agency: When surveyed about their ability to use or adapt the schoolyard to meet their needs (n=270), Year 7 male students reported the highest levels of agency whereas Year 11 female students reported the lowest.



Risk appetite



Marcus

As a refugee Marcus feels like every decision carries risk, especially social risk. He's not looking for extra physical risk.



Isla

Isla is looking for a challenge to test herself physically and psychologically



Territoriality



Marcus

Marcus likes to move from one spot to another.



Sylvia

Sylvia has a favourite spot that feels like her own, she knows she'll always meet her friends there.



Emerging Adult



Sylvia

Age 15

Pronouns: she/her

Sylvia sees herself as a competent young adult, yet she feels like she's not treated that way. For example, there are trip hazards and long windy ramps that are hard to use in her wheelchair, which means she's often late to class.

Sylvia feels like adults make decisions about students without actually asking for their input, making them feel like their opinions don't matter. She asked the principal if an area at the front of the school could be used as a hangout space. The principal said no because he doesn't want it to look like kids are not in class. The principal wants to turn this space into a neat decorative garden that looks beautiful for the local community.

Sylvia was really annoyed when a new mural suddenly appeared over summer. Being about healthy eating, it felt really patronising. The students had not been

consulted. She felt this was a missed opportunity to celebrate student artwork.

Sylvia is social and creative, but acutely conscious of where she is allowed to be. Schoolyards have social territories, areas where popular girls dominate and Sylvia feels she's not welcome in. When she is alone and looking for friends, she feels she is being watched and judged for being lonely.

She feels strongest in places that are easy to navigate, socially welcoming, and celebrate student's contributions.

Breaktime is important to Sylvia not just for rest, but as a time to connect and imagine better possibilities. She thrives when school environments recognise her independence and treat access as a shared benefit, not a special request.

How to design for Sylvia

Sylvia benefits from spaces that support connection, agency and access without drawing attention to difference.

- When ramps don't look like an "add on" but are subtly incorporated into the landscape.
- Picnic tables with gaps in seats so she can roll her wheelchair in
- Clear sightlines so she can see and be seen on her terms
- Spaces designed with students and not just for them, such as murals and productive gardens.



This space is inaccessible for Sylvia.
Photo: Principal 17



New mural appeared at Sylvia's school without engaging with students. Photo: Government school in Canberra



Sylvia suggested that this used front area become a senior student retreat but the Principal wanted this to become a decorative garden. Photo: Principal 15.

3.1 Claimable space

Offer a diverse range of distinct, claimable spaces to support a sense of ownership among different student groups. Reduce social gatekeeping by providing desirable features in several locations for different ages and genders. [Page 102](#)

3.2 Autonomy and risk

Offer students opportunities to exercise agency and positive risk-taking with appropriate safety measures. [Page 106](#)

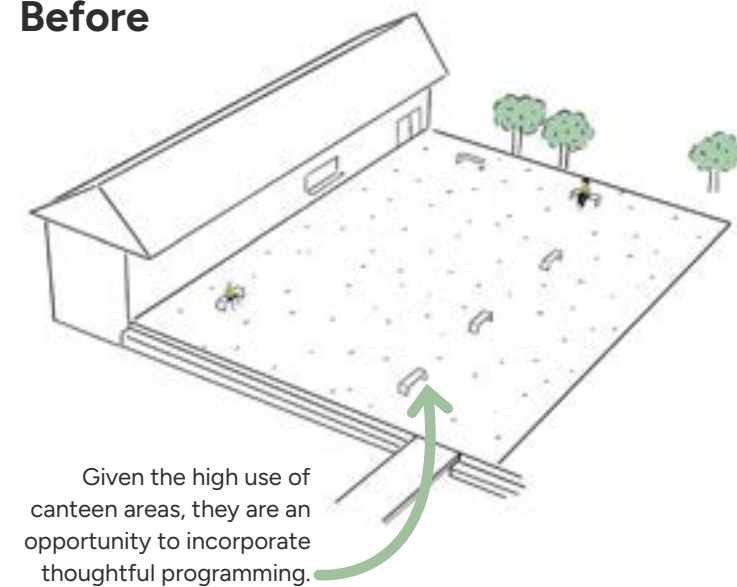
3.3 Competence

Create spaces where students can build skills, feel capable and be treated like young adults. [Page 114](#)

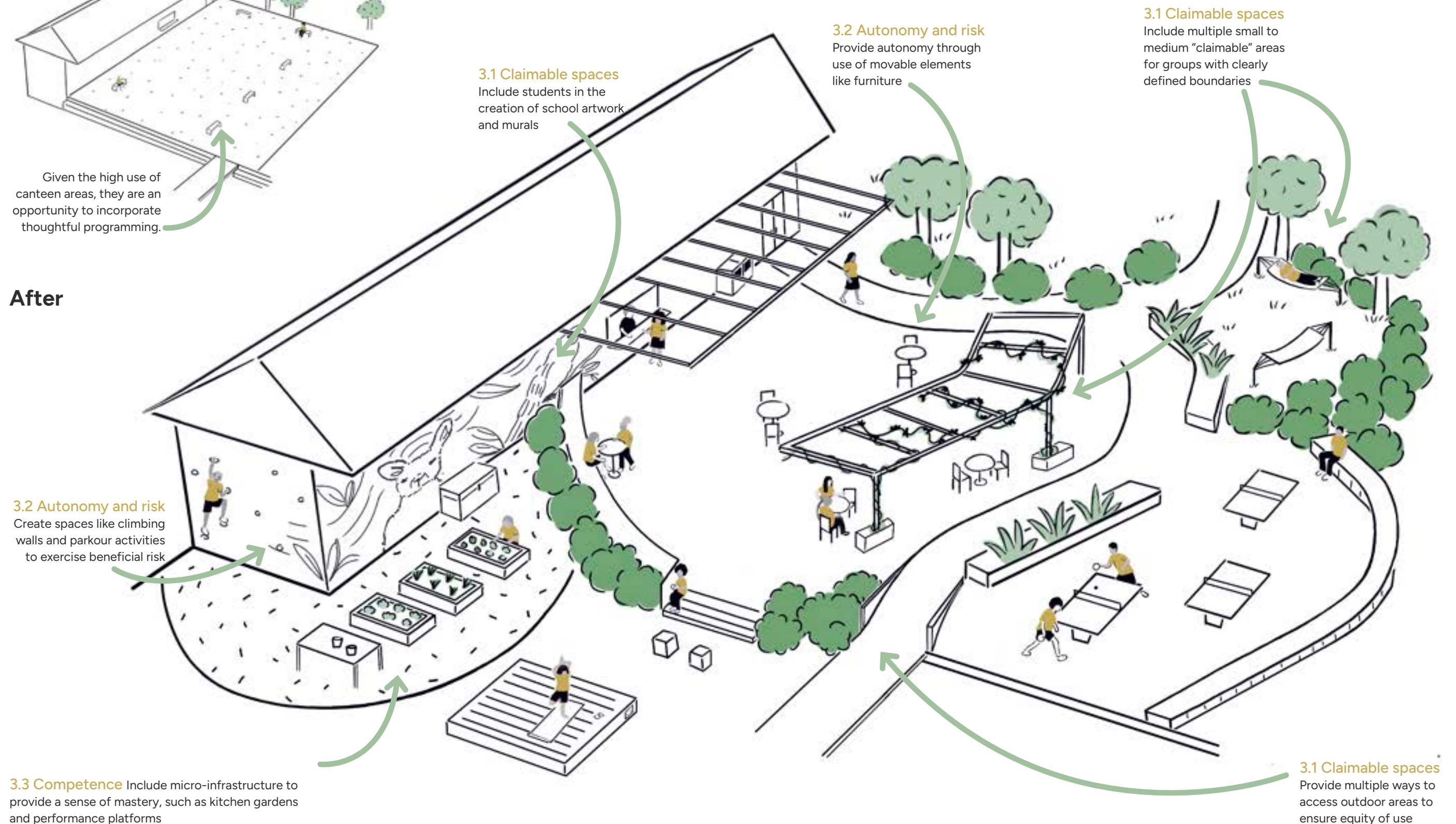


Applying the guidelines

Before



After



3.1 Claimable spaces

Offer a diverse range of distinct, claimable spaces to support a sense of ownership among different student groups. Reduce social gatekeeping by providing desirable features in several locations for different ages and genders.

Student insights

Many students want a space that feels their own: “You have to find a spot and that’s your spot from year eight to year 12.” (School R, Year 9–10F). In many schoolyards, social hierarchies are expressed by who can access which space. As one student explained, “sitting in someone else’s spot, that’s just wrong” (School R, Year 9–10F). This can marginalise less dominant groups, including younger students, girls, and gender-diverse students. One student explained: “you don’t want to steal, like, Seniors’ spots” (School R, Year 9–10F) while a teacher described a girl needing “a place... away from the boys” who were “intimidating, loud and physical” (School L, teacher story).

When only a few spaces feel safe or desirable, competition intensifies. At School L, younger and female students felt excluded from popular undercover areas: “...they don’t really let anyone else nearby... we’ll just [get] trampled on.” (School L, Year 7–8F). Students suggested this could improve with “more... big play area[s], not one thing” (School L, Year 7–8F).

As a result, some students retreat to less desirable locations. Noted one student, “lots of students are sitting on the floors or stairs” (School M, Year 7F). This competition for seating is often attributed to a lack of availability: “it’s really hard to... find somewhere to sit” (School R, Year 9–10F). As there was sufficient available seating in this instance, this suggests social hierarchies rather than supply. Providing a range of spaces can support more inclusive use.

Principal insights

Principals acknowledge that students can be very territorial causing “tensions and conflict... ‘This is my table.’ ‘No, it’s not your table.’” (Principal 3)

Principals acknowledge that certain cohorts of students need their own space. Often this is Year 7s and senior students who both benefit from being separated from other students. For example, one spoke of a senior zone which “makes them feel that they’re important and that this is our space. We get to be here” (Principal 1). Referring to a Year 7 space another principal said: “it’s quite a nice safe sort of transition to high school” (Principal 2).

Principals want to meet the needs of diverse groups but grapple with how to do this, especially in the context of shrinking space. One raised concerns about an LGBTQIA+ space seeming unfair to other students: “separate spaces and that sort of thing [wouldn’t work] ... there’s nothing gendered [in our schoolyard]. Anyone can be anywhere....[different genders] just gravitate to different spots” (Principal 11).

Principals worry that providing more and diverse spaces in the schoolyard will increase the supervision loads of teachers. One commented if “you open up more playground areas then you require more supervision, which increases staff workload, but by minimising the, you know, the areas reducing the supervision, your density rates increase, which cause conflict in and in other ways which can indirectly result in more work.” (Principal 3)

Meet *Emily*
Name your student
they are *a 15 year old female student.*
About your student: age, gender, demographics etc

they sometimes feel *like they don't have a 'place' at breaks*
Feeling in schoolyard

One day when *they wanted to connect with friends, eat lunch and have downtime they had nowhere to sit*
What happened?

What they needed was *a table, chairs, shade*
What did they need from the space?

It was important that the space *had seating and was comfortable and able to seat multiple students.*
What qualities / functions / features were important?

So that *they were able to connect with each other*
What is the impact or outcome? What is the moral of the story?
They end up standing for the lunch break or sitting on dirty concrete and don't eat their lunch as it was uncomfortable. Students need spaces to connect and function comfortably during the day.

Story card produced by a teacher at School L

3.1 Claimable spaces

Practical solutions

3.1.1 Design multiple small to medium “claimable” areas with clear boundaries so groups can settle in. A space is claimable when it is defined. This can be achieved by adding edges, seating, planters, low walls, changes in level or surface material.

“Students are very tribal and they’re very territorial and they tend to go to the same areas.”

Principal 9

3.1.2 Vary the visual language in different spaces so that students can identify with a particular spot. For example, there may be a colourful space, a calm space, a playful or risky space.

3.1.3 Include multiple desirable features. When implementing popular amenities such as hammocks, swings or play elements, distribute these amenities across campus and make them available to different student cohorts to prevent a single amenity becoming owned by a powerful few.

3.1.4 Involve and express student identity. This can be achieved through involving students in the design process (see Guideline 3.3 Autonomy and Risk) and through involving them in artwork, murals and other student created spaces.

3.1.5 Provide alternative spaces for groups who are displaced during renovations. Students report losing their “spot” during re-build processes. If renovations displace a group, consider providing an alternative space during the short term, such as curriculum or courtyard spaces, to prevent conflict when multiple groups need to occupy the same space.

“There just needs to be a really good diversity of places to sit so that everybody feels like they’ve got the space that they can call their own...”

Gender & Inclusivity Workshop



Raised mounds with artificial turf create small claimable places, while trellis enclosure with climbing plants creates larger claimable places at St Columba's College, Vic. Designer: Rush Wright. Photo credit: Chris Erskine



A raised platform with timber seating creates a larger claimable place at Pedare Christian College, SA. Designer: Swanbury Penglase. Photo Credit: Brad Griffin.

Visual language: Visual language is the intentional arrangement of landform, materials, planting, colour, texture, light, sound, scale, rhythm, and edges to make places legible and express character. Site-wide coherence reads as one “hand”; deliberate shifts at thresholds signal entry into a different space or quality.

Claimable space: Small, clearly bounded areas a group can adopt as “their spot”, supporting identity and belonging.

3.2 Autonomy and risk

Offer students opportunities to exercise agency and positive risk taking with appropriate safety measures.

Student insights

Teenagers developmentally need independence; when the classroom feels highly structured, they often seek freedom outdoors: “It’s just like you’re getting bombarded by teachers and then you go outside and ... do whatever” (School L, Year 11–12M). Students want different types of spaces and freedom to engage in different ways so there is “more room for other people to try new things” (School M, Year 8–9M). Suggestions included “some more climbing frames... bigger spaces and... different types of eating areas” (School L, Year 7–8M), while other students sought creative options, chess, games and reading.

Students were frustrated when options were restricted, such as equipment that “you’re not allowed to use... it’s useless” (School L, Year 9–10M), or play areas with too many rules: “[I’d like] less rules around what you can actually do with [the play equipment]” (School L, Year 9–10F). Limited options contributed to boredom – “We just sit and don’t do much” (School L, Year 7–8F) – and students often improvised, from building teepees with branches (School R) to dragging a picnic table to a better spot (School L).

Many also wanted more adventurous, risky play, describing jumping from ledges (School R, Year 11) and requesting parkour-style elements, rocks or stumps to jump on, and chairs “you can also run across” (School M, Year 8–9M). When these outlets were missing, staff observed behavioural challenges: “If they don’t find something to do, they get up to mischief” (School R, staff).

Principal insights

Principals and staff acknowledge that “they’re teenagers. They don’t consider risk as we do as adults” (Principal 3). Yet schools also recognised “students benefit from structured freedom options for self-directed but supervised activities [as] we don’t have many options” (School R, staff). This could include “grown-up seeming monkey bars ninja course things” or “giant outdoor fidget toys” (School R, staff). Staff also highlighted “[the] importance of multiple co-existing zones – active, social, quiet and solitary to suit needs on any given day” (School R, staff). Even at School R, outdoor furniture was more restricted, with one teacher asking: “Moveable furniture – this exists in library. What does/could this look like in other spaces?” (School R, staff).

Ultimately, however, principals remain concerned about student safety, parent perceptions, and legal ramifications. These pressures tend to highlight the downsides of risk while de-prioritising its benefits. Principals gave examples of students hurting themselves climbing trees, or of desirable spaces such as creeks or bush areas being out of bounds because of safety concerns and behaviours such as smoking. The benefits of risky play need to be supported by a risk management approach, in accordance with relevant government requirements.

Providing choice and options also creates challenges in managing space and equitable access, with staff noting that some students can dominate shared areas. At School L, for example, teachers described male students as loud and intimidating.

Meet Benny they are 17 year old boy
Name your student About your student: age, gender, etc

they sometimes feel happy hanging out with friends
Feeling in schoolyard in the schoolyard

One day when we went down to the car park and
What happened?
used the gas cooker to cook bacon and
eggs on the back of my ute with orange juice

What they needed was They needed some lunch and
What did they need from the space?
a good story and to tell people and for something
to do at lunch

It was important that the space was quite and peaceful
What qualities / functions / features were important?
and none was there to judge

So that we got food and had fun doing
What is the impact or outcome? What is the moral of the story?
it

Story card produced by
a student at School L

3.2 Autonomy and risk

Practical solutions

3.2.1 Create spaces for beneficial risk taking.

These opportunities physically challenge students and are not perceived as childish. Ideally these should be suitable for a broad range of students. For instance, using landform, natural features and traversable edge elements (terracing, rock outcrops, timber ledges) to invite balancing, jumping and perching. Options could also include bouldering and climbing structures, ninja or nature play spaces, parkour or flying foxes, rope-and-net structures. Where appropriate, provide loose parts or worker spaces such as timber pallets, tires.

3.2.2 Offer a variety of ordered spaces and spaces that are more organic in form. This allows students to find what resonates for them. Provide multiple path types (such as a direct route compared with a meandering route between destinations).

3.2.3 Provide autonomy through the use of furniture. Use movable or reconfigurable elements (such as chairs, hammocks or beanbags) to enable students to modify their environment. Moveable furniture should be durable and lightweight. Where moveable furniture is included, provide for storage outside school hours and establish school norms for the use of this furniture. For example, safety expectations and who will pack up the furniture at the end of term.



Climbing wall at Canberra independent school.
Photo credit: Hannah Richardson



A fire pit at an independent school in Canberra. Photo credit: Hannah Richardson

Educated by nature

Using loose parts to create agency

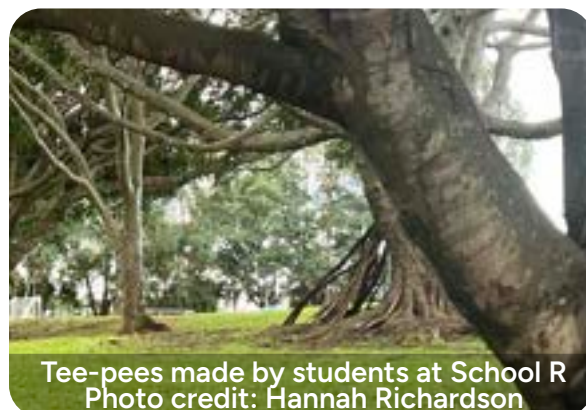
Using loose parts in the schoolyard is an excellent way to introduce risk and risky play as well as providing learning opportunities in a range of technology, design or science subjects.

“Adults often see mess; but in that mess, children see possibility, agency, and belonging.”

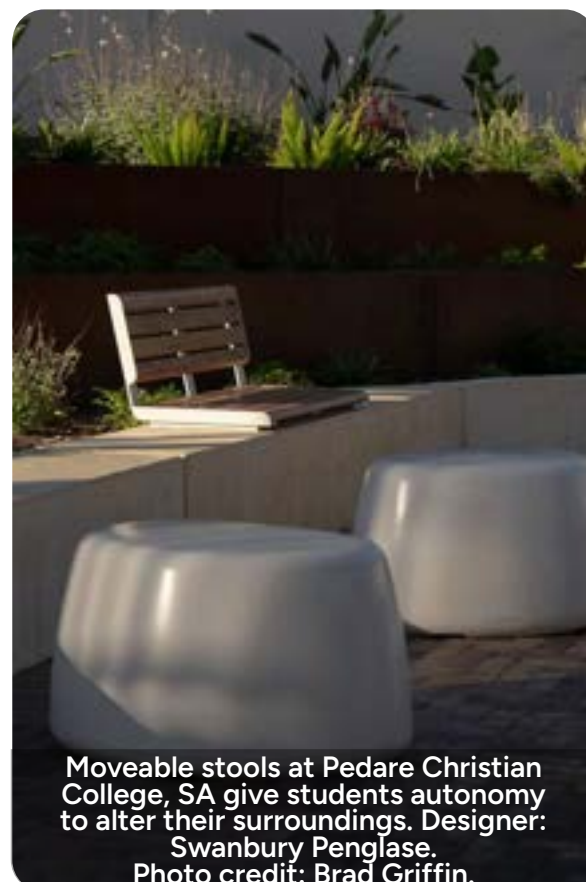
Daniel Burton, Educated by Nature



Loose parts at an independent school in Perth. Photo credit: Educated by Nature



Tee-pees made by students at School R
Photo credit: Hannah Richardson



Moveable stools at Pedare Christian College, SA give students autonomy to alter their surroundings. Designer: Swanbury Penglase.
Photo credit: Brad Griffin.

3.2 Autonomy and risk

Case study

Scotch College, Western Australia by Four Landscape Studio

The challenge: The school wanted to redesign the quadrangle to support risk taking during play.

The solution: A play space which offers a diversity of options, including parkour, climbing and swings designed for larger bodies.

The benefits: A popular play space within the school that is used by both junior and senior students. The new space provides risky play in a safe environment.

“The school was really supportive of enabling their children to take risk... taking their parents along that process as well.”

Andrew Thomas, Director at Four Landscape Studio

Positive risk taking

Adolescents have a developmental drive toward reward-seeking. This design includes parkour, balancing, hanging, climbing and natural rock and level changes which provide a range of options for students to choose from.

Diverse risky play

Not all students feel they belong in competitive sports but they still want to play. Offering a range of options encourages these students to be active.

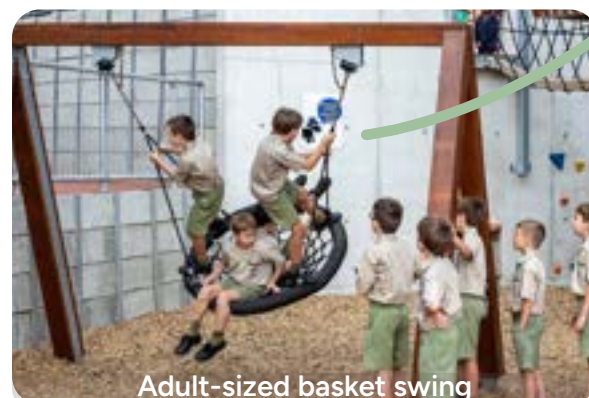
“The senior school boys swing with four fully sized adults on it. The school said, if we could have, we would have put more of those [swings] in.”

Andrew Thomas, Director at Four Landscape Studio

“Parkour seems to be seen as not a playground, even though it does all the things we want it to do in a playground.”

Andrew Thomas, Director, Four Landscape Studio

Scotch College's new risky play quadrangle
Photo credit: Silvertone Photography



Adult-sized basket swing



Rock climbing



Parkour



Multi-use nature play

Risky play

Many schools have successfully integrated challenging play equipment into their schoolyards. Identifying needs early and agreeing on what level of risk is acceptable with stakeholders can help make the process more efficient. This is followed by testing of equipment and undertaking spatial mapping for equipment placement. Consider the risk management approach applicable to your jurisdiction.

Needs

When on offer, students value risky play. However, it is important that supervising school staff are comfortable with its inclusion. For example, School L implemented a popular play area with a swing, trampolines and hammocks. When students began using these in risky ways, access was restricted, creating frustration: “you’re not allowed to use [it] it’s useless” (School L, Year 9–10M).

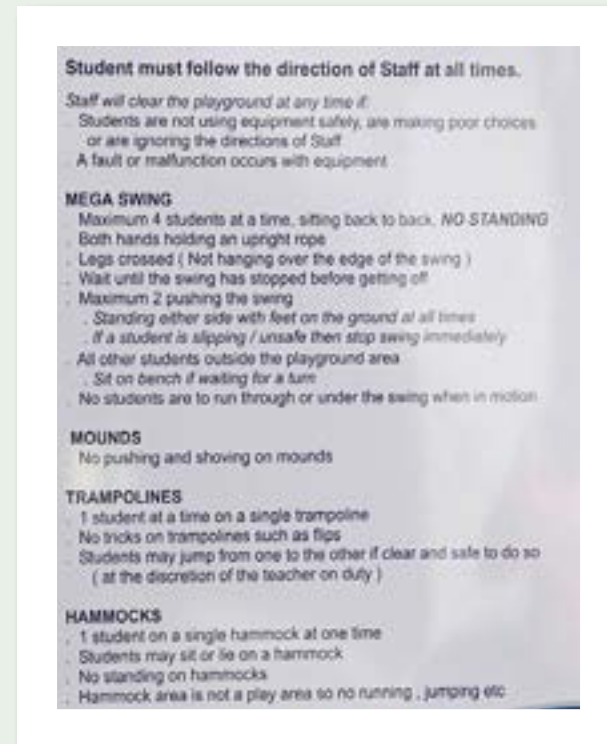
The school created detailed rules, but eventually the swing was temporarily removed until concerns around its use were resolved.

Challenges

Advocating the benefits of risky play is a challenge for principals, when stakeholders are concerned about risks: “requirements for safety dominate any discussion and [it’s frustrating] having nice elements designed out due to being considered unsafe” (Government Workshop).

Principals realise that to truly “blow off steam,” adolescents benefit from risky play (Government workshop). As one participant observed: “Students feel that risk comes with trust, it feels dehumanising to have all risk taken away” (Reference Group 2).

Many participants agreed that “swings are good for emotional regulation at every age.” (Health and Wellbeing Workshop)



A set of rules at School L



Students missed the nest swing at School L

How to design for risky play

1. Co-design to establish tolerable risk:

Meet with staff, students and parents to establish the school's tolerance thresholds. For example, decide whether a swing should accommodate three or five students at once, and select the equipment size based on these parameters. If installing a slide, determine if the school will tolerate non-traditional use, such as climbing up the chute, sliding down backwards, or riding on stomachs. If these are not tolerable behaviours, reconsider the choice of equipment. Where possible avoid controlling behaviour through rules only.

2. Conduct on-site spatial mapping: Use the manufacturer's technical specifications for the chosen equipment. Use spray paint, chalk, or markers on-site to mark out how far

moving parts can move when used to their full extent. This helps to decide on required clearance zones. Consult relevant Australian safety standards.

3. Design for varied use: Anticipate diverse play styles. Assume that a percentage of students will interact with the equipment safely and conventionally, while a percentage will push the equipment to its full extent.

4. Incorporate architectural risk controls: Guide behavior through design choices. For parkour equipment, create pathways to direct traffic flow, or purposefully limit platform heights to mitigate against falls. Incorporate softfall surfaces under equipment.



Basket swings with two-point suspension lines restrict movement to a single back-and-forth direction. Photo credit: Marta Day



Trampolines and sandstone blocks at School L

Positioning trampolines further away from hard surfaces like sandstone blocks and unpredictable equipment like swings creates better opportunities for unhindered risky play.

Refer to safety standards to ensure your play space is safe. Consult a landscape architect and undertake risk assessment in accordance with state or territory risk management protocols.

3.3 Competence

Create spaces where students can build skills, feel capable and be treated like young adults.

Student insights

During high school, students transition rapidly, physically and psychologically, from children to adults, and they want the school environment to reflect that shift. One Year 11–12 student noted: “your interests change [over time]...” (School R, Year 11M). Competence develops as students follow changing interests and engage in challenges. This can be physical (movement), social (being trusted in a space), creative (making and doing), or cognitive (strategy, study). Development also occurs at different rates. As one student noted: “I want to bring my inner child out as well” (School M, Year8–9F).

Older students want to be seen as mature young adults, so spaces and equipment need to reflect this. At School L, senior female students wanted to “sit, hang out with our friends”, but some newly installed hammocks were avoided because they were read as “for junior students”, shaped by the

colours, safety measures, behavioural rules and presence of nearby younger students. They concluded that “more generally the younger grades use it” (School L, Year 11–12F). Materials, colours, scale, detailing, and rules can all signal competence and emerging adulthood.

Students also want freedom to use furniture, vegetation, and equipment to meet their needs. At School L, students described being discouraged from sitting on lockers and disciplined for moving furniture like a picnic table. They felt constrained: “sitting [is] not allowed ... we ask for seats and they just say ‘no’” (School L, Year11–12F).

Finally, students want to contribute to schoolyard design through co-design, maintenance, and displays of student work. For more information see the Schoolyard Greenprint Engagement Toolkit.

“[Adults] think we are going to get more boring. No offence or anything... I want to bring my inner child out as well”

School M, Year 8–9F

“They allowed students to sort of put murals all along the whole 10 minute walkway on either side ... it felt much more accessible and inclusive and it was very nice to walk through there afterwards.”

Student, Adelaide Workshop

Principal insights

Principals recognise that outdoor spaces contribute to students growing into young adults and want students to develop competence. Many provided specific senior areas that were designed as “a coming of age [space] away from the rest of the school” (Principal 11). Some allow seniors to occupy more public spaces less supervised by teachers to indicate this trust.

However, principals grapple with how to manage supervision. With fewer teachers on yard duty compared with in class, it “could be upwards of 100” students per teacher (Principal 11) and they worry about students behaving unsafely. One observed: students “always push the boundaries... just wanna be out of sight... just not doing the right things” (Principal 11).

As a result, students are often offered opportunities to develop competence during class, such as adventure sports, BBQ usage, access to bushland or gym equipment, but not at breaks. Similarly, loose furniture exists inside but tends to be locked down outside for fear of it being moved,

thrown or stolen. Any equipment or furniture that is loose imposes potential work for teachers to unpack and pack away before and after breaks.

For those schools that allow more trust in their students, a sense of ownership of spaces is critical. For example, allowing access to a space contingent on students looking after it or involving students in its design. As one Principal noted that behaviour issues were minimal “because the kids are proud of the spaces that they make.” (Principal 8). Another spoke of Aboriginal students tending to the yarning circle: they “make sure they take real ownership over the yarning circle...it always looks pristine...” (Principal 7)

Spaces that provide opportunities for competence benefit from passive surveillance from nearby buildings. For example, a senior space with moveable furniture could be positioned nearby large windows that staff can monitor.

“when we fix [furniture] down we say, well we don’t trust you.”

Designer, Adelaide Workshop

“If they have the opportunity and freedom to care for these spaces ...they have the opportunity to discover that they are capable of great work and are valuable to the community of which they are a part.”

Independent schools advocate, Reference Group 1

3.3 Competence

Practical solutions

3.3.1 Use visual language, scale and furniture choice to communicate adult style spaces.

For example, seating around a canteen could visually communicate café rather than being in an institutional style, through elements such as mobile furniture, lean-rails and narrow counters. Similarly, colour, pattern and texture choice can be used to create spaces that feel adult-like rather than child-like.

3.3.2 Provide achievable challenge features with progression. This could include physical challenges such as parkour with varied grip routes, step or terrace sequences, skill loops so students can improve over time.

“Teenagers have a really great capacity to actually be responsible human beings ...when you take away their autonomy, and make it so that things are fixed down, that’s what encourages them to actually act out against it.”

Adelaide Workshop

3.3.3 Include purposeful micro-infrastructure

that fosters a sense of mastery. This could include chess tables, outdoor whiteboards, maker benches, repair stations, planting or propagation zones. Integrate products or structures of these elements so effort becomes visible to the school community. This could include a project wall, student-run planting beds, small performance nooks.

3.3.4 Empower students and others to contribute to schoolyard designs

at every stage by co-designing schoolyard changes with them and staff, specialists and parents. When implementing new designs, prototype with low-cost pilots to test demand, supervision and maintenance before investing. Simple methods to prototype include spray painting proposed seating outlines onto the ground and testing before implementing, creating temporary structures, or using milk crates or beanbags to represent seats before implementing. For more information See Schoolyard Greenprint Engagement Toolkit.



Involving students in the design and implementation of new green spaces at J J Cahill Memorial High School in Sydney. Designer and photo credit: Tanya Wood Landscape Architecture



A Queensland independent school provides movable chairs for students at break time. Photo credit: Gweneth Leigh



Productive garden outside a school in Canberra made by students invites locals to take some produce. Photo credit: Hannah Richardson.

3.3 Competence

Case study

St Columba's College, Victoria by Rush/Wright Associates

The challenge: The school had a dark, uninviting and institutional-feel to their school canteen.

The solution: Redesigning the canteen to an adult style cafe with diverse and moveable furniture.

The benefits: A sophisticated design treats students as young adults and gives them the freedom to move furniture and adapt the space to their needs.

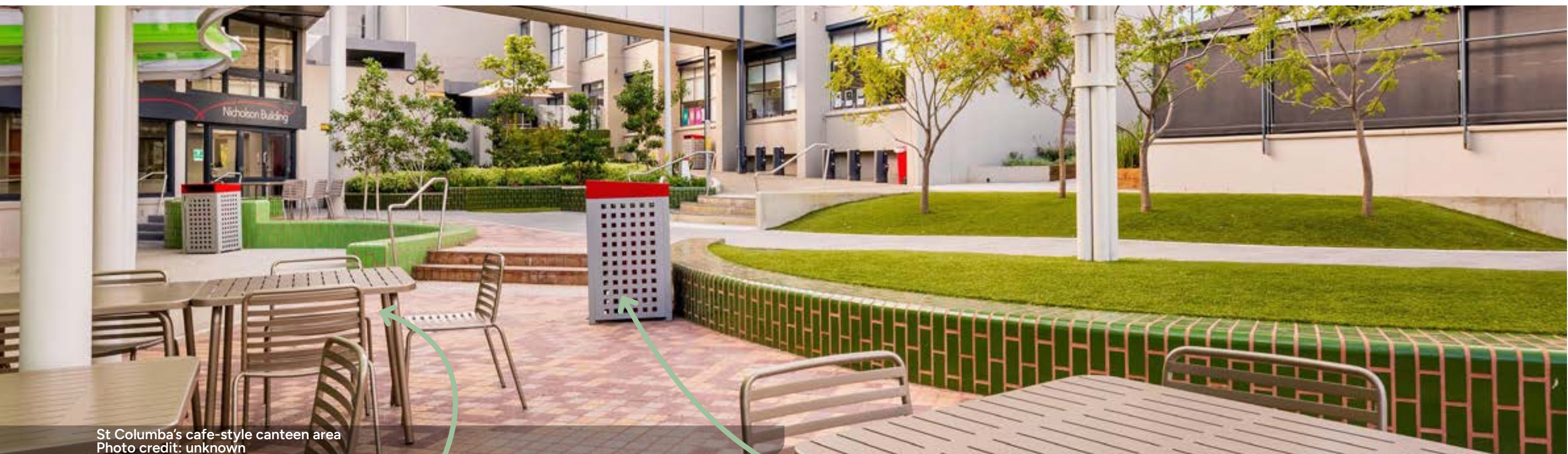
“It was important to appeal to their adult behaviours.”

Catherine Rush,
Director at Rush/Wright Associates



Old canteen

The old school canteen had fixed tables and chairs which took away the students' sense of autonomy. Says designer Catherine Rush, “St Columba's [student and staff] were keen to make it feel sophisticated”.



St Columba's cafe-style canteen area
Photo credit: unknown

Moveable furniture

Students can move chairs and stools as needed, giving responsibility and freedom of movement.

Easy upkeep

Placing bins close by encourages students to pick up after themselves and minimise litter.

Variety of seating

Tables and chairs, grassy areas and incidental seating on the retaining wall provide choice for students.

Multifunctional space

The space is used by students and staff outside of recess and lunch times.





Chapter 04

Cognitive Needs

Cognitive needs

Introduction

During adolescence, young people develop an increasing capacity for reasoning and problem-solving. Cognition is the set of processes involved in acquiring, organising and applying knowledge, including attention, memory and executive functioning (Byrnes, 2006). These skills become more sophisticated as students age, enabling more flexible, efficient and self-aware thinking. Access to supportive learning resources, social interactions and opportunities to practise new skills can influence both the pace and quality of cognitive development.

In secondary school, learning experiences are often designed to build on this emerging capacity, particularly as

students transition from concrete to more abstract and self-directed thinking. This is reflected in practices such as class debates, collaborative group work and tasks requiring critical analysis. Outdoor learning environments provide contexts in which students can apply and consolidate new knowledge.

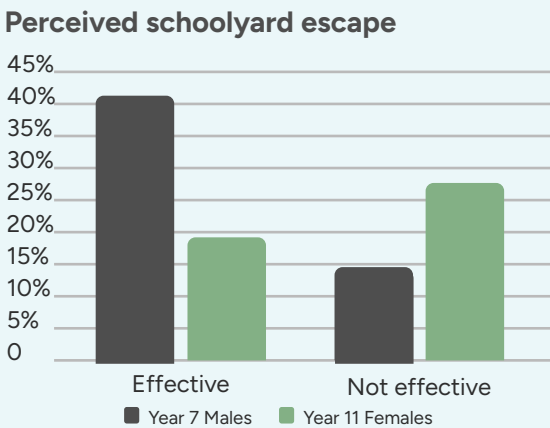
Importantly, school grounds may also support cognitive wellbeing by helping to manage cognitive load—the mental effort required to complete learning tasks. Comfortable, shaded courtyards and smaller, quieter outdoor spaces can offer opportunities for students to decompress and recover, particularly when academic demands are high.

How to design for student needs

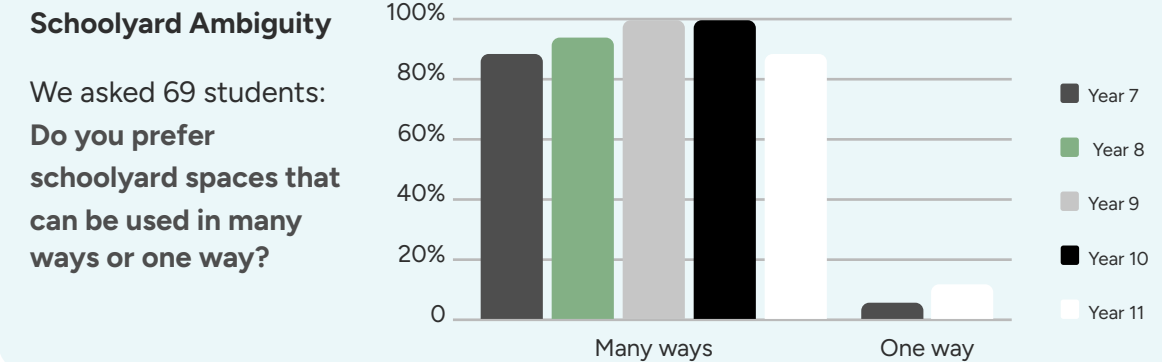
There are two core spectrums to consider when designing for student cognitive needs: ambiguity tolerance and cognitive load. For students who relish complexity, the schoolyard can offer cognitive challenges, for example through ninja play. Others want legible, simple spaces where behaviour expectations are clear. Some students experience high cognitive load due to neurodivergence, academic or social pressures. They benefit from spaces to down regulate; others seek vibrance and enjoy crowds.

Evidence

In schoolwide surveys at Greenprint schools, students (n=560) were asked how effective their schoolyard was in providing a sense of being away (escape) from academic demands. Younger male students reported stronger perceptions of escape, while almost 30 per cent of Year 11 female students indicated the schoolyard was ineffective in helping them mentally disengage from school-related pressures.



As students build skills in how they think and make decisions, designing for ambiguity - elements or spaces that can be interpreted in a range of ways - can help test ideas and build resilience. A majority of surveyed students at Greenprint schools preferred to explore spaces in multiple ways rather than toward a single predetermined outcome.



Ability to manage ambiguity

Marcus

Marcus finds ambiguous spaces and equipment confusing and mentally taxing

Low

High

Isla

Isla is up for a challenge, she doesn't want child-like play and enjoys the complexity and ambiguity of things like Parkour

Low

High

Cognitive load

Noah

Noah generally doesn't experience a high cognitive load. He loves vibrant groups of friends.

Low

High

Shreya

Shreya's cognitive load is high. She cares for her young cousin and works saving money for her family. Being in year 12 she's trying hard to get great marks.

Low

High

The Structured Scholar



Marcus

Age 16

Pronouns: he/him



Marcus wants to spend lunch times pursuing his hobbies of chess, rubicks cubes, reading. Having a focus helps him relax and feel capable.

At home, he has experienced violence, and spaces can trigger his anxiety. His old school felt like a rabbit warren of spaces; he often couldn't see who was coming, which was stressful. The access to the canteen was like a dark tunnel and triggered his anxiety. So he stayed sitting on the balcony during breaks.

That changed at his new school, which has a quiet space that's shady and natural. He can see the whole schoolyard so he feels part of the action but safe with hedges at his back and soft materials that create quiet.

For Marcus it's very mentally draining when it's not clear how to use a space. When the school created a sculpture at the front he was stressed about whether students could sit or play on it.

Now that he's in Year 10 study is important to him. Marcus wants to study outdoors but the outdoor classroom is out of bounds during lunch.

I want "a quiet space to read, relax and play games that don't require lots of physical movement and prepare study for important things. ... in a safe place, that doesn't feel empty or crowded, was at least partially undercover on wet days. [So that] this place could be versatile, safe and comforting.

Story, Year 7-8M
School R

How to design for Marcus

- Tables or benches for making and working
- Calm areas with low noise and distraction
- Spaces that allow solo or shared activities
- Clear rules and signals about how spaces are used
- Opportunities for creativity and problem solving outdoors
- Clear footpaths and sightlines between spaces
- A calm and welcoming front entry

Cognitive Needs

Storycard completed by
participant at Refugee
Youth Workshop

Meet Farhiya they are 15 years old in year 12
Name your student About your student: age, gender, etc

She is a young Somali girl who wants to do her best academically.

they sometimes feel overwhelmed by walking through the walkway in the schoolyard

One day when my classes finished everyone usually gathered in the walkways so I try to avoid going there.

This is due to my introverted shy nature.

What they needed was a quiet space to recollect myself.

I also needed a space to study since at home it was loud and busy especially coming from a household of 9 people. Studying at school was a must.

It was important that the space had computers, internet, books, tables so that I could study effectively and enjoy my own company. Also having a space for individual study was important to me at that time.

So that I could get as much study in as I struggled studying at home.

I got the good grades and I felt less overstimulated.

Also creating a safe space for myself.

"I didn't know where to get food from...but as time went, my community - they noticed me every lunchtime...Today we just go sit under the tree and then we can buy food and share...We joke a lot and then we enjoy everything. People share the experiences and then we mix languages. Sometimes we speak English, sometimes Swahili, so that we understand each other better. So yeah, it's a good place to be."

Refugee Youth Workshop Participant

Guidelines

4.1 Reduce cognitive load

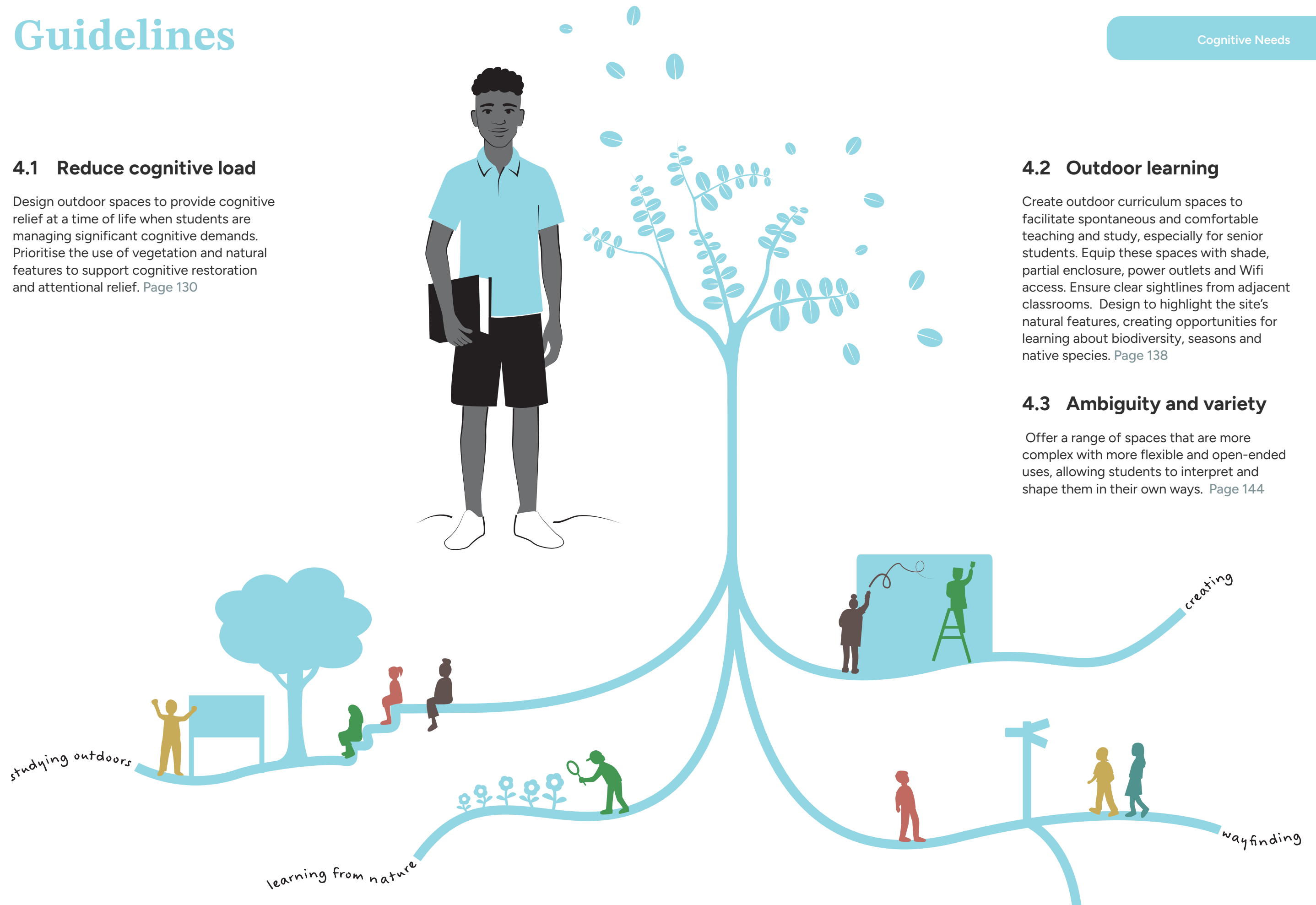
Design outdoor spaces to provide cognitive relief at a time of life when students are managing significant cognitive demands. Prioritise the use of vegetation and natural features to support cognitive restoration and attentional relief. [Page 130](#)

4.2 Outdoor learning

Create outdoor curriculum spaces to facilitate spontaneous and comfortable teaching and study, especially for senior students. Equip these spaces with shade, partial enclosure, power outlets and Wifi access. Ensure clear sightlines from adjacent classrooms. Design to highlight the site's natural features, creating opportunities for learning about biodiversity, seasons and native species. [Page 138](#)

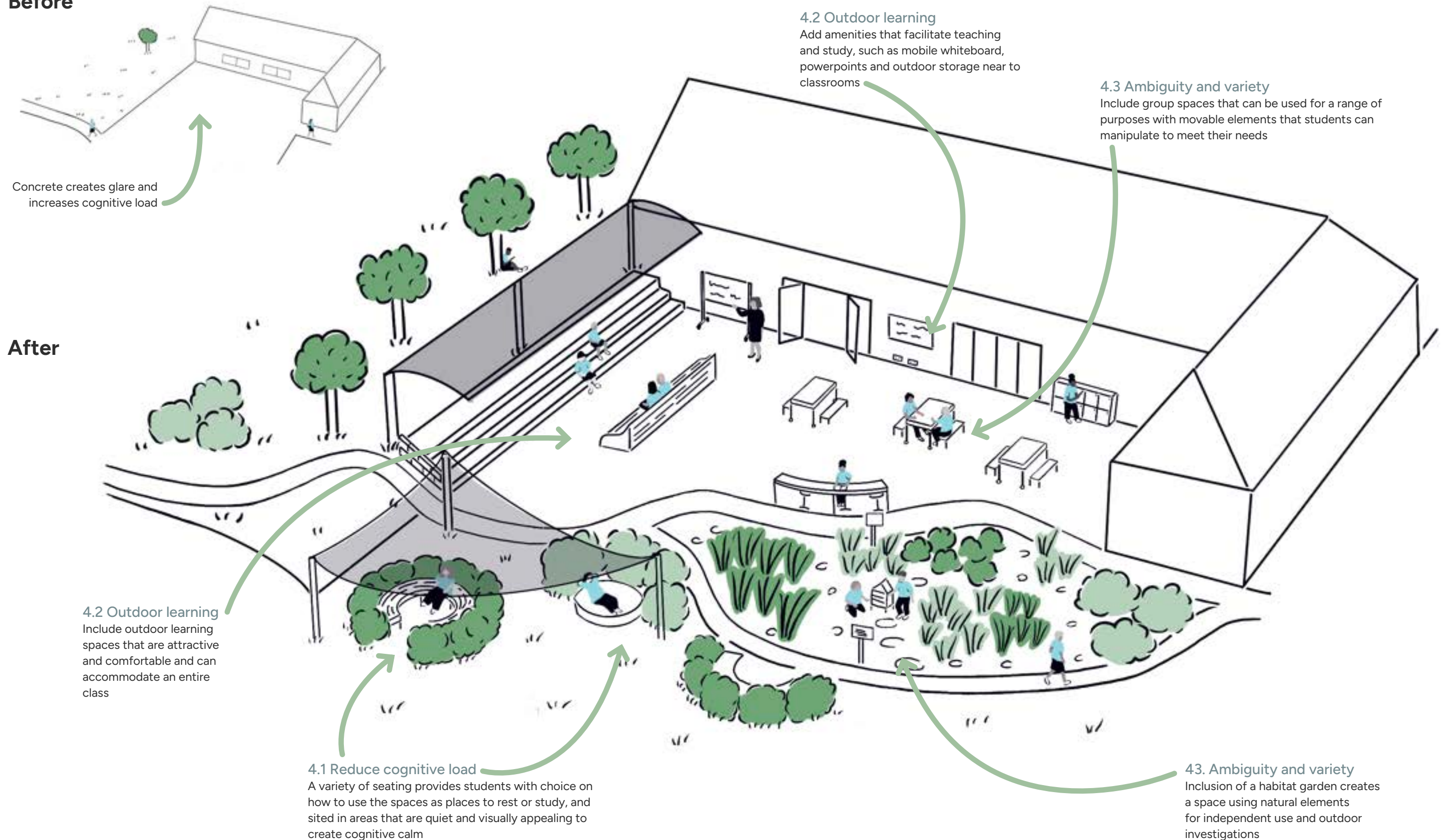
4.3 Ambiguity and variety

Offer a range of spaces that are more complex with more flexible and open-ended uses, allowing students to interpret and shape them in their own ways. [Page 144](#)



Applying the guidelines

Before



4.1 Reduce cognitive load

Design outdoor spaces to provide cognitive relief at a time of life when students are managing significant cognitive demands. Prioritise the use of vegetation and natural features to support cognitive restoration and attentional relief.

Student insights

Teenagers deal with high cognitive demands. They spoke of “out-of-school dramas” (School R, Year 9-10F story) and “the stress of school ...when assignments are building up” (School R, Year 11 F/M).

Queer and neurodivergent students in particular feel cognitive demands, with one noting they felt “anxious and concerned about crowds” (Student H, Queer Youth Interview). These students often retreat inside. Senior students spoke of the heavy demands of study taking a cognitive load.

Students want calm outdoor spaces that are quiet and have pleasant vistas away from crowds.

“I just want to sit and let my brain and my thoughts kind of gather as I kind of reflect on the day.”

School L, Year 11–12F

As a result they avoid areas that are “way too crowded for me. It gets really annoying” (School L, Year 9–10F)

Students draw an explicit link between vegetation and cognitive relief. “I’d add ... a really nice and calm area somewhere. It is just hidden away ... seating and then really nice nature and the tiny garden” (School M, Year 8–9F). Strong visual connections to green landscapes are consistently linked with stress recovery, improved attentiveness and a greater sense of openness and optimism among students.

Principal insights

Principals acknowledge that “When kids go out there there’s a calmness... they feel safe... can relax or have fun” (Principal 1). Neurodivergent students particularly benefit from “a quiet space [that is] not as rough and tumble...” (Principal 10).

Principals want to provide shade to reduce cognitive load. As one observed: “shelter is also important and again potentially difficult to achieve from a cost perspective” (Principal 11).

Principals are looking for guidance on how to provide shade: “How do we get this [school] more green?” (Principal 5). They also feel they can’t let students into nearby natural areas during breaks: “I’d love to have kids be able to sit [in green space], but I just can’t staff the supervision there.” (Principal 10).

For principals, hard surfaces are often easier to maintain. While building costs are covered by authorities, schools pay for maintenance. Concrete, paving, artificial turf or soft fall are seen as cheaper to maintain over more calming natural options. As one principal noted: “[mulch] looks lovely until it rains and it all then washes and puts it everywhere over the concrete” (Principal 1). Natural grass also needs to be mown, with one principal admitting: “did our GA [general assistant] cut the grass enough? Probably no, because they’ve got to do so many other things” (Principal 1). Lawn can also take time to drain after rain compared with hard surfaces that have drainage solutions.

Meet... James they are... Year 10 boy
Name your student About your student: age, gender, demographics etc

they sometimes feel... Isolated and alone, Looking
for a space ^{Feeling in schoolyard} to feel comfortable in the schoolyard

One day when... they were walking around the
School ^{What happened?} looking for a place to belong
they found a place where lots of people were
sitting and playing under a big tree with tables.

What they needed was... a place to be in the open
but also ^{What did they need from the space?} safe and shady where they could
sit and watch but also feel they had opportunity
to be with people if they needed.

It was important that the space had greenery - big shady
trees - real grass/plants... ^{What qualities / functions / features were important?} comfortable seats
+ tables and enough of them to not
make it limited to only a few students.

So that students need open - shady - green
^{What is the impact or outcome? What is the moral of the story?} spaces to relax + be social.

Story card written by a teacher at School R

Stress Reduction Theory (SRT)

Roger Ulrich’s theory suggests that because humans evolved in natural settings, we are biologically predisposed to find them calming. Exposure to nature triggers a parasympathetic nervous system response, lowering “fight-or-flight” signals.

4.1 Reduce cognitive load

Practical solutions

4.1.1 Access to vegetation. Arrange planting to provide clear views of vegetation from indoors, giving cognitive relief to students both during class and breaktimes. Where possible, provide direct physical access from classrooms to outdoor courtyards / terraces / balconies to make it easier for students to step outside for a brief mental reset. For every formal study zone, provide an accessible **biophilic** option nearby to balance structure with natural comfort.

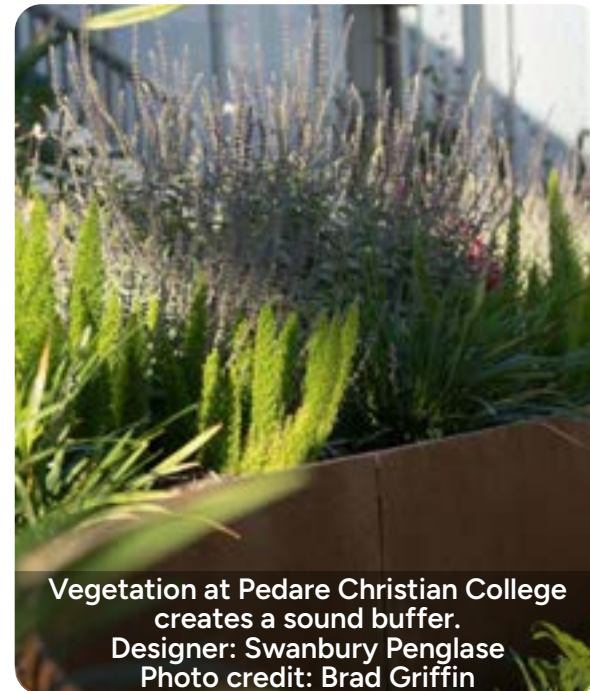
4.1.2 Prioritise natural materials, particularly soft materials that absorb sound. For example, timber or pine bark provide a better acoustic buffer over hard materials that reflect sound such as metal, plastic or concrete.

4.1.3 Create settings that convey beauty, peace and welcome. Provide shade in high-use areas; plan for canopy cover early through deep soil provision and **succession planting**, so these spaces remain comfortable throughout the year. Choose materials that engage the senses through sight, sound, smell and touch to encourage contemplation and curiosity.

Cognitive load: The mental effort needed to process information; lower load improves wayfinding and learning.

Deep soil provision: Deep soil provision supports healthier, longer-lived plants. Soil is structural soil where it supports pavements while providing roots space to grow.

Succession planting: Planting staged over time so as trees age, younger plants are ready to replace them.



Vegetation at Pedare Christian College creates a sound buffer.
Designer: Swanbury Penglase
Photo credit: Brad Griffin



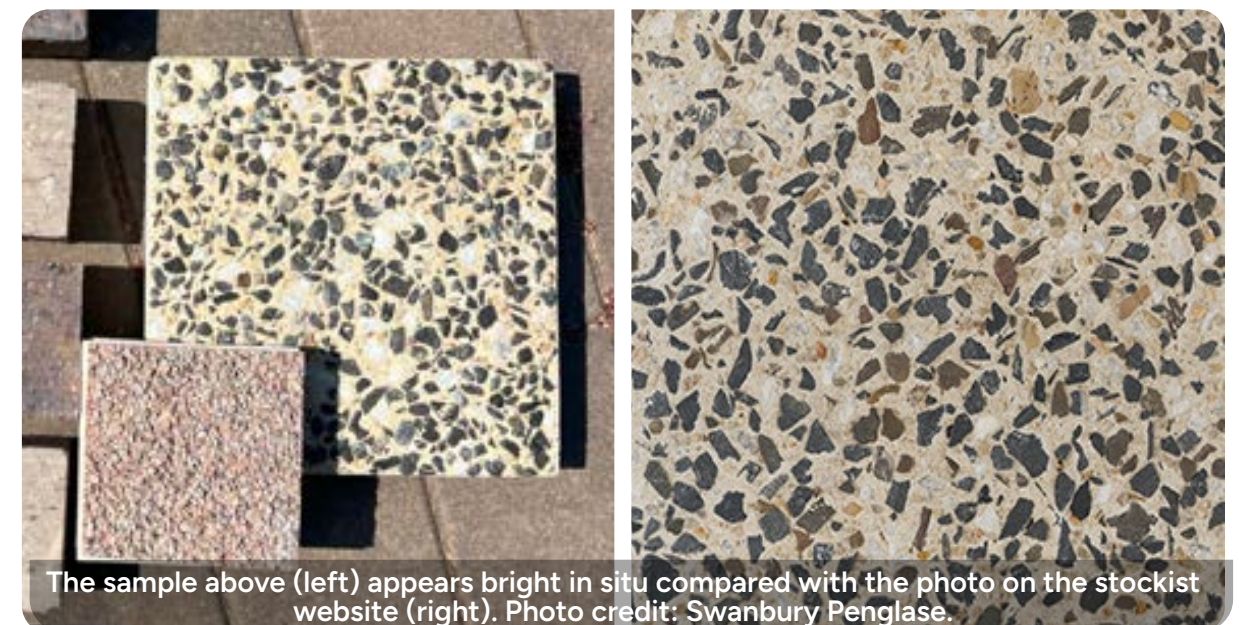
Translucent verandah reduces glare and UV while ensuring indoor spaces remain light at an independent school in Tasmania.
Photo credit: Adam Gibson

4.1.4 Reduce harsh light and glare. Provide soft, filtered light (eg through planting or overhead elements) to avoid squinting or coping with glare. Opt for low reflective surfaces, for example natural surfaces and matte over shiny surfaces. When using hardscapes such as concrete opt for a penetrating sealer to keep it clean while ensuring the surface does not reflect light.

4.1.5. Match surface colours to on-site glare conditions. While light coloured surfaces reduce heat absorption, they can increase glare in bright areas. The colour of surface materials can appear very different in situ compared with stockist photography. Before using a surface material, test samples on site during the middle of the day to assess reflected light, heat and ensure visual comfort.



The concrete (sample below) seemed grey in photos but on site created glare, pictured in the pathways at Compass Catholic Community school in South Australia.
Photo Credit: Swanbury Penglase



The sample above (left) appears bright in situ compared with the photo on the stockist website (right). Photo credit: Swanbury Penglase.

4.1 Reduce cognitive load

Case study

Chatswood Public School, New South Wales
by Architectus

- The challenge:** The school needed to expand its premises for a growing population of students. Located within a bustling suburb, the new design needed to offer staff and students moments of nature, quiet and solace within a highly concentrated space.
- The solution:** The new design embraces its natural bush setting and biodiversity corridors through seamless indoor-outdoor transitions.
- The benefits:** The school's calming natural perimeter acts as a sensory shield from the surrounding suburb and facilitates 'soft fascination' through continuous exposure to the landscape.

“We did have that lovely mature treetop canopy along most of the edges of the site, which is why we called it the bush campus, even though just literally 100 yards up the road are high-rise buildings in the centre of Chatswood.”

Alan J Duffy, Principal at Architectus

Tree canopy
The school is surrounded by mature trees. These were retained and became the focus when designing spaces for staff and students.

Biophilic design
Architectus' research into biophilic education design found that having immediate visual access to tree canopies and green inner centres provides quick, involuntary micro-restorative breaks. This resets working memory during dense academic tasks.



Connecting with the natural environment
Numerous views to nature as students move around the school help in the reduction of stress levels and mental fatigue.

Views to nature
A double height volume of 6m in this outdoor learning space allows the views of nature to be optimised to help decrease cognitive load in students and teachers. Says designer Alan J Duffy, “this was the moment we made the most of...let’s make this a really large volume of space so that you do get this beautiful experience.”

“Chatswood was really just about trying to make this school feel like it was in the bush-lands rather than the city. That was the intention.”

Alan J Duffy,
Principal at Architectus

What is Biophilic design?
Design that connects people with nature through plants, materials, water, light and views.

Attention Restoration Theory (ART)
Developed by Kaplan & Kaplan, this posits that urban environments drain our “directed attention” (focus), leading to mental fatigue. Nature provides “soft fascination,” allowing the brain to recover.

GREENPRINT
SPOTLIGHT

Neurodivergent students

Cognitive Needs

Schools that have successfully supported neurodivergent students have created schoolyards that manage noise and glare and provide wellbeing spaces available to all. These features not only benefit neurodivergent students but the whole school community.

Needs

Neurodivergent students report spending time alone or in small groups to allow for low-intensity socialising: “They need a space that is both separate from busy walkways and traffic zones, but also in reach of other social groups for the sort of cross-pollination that occurs and can be fostered there” (Needs and Strengths Workshop).

A choice of break-out spaces for over-stimulated students is often valued: “If we are wanting to improve school life for all students, [more places for students to calm down and self-regulate] is definitely an aspect that needs addressing in future.” (Student member, Reference Group 2)

Challenges

Principals recognise how overwhelming schoolyards can be because “there’s always a lot of noise and movement outside ... the playground can be quite a big, intimidating place” (Principal 10). They note that many neurodivergent students “prefer to sit in a quiet spot in the library rather than outside” (Principal 4).

Implementing changes to support neurodivergent students can be challenging. Principals are concerned about the optics of special treatment and the cost of low stimulation spaces. As enrollments grow, they feel they don’t have space for specific cohort areas, and instead opt for hard surfaces, which are higher in glare and noise but cheaper to maintain.



Multi-entry verandas and seating at Compass Catholic Community
Designer: Swanbury Penglase, Photo credit: Brad Griffin

Options to support neurodivergent students

Prospect: Designing for prospect allows students to sit on the periphery and watch others without being forced to participate. See Guideline 5.1 Variety of social spaces.

Multiple entry and exit points: Small social spaces with more than one entry/exit point prevent neurodivergent students from feeling socially cornered, allowing them to choose when and how to enter. See Guideline 2.1 Navigation.

Include semi-private spaces, such as a veranda equipped with tables and chairs or pause points off a pathway. These can help neurodivergent students maintain a sense of connection to the school community without feeling the pressure to interact. See Guideline 2.3 Privacy.

Refuge and shade: Structural shelter and dense tree canopies protect students from feeling overwhelmed by sun exposure and glare while reducing noise. See Guideline 1.1 Environmental comfort.

Acoustic and visual retreats: The schoolyard can be noisy and overwhelming. Spaces away from active zones, surrounded by low vegetation and soft surfaces provide visual and auditory relief. See Guideline 2.3 Privacy.

High-stimulation outlets: Dedicated active spaces, like swings, climbing walls or monkey bars allow students to process high energy and regulate their bodies. Swings provide useful vestibular stimulation and nervous system regulation. See Guideline 1.3 Movement and play.

What is prospect and refuge?

An environment that offers a balance of two things: an unobstructed view of the surroundings (prospect) and a sheltered place for concealment or safety (refuge). When these two elements successfully blend, humans feel psychologically secure and comfortable.



Neurodivergent-friendly seating at a public school in Victoria
Designer: SBLA Studio, Photo credit: Pier Carthew

This public high school in Victoria has prioritised softer passive green areas to help students with self-regulation and decompression. Its outdoor seating naturally partitions the space into varying levels of active social zones and quiet, isolated retreats.

4.2 Outdoor learning

Create outdoor curriculum spaces to facilitate spontaneous and comfortable teaching and study, especially for senior students. Equip these spaces with shade, partial enclosure, power outlets and Wifi access. Ensure clear sightlines from adjacent classrooms. Design to highlight the site's natural features, creating opportunities for learning about biodiversity, seasons and native species.

Student insights

Students look for calm outdoor study environments. In particular, female and senior students described themselves as feeling “stressed out from the school work” (School M, Year 8-9 story), as well as overwhelmed or anxious about their academic performance.

As a result, they seek out quiet, comfortable outdoor learning spaces that are infused with nature. To help them concentrate, they articulate the importance of being away from active, crowded areas. For example, in one Story from School R a student wrote:

“Eva had work/homework to do; she needed a quiet space to be able to complete this work” and it was important that the space “was outdoor, had lots of plants, in the shade, trees” so that “Eva could focus and not be overwhelmed by large amounts of people”

School R, Year 7-8F

Outdoor learning can be particularly meaningful for First Nations communities, especially when the whole school site is used to learn about Country. As one First Nations man said: “For our people it’s about shared knowledge spaces to teach and learn. Whether that’s having more bush or garden or schools that run into reserves where you have eucalyptus and being able to share that knowledge with your friend or get elders into schools to teach people what those trees are used for” (First Nations workshop). Outdoor connection was viewed as a way to attract students to school, with one indigenous student suggesting that “once an area feels safe it gives school retention.” Another agreed: “you don’t want to feel like you are in an institution” which “makes you feel anxious” (First Nations workshop).

“I don’t want [work areas] to be in a very high traffic area.”

School L, Year 11-12M



At School L, students disliked this outdoor area that was dark, highly trafficked and lacking nature

Principal insights

Principals want to facilitate teaching outside. They recognise that senior students want to do “homework, study, sit and chat...” (Principal 6). One principal discussed how music students were disturbing nearby classes. In response, his school designed and built an outdoor performance space equipped with power, overhead cover and seating for performances (Andrew FitzSimons, Working Group).

Principals note, however, that variable weather conditions can make outdoor learning difficult. Limited access points, poor weather protection or awkward transitions between indoors and outdoors were identified as barriers that can further hamper outdoor teaching. Addressing these obstacles supports greater uptake of outdoor learning.

Outdoor learning spaces are often seen as “nice to haves”. One retired principal noted the importance of ensuring these spaces can be used at “recess and lunch before and after school” (Andrew FitzSimons, Working Group). To support this, clear sightlines are important and materials that could become damaged - such as power outlets, whiteboards or speakers - be securely stored.

Schools that have successfully used nearby facilities have put in place appropriate infrastructure, clear behavioural expectations and broad parental approval. For example, Principal 10 allowed students to use nearby bushland for outdoor education. This required infrastructure to store mountain bikes and substantial in-class learning about “bushcraft or compass work and map reading” (Principal 10). Principal 2 ensured that parents give “[a once-off] permission for students to participate in activities in that local area” including kayaking and fishing in nearby lakes and rivers.

Several principals spoke of the importance of connecting to local bushland, especially for their Aboriginal students. This included using yarning circles, nearby creeks or significant trees.

During class “the kids can nick out and strum the guitar [in the new music space]... and a teacher can look out the window or the door and see the kids.”

Andrew FitzSimons, Working Group

4.2 Outdoor learning

Practical solutions

4.2.1 Nature as learning. Outdoor learning is not limited to specific curriculum spaces such as ovals or performance spaces. Rather, the whole site has potential as a landscape for learning. For example:

- Make water cycles visible: Swales, rain gardens, continuous tree pits, and rainwater harvesting tanks designed as instructional apparatus, where students can trace time and quantify flows. Create pocket wetlands (where feasible) near science labs and outdoor-learning areas to support inquiry learning and biodiversity.
- Link microclimate to transpiration, cooling and plant health.
- Provide biodiverse habitats for investigation: Layered planting habitat elements, and mini gardens positioned adjacent to outside learning areas for repeatable observations, journaling, and data collection.

4.2.2 Design the building-outdoor interface to facilitate transitioning to outdoors. This includes using wide, sliding doors, avoiding bottlenecks from narrow doors or corridors to reach outdoors. Minimise level transitions to make it easy to move learning materials on trolleys in and out of the classroom. Allocate specific outdoor learning spaces adjacent to relevant indoor spaces. For example, science classrooms can offer adjacent outdoor facilities such as wash basins and rain gardens, while indoor kitchen spaces could offer productive gardens. Libraries and counselling spaces benefit from adjacent quiet gardens that can both visually introduce calming natural elements indoors and offer students the opportunity to move outside.

4.2.3 Design outdoor learning spaces that are attractive and comfortable. Provide around ~1.5 m² per student, include weather cover (some jurisdictions recommend min 2.1m covered walkway) but be careful of shade structures that make classrooms dark. Opt for filtered light and predictable acoustics (ceiling absorbers/ soft landscape). If your site allows it, create a number of outdoor break-out spaces that accommodate varying group sizes, including large ones for up to 25 students and smaller ones for 5-10 students. Furnishing will depend on how they will be used. Choose ground paving materials so indoor seats can be used. Use planting to enclose the space and support students to focus. Provide shade to reduce glare.

For more information see: Qld Department of Education's Design standards — Part A: Education facilities design principles and generic functional brief and NSW Department of Education's Educational Facilities Standards and Guidelines (EFSG).

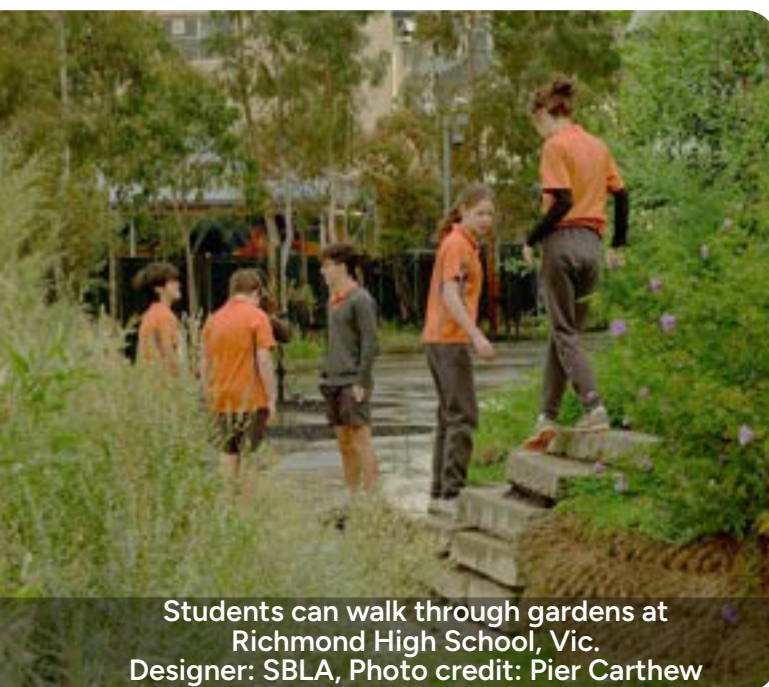
4.2.4 Add amenities to outdoor spaces that facilitate teaching. Include wifi coverage and power points for devices like laptops and storage for learning aids and bubblers. Where appropriate add fixed whiteboard or chalkboards or a mobile whiteboard bay. Provide hose bib or water point where practical for science/art clean-up. Consider tables sized for laptops and taking notes (~700 mm depth; wipe-clean, matte tops for screen readability).

4.2.5 Position outdoor curriculum spaces within clear sightlines of buildings. Ensure teachers can supervise outdoor curriculum spaces easily from classrooms or nearby standing positions. Use low hedges, subtle barriers or shallow level changes to define smaller group settings without obstructing visibility. Where appropriate, create semi-defined nooks for 5–15 students while avoiding enclosure that limit oversight or make supervision difficult.

4.2.6 Locate outdoor curriculum spaces according to students' age and autonomy. Place younger students' outdoor curriculum spaces directly adjacent classrooms, where supervision is easiest and transitions are shortest. Where possible, position older students' spaces progressively further away. This supports their increased independence for more self-directed learning.

4.2.7 Where possible, embed productive gardens and biodiversity features close to learning communities and workshops to support STEM learning. Provide practical infrastructure such as tool storage, sinks and robust workbenches; add small processing areas for food grown on site.

4.2.8 Create outdoor study spaces, especially for senior students. Locate these spaces near senior students' space and away from loud or busy areas so students can move between indoor and outdoor work easily. Use planting, particularly understory and hedging, to help manage background noise for focused study. Provide tables sized for laptops and notes. Ideally include power/ charging (lockable outlets or charging rails) and strong wi-fi coverage. Include shade (canopy or structure) to allow laptop use during daylight hours.



Students can walk through gardens at Richmond High School, Vic. Designer: SBLA, Photo credit: Pier Carthew



An outdoor learning space immediately adjacent to a classroom at Woodcroft College, SA. Design & Photo credit: Swanbury Penglase.

Level changes: Steps, ramps or terraces that shift up or down to define spaces and manage runoff.

4.2 Outdoor learning

Case study

Pedare Christian College, South Australia
by Swanbury Penglase

- The challenge:** The school needed a covered outdoor learning and gathering space for its year 11 and 12 students. It needed to cater for both group and individual activities.
- The solution:** A versatile outdoor space that protects student from changing weather conditions.
- The benefits:** The space provides the facilities of an indoor classroom.

“ We asked the teachers what their ideal outdoor education space would look like. We asked them, how do you see yourself teaching everybody all at once? Or do you see everybody working individually in group breakouts? What do you need?”

Marguerite Bartolo, Associate landscape architect at Swanbury Penglase

Shade
A lightweight polycarbonate system offers light diffusion which reduces glare, shading and thermal insulation. This helps provide a comfortable outdoor learning space.



Photo credit: Brad Griffin

Lunchtime use
This open space can be used at recess and lunchtimes. Its open design invites students to enjoy the space.

Access to power and internet
Powerpoint and internet access were an important part of the design for uninterrupted outdoor learning.

Different learning spaces
The choice of sitting at a round table, a long table or on bench seats provides choice for students.

Table surfaces
Students prefer the option of table surfaces with no gaps to support the use of laptops during lessons.

Timber seating
Genuine timber was used for bench seating. It has more stable temperature properties than concrete or composite timber.

Climbing plants
Placing these behind bench seating brings a sense of shelter and comfort for students.

4.3 Ambiguity & variety

Offer a range of spaces that are more complex with more flexible and open-ended uses, allowing students to interpret and shape them in their own ways.

Student insights

Students, especially older and female cohorts, “feel very bored” and while they do not want anything “too kiddish” (School M, Year 7M), they still “enjoy a bit of a challenge... that would just be fun” (School M, Year 8–9F).

Students are increasingly aware of how spaces are socially coded. Senior girls, in particular, described not belonging in areas that attracted younger or male students.

As a result, students want multi-purpose spaces “that everyone can use, not just certain stereotypes of people” (School M, Year 8–9F). For example, at School L students requested equipment where you can “climb in the way you want” and “weird chairs... that you could either climb on them or sit on them...[so that] everyone could do their own thing” (School L, Year 9–10F). At School M, one student preferred furniture with options for how it might be used: “you could sit on it, you could also slide down ... if you wanted to lay on it, that’s the relaxing option” (School M, Year 8–9F).

Despite this, some neurodivergent students preferred clearer affordances or more legible cues about how a space can be used.

Principal insights

Principals acknowledge the need for diverse spaces: “the main thing is we want to make sure we have enough ... a variety of usable spaces” (Principal 8). This reflects “the challenge of having 12 year olds through to 18 year olds... the activities are going to be different” (Principal 3) This means different sizes as well as varying levels of maturity, independence and interaction.

However, there was less recognition that older and female students may reject play options where they don’t fit in. Some principals recognised that older students still value play, saying “there’s no reason 17 year olds don’t want to go and get on a set of swings” (Principal 3). However, principals did not always connect female students disengagement with boredom or limited affordances. For example, one principal responded to boredom by reducing break length and increasing sports activities, rather than broadening the range of play options available.

Successful multi-purpose spaces need to consider different students and uses to avoid tensions. As one observed: “trying to do dual purposes I suppose is part of that challenge” (Principal 11). This is particularly relevant where spaces are expected to accommodate study, eating and play.

“there’s no activities or play environment for them to connect and engage with that are... appropriate for their age, maturity and... growth rate.”

Principal 3

Meet.. Eleanor they are... a year 10 girl.....
Name your student About your student: age, gender, etc

.....
they sometimes feel... bored... with nowhere to go...
..... Feeling in schoolyard
and nothing exciting to do..... in the schoolyard

One day when... she went for a walk... she realised
..... What happened?
lunch breaks didn't feel like breaks and that...
she spent them aimlessly walking around.....

What they needed was... somewhere different... A seating...
..... What did they need from the space?
area that was comfortable... colourful... and away from
classrooms and cleanliness.....

It was important that the space... was interesting and had...
..... What qualities / functions / features were important?
flexibility... in where and when you could use it...
and how loud you can be using it.....

So that... her and her friends enjoyed being there...
..... What is the impact or outcome? What is the moral of the story?
and felt that breaks were important for their minds.....

Story card completed by
Student at School L

4.3 Ambiguity & variety

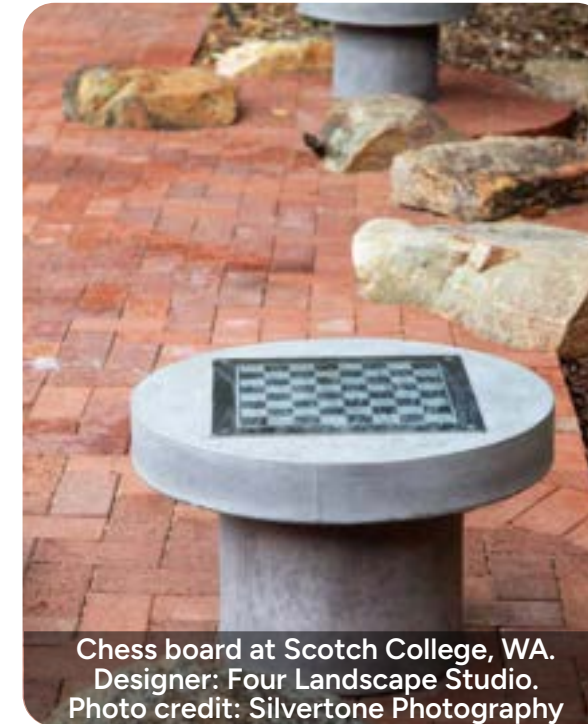
Practical solutions

4.3.1 Include ambiguously programmed play or entertainment spaces (usable in multiple ways) rather than only single-purpose areas. This includes furniture and sculptural elements that could be used for climbing, sitting or lounging, combined with appropriate soft fall or resilient surface treatments. These elements should enable informal play and social use without prescribing behaviour. Support their use through clear, shared expectations for how students may interact with outdoor furniture, so staff and students have a common understanding of acceptable and encouraged behaviour.

4.3.2 Design and group spaces that can be programmed for a range of purposes including learning and social purposes such as amphitheatres, terraces or raised platforms. Consider hardstand pads (approx. 5-8 m across) for items like whiteboards / trolleys and sitting arrangements where students can be cross-legged, lie or perch on edges.

4.3.3 Adopt a range of diverse materials with a preference for natural elements. Nature provides significant opportunities for varying interest and open-ended use. Consider canopy trees, ground cover, rocks or logs for climbing, water features such as bioswales, native planting and biodiverse options. Where appropriate add tactile variety that can be walked, measured, sampled, and tested in tasks.

Ambiguously programmed: Areas not assigned to a single use so students can invent activities and adapt them over time.

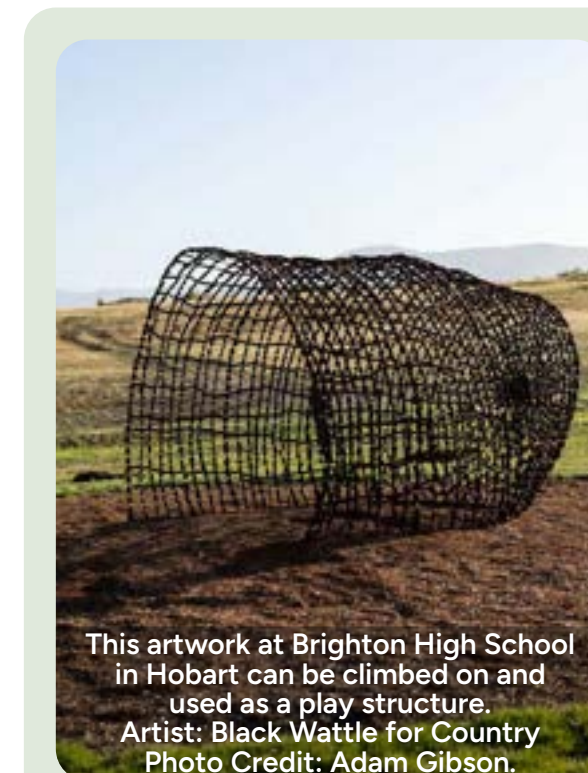


Chess board at Scotch College, WA.
Designer: Four Landscape Studio.
Photo credit: Silvertone Photography

4.3.4 Provide spaces that can accommodate a range of creative activities and innovation. Examples can include artistic zones such as art areas, murals, chalk walls, and performance spaces; play, game and hobby zones; kitchen gardens and agricultural areas; and practical maker spaces or workshops for activities like woodwork or bike repair. If implementing these options, consider nearby storage. Explore appropriate options that reflect site context and school community needs through a co-design process with students, teachers or other relevant community members.



Playful sculptural elements can be used in many ways such as climbing, sitting on or just admiring.
Photo credit: Gweneth Leigh



This artwork at Brighton High School in Hobart can be climbed on and used as a play structure.
Artist: Black Wattle for Country
Photo Credit: Adam Gibson.

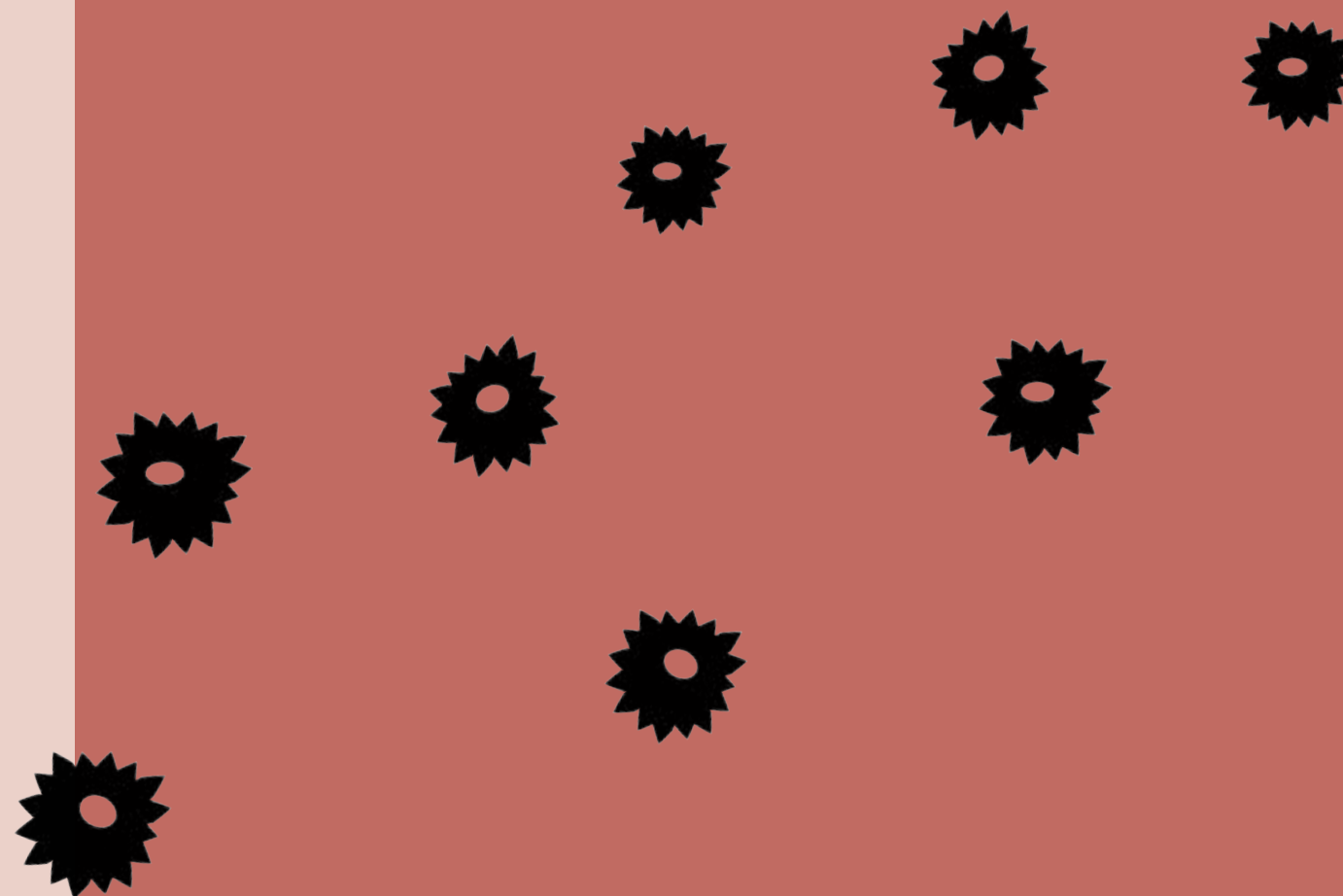
Brighton High School, Tasmania

Designed by Black Wattle for Country, this basket sculpture references the Jordan River (kotalayna), an important meeting place for Tasmanian Aboriginal people.

Made of steel, it provides open-ended play, climbing and social interaction.

“The kids apparently love sitting up on top of it. So it is actually serving as a piece of play.”

Miriam Shevland, Landscape Architect



Chapter 05

Social Needs

Social needs

Introduction

Adolescence is a period of profound social development, with friendships playing a central role in student wellbeing and school engagement. Many schoolyards already support high-intensity interaction in which students are close and face-to-face, such as through sport and fixed picnic-table settings. However, students consistently express a need for more low-key hang out options – places to be near others without pressure to perform socially. In addition, students often prefer opportunities to observe and passively socialise, choosing when to join in. When students can’t find the right fit socially, they can feel exposed or lonely.

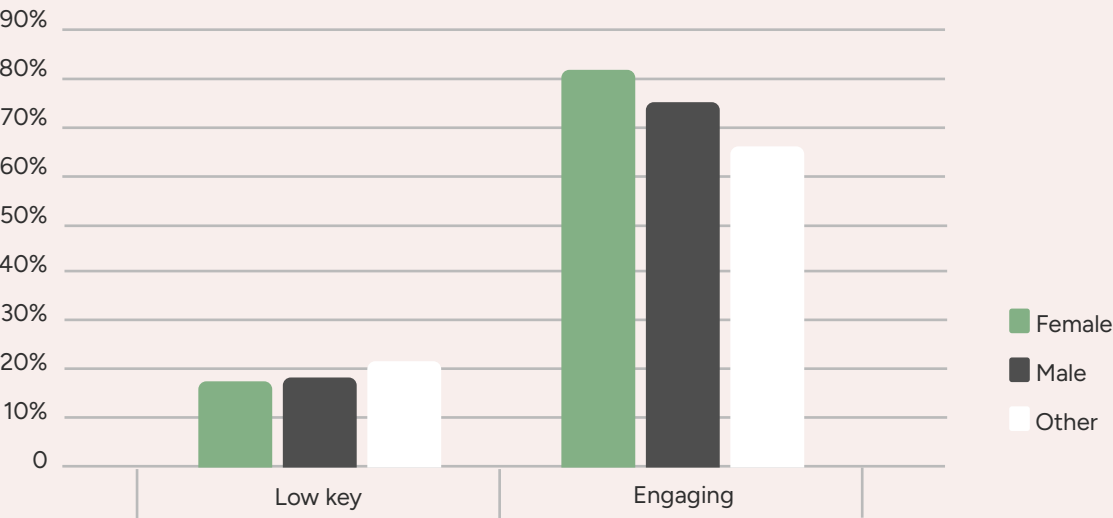
How to design for student needs

When designing for student social needs, two important spectrums of need include group size and social intensity. Some students have a desire to be among a large group of peers, while others prefer more small-scale settings with a few close friends. Social intensity is about the degree of interaction and social activity experienced with a group. Individual students vary on both spectrums. For instance, on days when Noah is feeling run down, he enjoys being with his friends but feels less inclined to engage in conversation.

Evidence

In schoolwide surveys across Greenprint schools (n = 560), most students viewed the school grounds as places where they could connect with friends, choose how and where they socialised, and access a range of activities. Focus group discussions reinforced the importance of outdoor spaces during break times for fostering friendships and social connection, with one student describing the schoolyard as “a place to be, to make friends” (School R, Year 9–10M). Students also expressed a strong preference for spaces that enabled direct social interaction and participation rather than passive observation.

We asked 89 students: “Do you prefer low key or engaging socialising?”

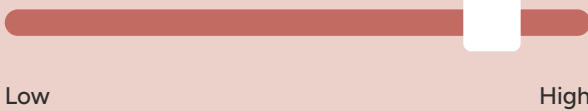


Group size



Noah

Noah loves getting to school early for a quick game of footy with his friends.



Alex

During lunch, Alex prefers to sit in the shade and watch their classmates play handball.

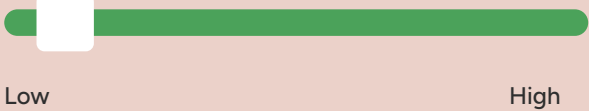


Social intensity



Isla

When Isla failed to block the winning goal at a PE soccer game, she felt embarrassed and spent recess wandering the schoolyard.



Shreya

Many of Shreya’s friends aren’t in her classes, so the lockers are an important space for meeting up and swapping stories.



The Social Connector



Noah

Age 17

pronouns: he/him

Noah is all about people. Breaktime is when he checks in with his mates and makes sure he's part of the group.

Movement is part of socialising for Noah. He wants to shoot some casual hoops while eating and chatting but there are rules that prevent this. Noah would like recently fundraised money to be put towards pingpong tables so he can exercise, socialise without being as serious as the usual soccer games that happen at lunch.

He's tired from exams and he wants a space where he can lounge and hang out with mates. There are couches indoors but they are off limits at lunch. He wishes there were hammocks or bean bags.

Noah and his friends want a space they can claim for themselves. Because most of the school is open and flat, the grounds feel too exposed. So they sit on their lockers, which are in front of their class; Noah gets in trouble for this. With the classroom right there, it feels study is looming over him.



At School L, students preferred seating areas where they could lounge and rest

How to design for Noah

- Comfortable group seating that feels "claimable"
- Spots that are easy to find and return to every day
- Clear social zones where expectations feel predictable
- Good sightlines so he can see who's around
- Spaces designed for talking and lingering, not rushing through

Meet... Holly ...they are... 14 years old in grade 9 ...

Name your student About your student: age, gender, etc

they sometimes feel... stressed ...

Feeling in schoolyard

One day when... They are overthinking and worried ... in the schoolyard

What happened?

...About getting school work completed but ...

...couldn't go to the library because it's always busy ...

What they needed was... a nice comfortable place outside ...

What did they need from the space?

...They needed to be able to relax, talk with ...

...friends and get their work done ...

It was important that the space... had comfortable seating ...

What qualities / functions / features were important?

...and was outdoors so friendgroups can talk ...

...have lunch and catch up on school work ...

So that... they can enjoy lunch but catch up on school work ...

Story card completed by
student at School L

5.1 Variety of social spaces

Offer a range of social spaces that support a spectrum of social interactions from low-key to high-intensity social engagement, so students can choose to watch others, hang out with friends, or actively socialise. [Page 158](#)

5.2 Scale of social space

Offer a range of spaces that cater from two people through to larger groups as well as spaces that can be modified for different group sizes. [Page 166](#)

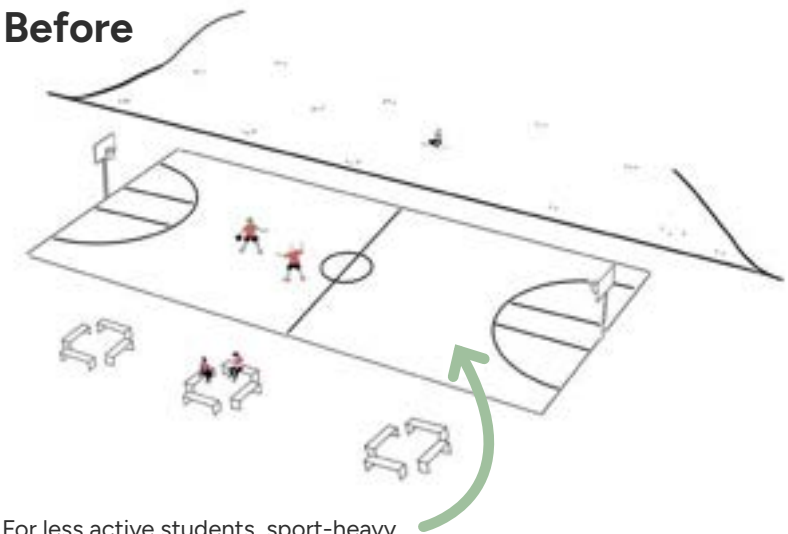
5.3 Location of social spaces

Co-locate social spaces with amenities and destinations that students naturally use while providing buffers between social and busier areas. Respond to students' natural inclination to sit on the ground by incorporating seating into landform. [Page 172](#)



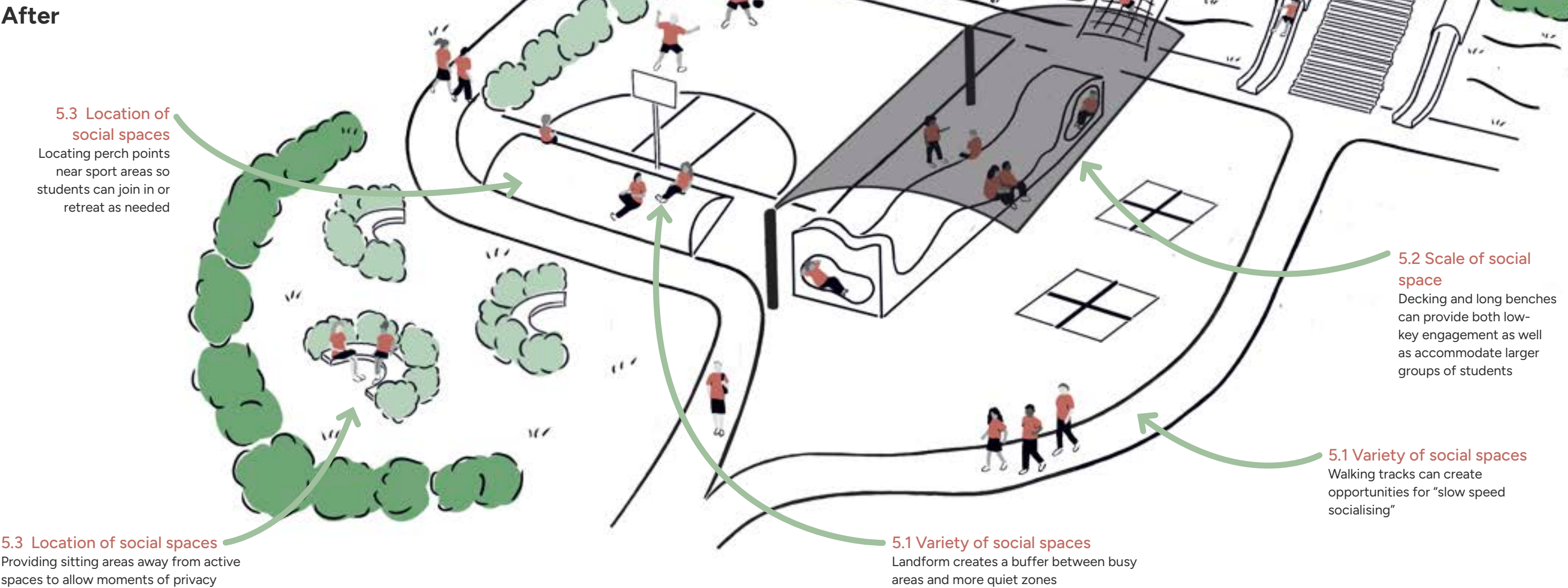
Applying the guidelines

Before



For less active students, sport-heavy spaces can leave some feeling excluded, especially when few alternative activity opportunities are available.

After



5.1 Variety of social spaces
Provide a range of seating types and configurations to accommodate different preferences

5.2 Scale of social space
Decking and long benches can provide both low-key engagement as well as accommodate larger groups of students

5.1 Variety of social spaces
Walking tracks can create opportunities for "slow speed socialising"

5.1 Variety of social spaces
Landform creates a buffer between busy areas and more quiet zones

5.3 Location of social spaces
Providing sitting areas away from active spaces to allow moments of privacy

5.3 Location of social spaces
Locating perch points near sport areas so students can join in or retreat as needed

5.1 Variety of social spaces

Offer a range of social spaces that support a spectrum of social interactions from low-key to high-intensity social engagement, so students can choose to watch others, hang out with friends, or actively socialise.

Student insights

Schools are often dominated by high intensity social spaces. These are commonly characterised by close face-to-face interactions and often in large groups. In Adelaide, a graduate noted “the school was just tables and chairs, like the 50 benches ...” (Adelaide Workshop). At School L, one student concluded “there are spaces, but not for people like me” (School L Year 9–10F).

Across all three schools, students wanted spaces that are less socially intense: “a bit quiet...to relax and ... to make friends.” (School M, Year 7M) When given cameras, students photographed favoured lounge seats and change rooms where they had privacy to hang with friends. As one advocate noted “spaces [are] designed for high traffic, mass groupings only” (Gender and Inclusivity Workshop).

Students who are neurodivergent, queer, older and outside dominant peer groups often value spaces that are less socially intense: “My autistic son... doesn’t necessarily want to sit in an area where he is going to be judged or challenged socially”

“there’s so many different varieties [of spaces], you can get different experiences hanging out [with] different people”

School R, Year 9–10M

(Parent). A Year 11–12 boy at School L articulated that being older, “now we just want to sit down... catch our breath and just catch up.” Said landscape architect and schoolyard designer Andrew Thomas, “the boys typically have articulated that they like to sit side by side ... without actually looking at each other.” By contrast, girls and younger students were more likely to enjoy high-intensity socialising.

Students want variety in furniture, particularly more informal and comfortable seats. They felt linear seats limit conversations, especially when located near busy areas, and requested more “lounge seating because I need to be comfortable.” (School M, Year 8–9F) and more variety: “[I’d like] big circular garden boxes... benches, seating spots... less structured than tables, interchangeable, adaptable for group or solo use” (Canberra Workshop).



At School M, this planter box is an excellent perch point for students to watch a game of ping pong.

Principal insights

Despite students’ strong desire for hang-out spaces, principals were more likely to prioritise the outdoors for exercise. Many made comments such as: “they like that space to run around, so they need that space.” (Principal 5).

Principals often associated hang-out zones with girls or senior students. As one observed, seniors “just want to sit and talk” (Principal 1) while another noted “girls would sit on the outside ... in a real passive [way]” (Principal 5). However, during focus group discussions, active boys also frequently requested hang-out spaces.

Many principals nevertheless recognised the importance of diverse social spaces. As Principal 1 noted, “A perfect playground meets the needs of all of the kids ... the active zone ...the space where I can sit and talk with my friends and play cards...” (Principal 1).



When the outdoors does not meet their needs, students retreat indoors. As the Librarian at School R noted: “kids are just chilling out [here]” because they can socialise in “lots of different spaces to sit individually, together” (School R, Librarian).

This was particularly the case for neurodivergent students, which one principal observed “prefer to sit in a quiet spot in the library rather than outside” (Principal 4). Neurodiversity advocates affirmed these students do value outdoor spaces for socialising, noting that neurodivergent students...

“...need a space that is both separate from busy walkways and traffic zones, but also in reach of other social groups...so that they can socialise and relax ...This shouldn’t be an isolated space.”

(Needs and Strengths Workshop)

Many observed the role of passive observation: “Some of the kids sit up the top ... [and] watch the other kids run around...it’s a nice place to be” (Principal 11).

This was nominated as a successful space by Principal 15 because of the ledge allowing students to watch sports while being under shade.

5.1 Variety of social spaces

Practical solutions

5.1.1 Offer a range of social spaces, from high-intensity interaction to passive observation. Ideally, all student cohorts should have a choice of social environment with varying levels of intensity. High intensity spaces position students close together, often face-to-face and cater for larger groups. Medium intensity spaces allow multiple students to co-locate without requiring active engagement, for example by not looking eye to eye. Spaces for passive observation allow students to watch others.



5.1.3 Provide a variety of seating configurations to accommodate different social preferences. Design seating so students can face both directions to select their preferred social intensity - inward toward each other (concave) and outward toward the environment (convex). Include options for sitting face-to-face, side-by-side or adjacent to each other such as through semi-circular benches. Ensure gaps in seating to allow students using a wheelchair to comfortably join.

5.1.5 Design walking loops specifically for socialising. Widen paths to allow for groups. Consider pause points near amenities that include shade, tables, seats, views, or bubblers. Avoid dead ends and include amenities, such as points of interest like water refill stations, along paths as attractive destinations.

“the principal ...told me about how kids like to walk and loop. And so what I wanted to create was [a walking loop] ... [to] stimulate that part of your nervous system”

Marguerite Bartolo, Landscape Architect

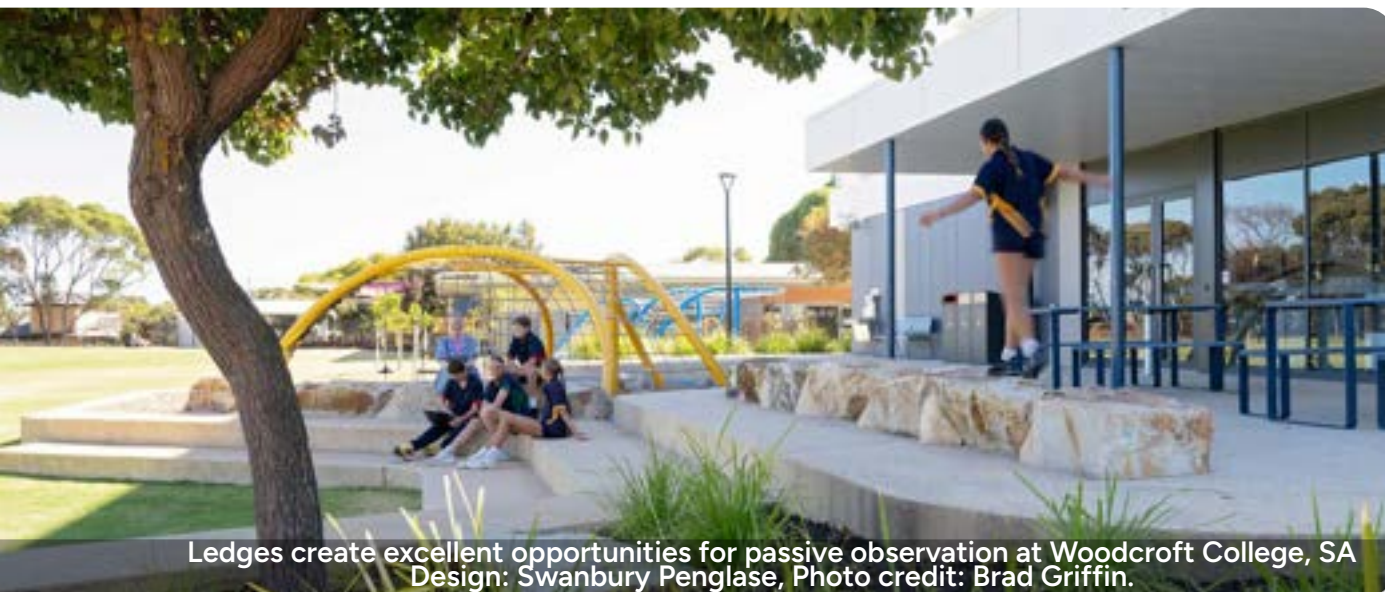
5.1.4 Offer seating and gathering areas with a mix of postures to accommodate different preferences and lengths of stay. Vary the height and depth of edge elements, for example:

- Lean rails (for standing support)
- Perch spots (for quick stops)
- Seats (for longer dwelling)

“...just that real importance of being able to sit separately but also together. So not feeling like you are separated, but that ability to maintain your personal space subtly...”

Ceridwen Owen, Reference Group 6

Active edges: Edges for sitting, leaning and gathering so students can watch, join in or passively socialise.



5.1.2 Activate edges between spaces so students can socialise through observing others and gradually decide when to join in. This could include turning retaining walls, planter boxes and stairs into seats, or providing seating along buildings and adjacent to sporting facilities. Existing slopes can also be used to create informal seating options. Low terraces and planting borders that you can see through (rather than tall hedges) all make effective **active edges**.



5.1 Variety of social spaces

Case study

Mathew Flinders Anglican College, Queensland
by Tract Consultants

The challenge: The school needed a new green space which would provide a variety of places in which students could learn, socialise and perform.

The solution: An adaptable and versatile outdoor area with spaces that connect via pathways to a central green sunken lawn.

The benefits: A diversity of open and closed social spaces support the differing needs of students and the changing social dynamics throughout a school day.

“We tried to create a variety of open and closed spaces... Open spaces... to ensure you’re reducing the risk of bullying... and spaces that feel closed and protected... Closed spaces often help students who are neurodiverse feel more comfortable.”

Taneile Nixon, Principal at Tract Consultants

Restorative spaces

Quiet spaces provide a place of retreat for students who are feeling overwhelmed. Says designer Taneile Nixon, “If socialising feels too overwhelming, there are spaces people can retreat to... and drop sensory overload.”

Informal coincidental seating

Abundant incidental seating such as active edges, seat walls, terraces and a sunken lawn create social and learning spaces for students.



Photo credit: Renee Green

Flexibility of space

Flexible social spaces support changing group sizes across the day. Says designer Taneile Nixon, “If you start your lunch break as a group of eight and some go and you’re left with three or four [students], does that space now feel like it was too big for them?”

Safety and inclusion

A mix of open sightlines and protected niches improves safety, comfort, and inclusion, especially for neurodiverse students.

Variety in size of seating

Multi-sized study nooks support both social and quiet study while still providing focused, face-to-face areas for close collaboration. Protected and enclosed seating help neurodivergent students feel more comfortable by reducing environmental stimuli and establishing a predictable, physically secure boundary.

Seating

Schools can enhance well-being by creating flexible seating layouts that naturally accommodate dynamic friendship groups and diverse interaction styles. Prioritising curved, inward-facing seat layouts facilitates eye contact and social connectedness, while incorporating linear seating provides for comfortable side-by-side gathering without the pressure of direct face-to-face interaction.

Needs

Students prefer flexible options to allow for changing friendship dynamics: “If it’s one table with three people on it and then you have nine friends, it’s going to be very overwhelming and everyone’s going to be fighting for chairs and stuff like that” (School M, Year 7F).

A lack of seating can affect student wellbeing and safety. This may lead them to less desirable locations. At School L, “There’s also no seating around the school... So we use the bathrooms instead” (Year 7F).

Older students prefer distributed benches to spread groups out and reduce density. Year 11–12 boys suggest ‘a bench every few metres... more spread... not as condensed.’ (School L).

When seating does not meet their needs, students improvise in walkways or stairwells. One group of boys “just want seats where a lot of people can sit and talk together” (School L, Year 7M).

All-weather comfort

Outdoor seating with optimal thermal comfort guarantees a safe play and rest environment: “Composite plastic timber, which is... ninety-five percent trash, actually burns children... [In Australia’s extreme heat] it warps.” (Marguerite DiBartolo, Associate at Swanbury Penglase).

Schools can successfully eliminate these heat risks by upgrading to extruded aluminium, which effectively regulates surface temperature to keep seating areas cool and inviting: “...extruded aluminium doesn’t burn children... and performs best on both fronts [thermal properties and safety].” (Marguerite DiBartolo, Associate at Swanbury Penglase).

Challenges

Some principals have to independently raise money to provide basic outdoor seating for students: “I’ve raised a fair bit of money through grants to be able to purchase new...outside furniture and that’s made a significant difference” (Principal 7).

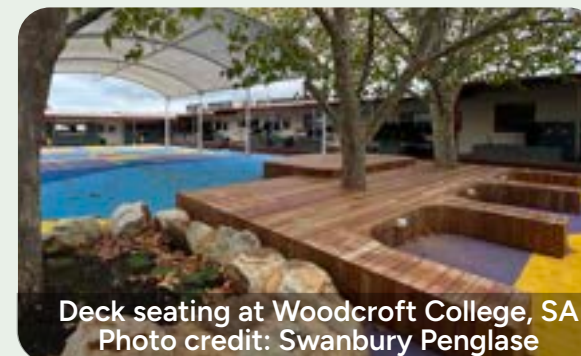
One principal noted the need for more seats than students: “My broad metric is 10% more seating than [number of students].” (Andrew FitzSimons, Principal)

Flexible and diverse seating options



Seating pod at Woodcroft College, SA
Photo credit: Peter Casamento

Small group seating: This hexagonal timber pod creates a defined room within a room that offers strong psychological comfort and privacy for a small peer group. The pod allows students to face each other, supporting eye contact and social connection.



Deck seating at Woodcroft College, SA
Photo credit: Swanbury Penglase

Flat deck spaces: Decks are popular with students as they allow cross-legged sitting, opportunities to lounge and to sit on edges. These spaces are versatile for individual groups and larger groups. They are also successful spaces for outdoor learning.



Curved seating at St Catherine's School, NSW. Photo credit: Diana Snape

Curved seating: The curved, continuous bench provides social intensity options through inward and outward-facing seating choices. Sweeping shapes allow dynamic, expanding friendship groups to sit together comfortably.



Designer: JPE Design Studio. Photo credit: Peter Barnes

A range of seating configurations at a public school in South Australia support different forms of social interaction. This area of the school provides circular deck seating, picnic tables and seating with back support.

5.2 Scale of social spaces

Offer a range of spaces that cater from two people through to larger groups as well as spaces that can be modified for different group sizes.

Student insights

Students want spaces that range from small to large. One student described this as a strength: “[it’s] good for everyone. ... [to] have a lot of spaces for lots of different people...” (School M, Year 7F).

Younger students and girls describe seeking larger spaces for their friendship groups. One girl observed “if it’s one table ... and then you have nine friends ...everyone’s going to be fighting for chairs” (School M, Year 7F).

Other students, especially older and Queer students, seek smaller spaces. Said one queer youth, “I like the picture of the small space...I like the nature surrounding the small space, [it] feels very cozy and lovely to me” (Queer Youth Interview). Older students requested “enclosed seating area” (School L, Year 9–10F) for “five, six of us” (School

L Year 11–12F). They also requested seats “just a bit off to the side” in a smaller space. (School L, Year 11–12M)

When spaces feel too small or large, students adapt; scalable spaces can better meet the needs of many. For example, some younger girls are drawn to stairs: “we just sit at the stairs ...other students, they come and say hi...It’s just a good space to hang out with your friends” (School M, Year 7F). Conversely, one Queer student described finding “an alley where I could sit and relax” because “it was secluded”. They requested “a place to hide away that isn’t boring” to help with their anxiety and autism (Queer Youth Interview). As an adult participant concluded: “a diverse scale of social spaces [and] seating arrangements is crucial to provide flexibility in socialising” (Needs and Strengths Workshop).

I like “the quieter spaces in the little nooks.”

School M, Year 7F

“Large spaces here? Yeah. I love them. Plenty.”

School M, Year 7F)

At School R this was a popular space with female students as it can be scaled up and down depending on group size.



Principal insights

With many schoolyards being wide and open, principals emphasise the importance of providing more spatial diversity: “We want to make sure we have enough like a variety of usable spaces” (Principal 8). They recognise that some students benefit from smaller environments, with one describing a wellbeing hub where students “don’t feel like they [have] to be in the main quad with everyone else. There’s a smaller space of like-minded kids ...” (Principal 5).

Where small spaces are necessary, principals highlight senior students and occasionally neurodivergent students who prefer to be “not out in the open” (Principal 9). For Principal 11, the Year 7 area was too small, with students “quite on top of each other.” Combined with students being “immature and growing into high school,” this contributed to behavioural issues.

For principals, deciding how much of the schoolyard to open during breaks is a fine balancing act, as both very large areas and numerous small spaces can be difficult to monitor effectively. One observed:

“you open up more playground areas then you require more supervision, which increases staff workload, but by minimising the ... areas ... your density rates increase, which causes conflict.”

Principal 3

Yet principals also express concern about supervising small spaces where visibility is low. “Line of sight is the most important thing... teachers [need to] basically see from any particular area... everywhere in their supervision space” (Principal 7).

“[School outdoor designs] definitely skew towards larger spaces. I don’t think that’s necessarily a reflection of the students’ needs. I think it’s just a reflection of budget and what’s always happened...”

Canberra Workshop

5.2 Scale of social spaces

Practical solutions

5.2.1 Offer social spaces that cater to a range of group sizes from two through to 20. Flexible social spaces work best as a suite of choices (pockets, edges, and reconfigurable elements), not as a single open plaza.

Offer space sizes from:

- Micro spaces (2–4 people): alcoves, low walls with backs, small mounds.
- Meso spaces (6–8 people): semicircular benches with movable chairs, garden rooms adjacent to lawns or buildings.
- Macro (12–20+ people): terraces/steps such as an amphitheatre with multiple entries and exists, suitable for multiple groups or school events such as performances and night markets.



Pedare Christian College, SA
Designer: Swanbury Penglase,
Photo credit: Brad Griffin

5.2.2 Define spaces and offer amenities within them to facilitate socialising. Define spaces through built elements such as garden beds, planting, low walls, level changes, trellises, and canopies so students don't feel exposed or in the way. Equip with amenities that support socialising such as protection from the weather, seating and noise management. For more information see Guideline 1.1 Environmental comfort and Guideline 3.1 Claimable Spaces.



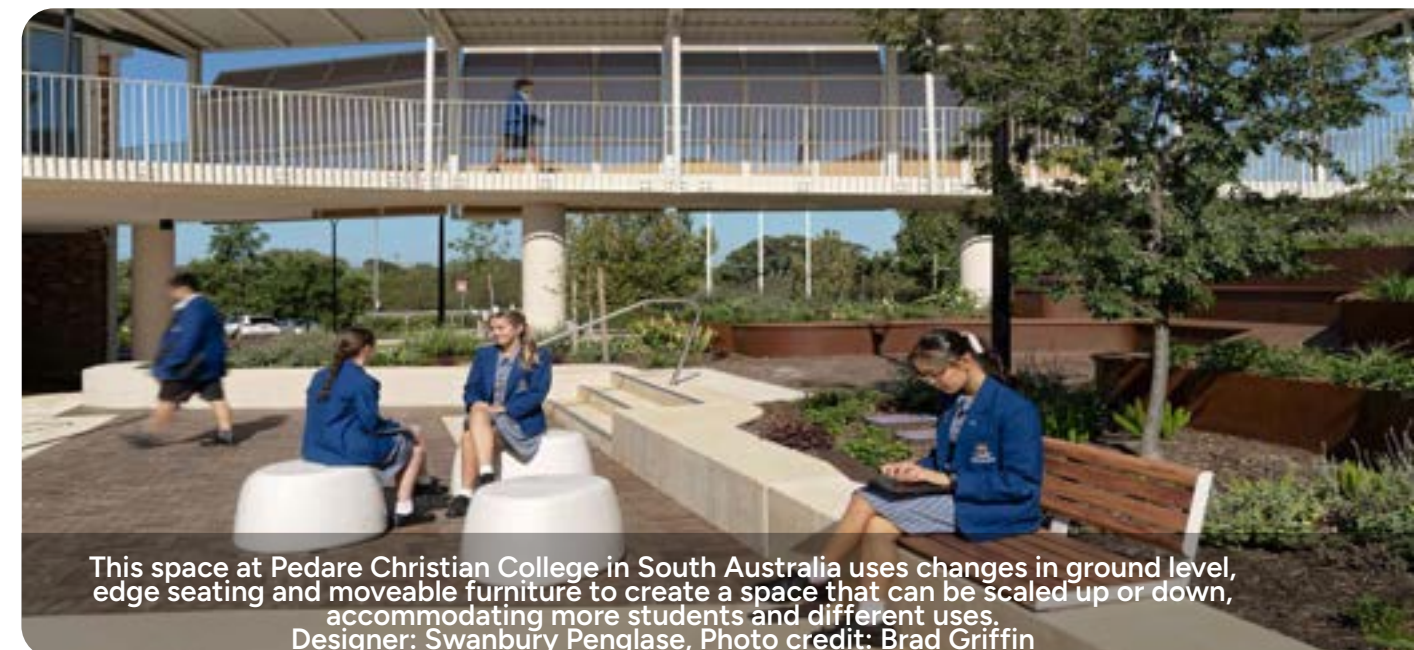
This smaller space will be surrounded by vegetation in time at Compass Catholic Community school in South Australia.
Designer and Photo credit: Swanbury Penglase.



A series of clearly defined small spaces at an independent school in Victoria show how to provide a variety of small spaces while maintaining clear sightlines.
Designer: Cley Studio
Photo credit: Peter Casamento

5.2.3 Scaling up and down spaces. Spaces scale up and down when they include 'rooms within the room': small sub-zones that can merge into larger areas without conflict. This is particularly important for young people who are increasingly self-conscious and other cohorts who may feel more socially observed, such as the Queer community or neurodivergent students. To assist students to come and go unself-consciously, ensure clear space and pathway legibility, multiple thresholds, and multiple entry points.

5.2.4 Use seating options that can be scaled up and down for different group sizes; avoid benches designed only for one or two people. For example, small circular decks or seats that run along a retaining wall can add more students readily. Where possible, choose furniture that has multi-use elements so students don't feel conspicuous when sitting alone on a multi person seat. To ensure spaces can expand or contract for different group sizes, incorporate permeable edges, broken-edge planting, and several entry points. This also assists students to drift in/out of groups rather than feeling they are "interrupting" a group.



This space at Pedare Christian College in South Australia uses changes in ground level, edge seating and moveable furniture to create a space that can be scaled up or down, accommodating more students and different uses.
Designer: Swanbury Penglase, Photo credit: Brad Griffin

5.2 Scale of social spaces

Case study

Hillbrook Anglican School, Queensland
by Vee Design

- The challenge:** The school wanted to create a welcoming entrance and central courtyard with a range of social spaces that are adaptable to students’ changing needs.
- The solution:** A design that features layered terraces, a central raised lawn, intimate edge spaces and a variety of seating configurations.
- The benefits:** Students have a selection of spaces to accommodate large and small groups of students that respond to a range of diverse comfort needs.

“A corner is social; a flat bench is not social.”

Holly Peacock, Associate Landscape Architect at Vee Design

A range of seating options
Mixed seating orientations include corners and angled edges for face-to-face interaction, linear perches for side-by-side comfort, and picnic tables for formal group settings.

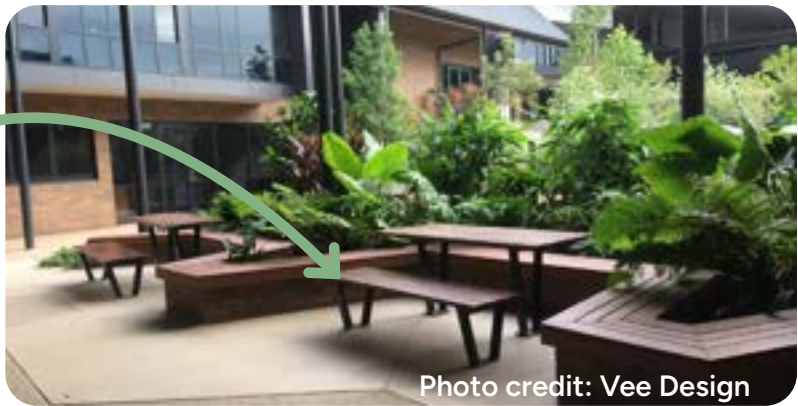


Photo credit: Vee Design



Photo credit: Angus Martin

Semi-private spaces
Enclosed courtyards and nooks offer semi-private spaces for students to retreat to while maintaining staff visibility. Vegetation and layout signal privacy without hard barriers.

Smaller social spaces
Intimate edge niches provide semi-private settings for small groups or individuals.

Large social space
A central raised lawn provides an informal green space for students to gather with friends.

Varied platform hierarchies
Such as picnic seating, low walls, terraces and edge seating, allow students to create ‘invisible’ boundaries, manage how they engage with others, and claim ownership over school spaces.

Student experience
Changes in level provide natural vantage points, allowing students to observe activities without direct participation. It also enables multiple groups to occupy the same area vertically without crossing unspoken student boundaries.

5.3 Location of social spaces

Co-locate social spaces with amenities and destinations that students naturally use while providing buffers between social and busier areas. Respond to students' natural inclination to sit on the ground by incorporating seating into landform.

Student insights

Students often want to socialise while doing other things such as eating, playing and accessing lockers. One landscape architect noted that students want "incidental mucking around, shooting [hoops], just talking rubbish ..." (Andrew Thomas). They want to avoid "spend[ing] half our recess and lunches thinking of where can we go to eat?" (School M, Year 8-9F). Infrastructure can address this by embedding social spaces into places students already use, such as planter boxes and retaining walls. Students identified the canteen, building edges or sporting facilities as desirable social spaces.

Social spaces can be particularly valuable around lockers. In schools where there are short breaks and large campuses, lockers

can become the default social space. One student at School L explained, "I don't like leaving my locker" (Year 11-12F) while another noted "all my stuff is in there" (Year 11-12F). A teacher in Canberra concluded: "Kids socialise [at lockers] definitely. And you wait for each other and you chat... it's a nice space for figuring stuff out in life" (Canberra Workshop).

At all three schools studied, students were observed sitting on the ground because there's "not enough seating" (School L, Year 11-12F) or spaces are not flexible enough to accommodate their friendship groups. Students reported sitting on slopes near the oval or in stairs as these spaces allowed students to gather flexibly in friendship groups.

"It could be a reading spot, it could be something soft. You could even have it on a slope... maybe grass... nice grass, not concrete."

Canberra Workshop



At school M students were observed sitting in this location on the ground, mostly observing the basketball. Despite it being windy, it was sheltered from rain.

Principal insights

Principals saw co-locating social spaces with activity areas or landform as an efficient use of space, especially in vertical schools. One described transforming an unused slope into seating: "They've redeveloped... the hillside that was never used before, so that there are pathways, there's sandstone that kids can sit on, there are little tables and chairs" (Principal 6).

Co-located spaces can also reduce boredom and support supervision while limiting unwanted behaviours. Principal 2 observed, "you get the spectators [at the oval]. That then means you don't get the boredom." Another noted a successful social and performance space: "the kids will come from all over the school just to sit down and listen. So it's a very communal area" (Principal 6). These desirable social spaces could help provide alternative gathering areas to having "a whole pile of kids... in the toilets for social reasons" (Principal 2) or sitting on areas like lockers, which was discouraged at School L.

Sitting areas that spill out from covered shelters into nearby playing fields provide flexibility for students at School M to choose between sunny and shaded sitting areas.

By contrast, spread out amenities creates challenges for supervision: "it is very difficult [to supervise] because [of] so many students, so many areas ..." (Principal 6)

Co-locating, however, does require buffering and zoning. Where canteens, toilets, ramps and sporting areas converged, one principal reported "a lot of conflict" (Principal 2) while another noted "a little bit of distance is important as well" (Principal 11). Rather than long distances, however, buffering using vegetation, landform or structures can assist to delineate spaces without needing to shift them.



"They'd rather just have a hill to sit on"

Principal 6

5.3 Location of social spaces

Practical solutions

5.3.1 Position social spaces and seating close to key amenities such as lockers, home rooms, canteen, 'heat and eat' areas and sporting facilities to make connection easy and reduce students feeling conspicuously alone.



3.3.2 At the same time, include buffers between loud or busy areas and quieter social zones. This can include landform, vegetation or structures. For further information on how to create buffers between active and quiet zones see Guideline 1.4 Sports.

3.3.3 Use (or create) variation in landform to give students comfortable, informal ways to sit on the ground for social purposes. This could include mounds, terraces or slopes. When designing grassed areas for seating, raise the ground level to aid in drainage.



“Wherever we have grass spaces, we tend to kind of move them off the ground level...so that they're freely drained...because no one wants to sit on damp grass.”

Catherine Rush, Landscape Architect



Chapter 06

Cultural Needs

Cultural needs

Introduction

For students, cultural wellbeing means walking into the schoolyard and seeing their community and culture reflected in it. During adolescence, this matters because young people are developing their identity.

Schoolyards can support this by recognising students' cultures, languages, histories and community connections in visible and everyday ways.

Schools can celebrate students' cultural identities at multiple scales: from bilingual signage, student artwork, culturally meaningful planting and subtle markers of welcome, through to night market spaces or a memorial garden.

“Some of the Indigenous students [are] often absent from school because they don't feel a sense of belonging. [There is no] space or connection or element that actually speaks to their cultural connection to the place.”

Needs and Strengths Workshop

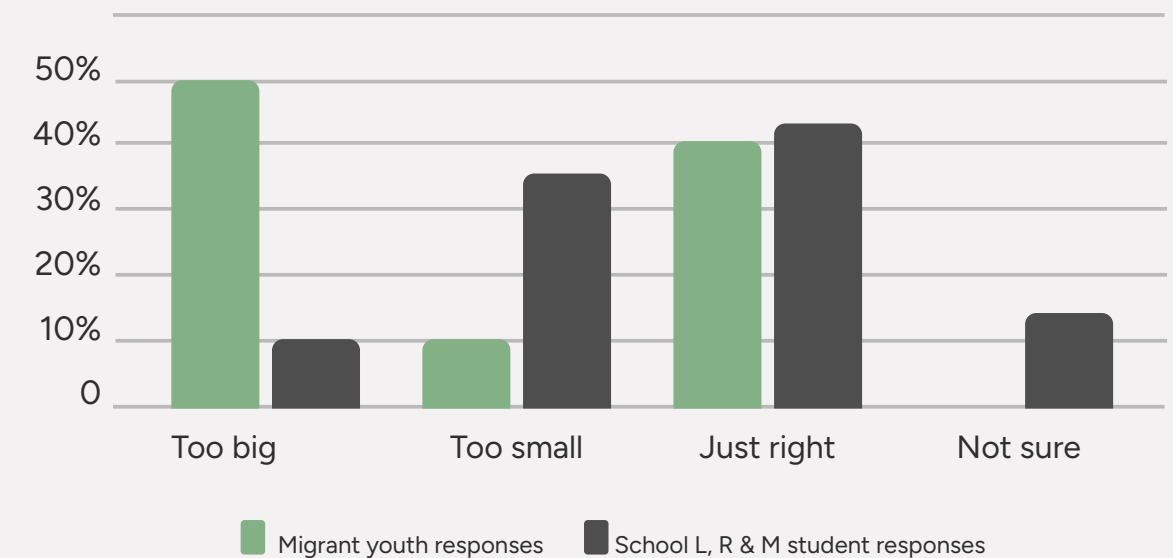
How to design for student needs

When designing for student cultural needs, there are two main spectrums to consider: their sense of belonging and their need for expression and performance. **Sense of belonging:** For students who feel they don't belong, small markers of welcome matter significantly. This is highly context dependent but includes signage, student artwork or subtle references to culture. **Need for expression and performance:** some students look for opportunities to express themselves in the schoolyard including through performance. For those who find indoor auditoriums confronting, outdoor event spaces can help calm their nerves.

Evidence

A Queensland Greenprint workshop explored schoolyard experiences of multicultural, migrant and refugee youth from countries including DR Congo, Kenya, Syria, Somalia and Afghanistan. Some participants noted Australian schoolyards were larger than those at home, presenting wayfinding challenges but also offering a greater choice of activities and stronger connections to nature. Shared cultural practices of playing sport and food sharing at outdoor break times was an effective way to navigate language barriers and build friendship networks.

Perception of schoolyard size



Sense of belonging



Shreya

Shreya's not sure if she belongs here, as there are few visuals in the schoolyard that reflect her language and culture



Noah

Noah's grandpa went to the same school as he did. A seat near the oval is named after him and makes him feel proud.

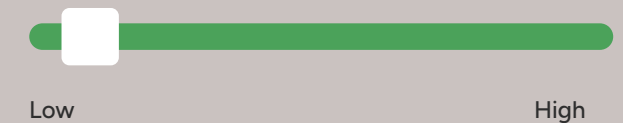


Need for expression & performance



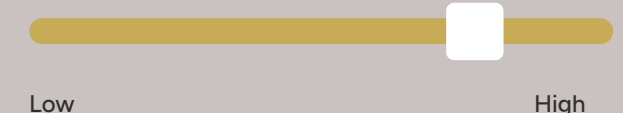
Isla

During an awards night at the gym, she tripped over going up the stairs. A less formal outdoor space for events helps her feel calm.



Sylvia

Sylvia loves to perform, she's learning the guitar and wants to play at lunch





Shreya

Age 17

pronouns: she/her

Shreya is a Wiradjuri woman from regional NSW. She's very aware of who feels welcome where, and which spaces send signals about inclusion or exclusion.

In previous schools she felt she didn't belong - it was in an historical building which had been an orphanage where some elders and ancestors had experienced trauma. As a result, many elders found the building really emotional, especially since a heritage upgrade emphasised the historical features of the orphanage. They didn't want to come to school to contribute their thoughts on a proposed native tucker garden.

Things changed when Shreya moved to her new school. The school recently put in place a yarning circle and Shreya has led some cultural events there. This has helped her connect to her ancestors and play a leadership role in the school.

"For our people it's about shared knowledge spaces to teach and learn... That shared environment where students are connected are so important so that students don't feel so disconnected... allowing kids to explore and learn about country and feel grounded... It's about connecting back and feeling what's in that area at that time."

First Nations Workshop

It's not all smooth sailing. The school received funding to manage its trees. The cost of arborists and maintenance was high. So the school used the money to cut down a number of large eucalyptus. Shreya found this really hard.

Shreya is creative and loves to break dance but there's no real space for outdoor events and performance especially with lighting or electrical access.

Shreya led a design process with her school to create a market space for community events which the school then implemented. The space opened last year and has been great for raising school funds.

How to design for Shreya

- Places that tell stories and reflect diverse cultures
- Opportunities for student expression and co creation
- Small group spaces that feel intentional and respected
- Clear signals that older students still belong
- Environments that show care, meaning and respect



Outdoor student artwork at School L

"Schools these days everything has a fence around it, so opening it up and allowing kids to explore and learn about country"

First Nations Workshop

Meet Archie, a first nations student. One day when he is identified with high truancy because he feels alienated by the curriculum and the system, he needs an outdoor space in school that provides him with a sense of belonging to his ancestor so that he feels a sense of belonging, pride, and encouragement to come the school

This could be a productive gardens where he owns a plot to plant native trees that belongs to his paternal/maternal lineage as part of school or a space in school where he is celebrated culturally and able to lead some conversation of his connection Country, it can be a cultural dance, a mural painting etc.

when his parents or grandparents from community don't feel safe to come into a school they need to feel seen, be known and to know, and be able to contribute to the school (for mob and for others) so that past traumas are recognised and that they trust the school with their young ones.

Story card from First Nations Participant, Needs and Strengths Workshop

6.1 Sense of belonging

Create spaces that connect students to their group, school, history, place, heritage and Country. Page 186

6.2 Celebration spaces

Create a central outdoor school heart that comfortably hosts whole school gatherings to celebrate important milestones, perform or commemorate significant dates. Page 194

6.3 Shared community spaces

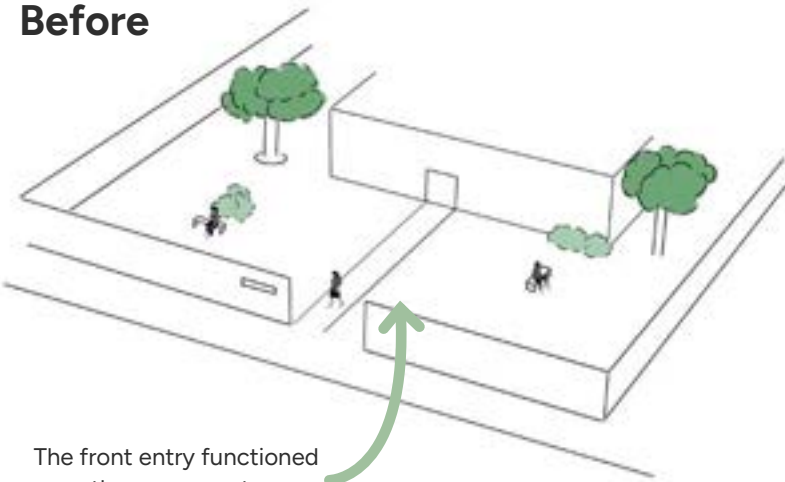
Offer spaces that invite in the broader community including parents and the local community for shared activities. Page 198



Cultural Needs

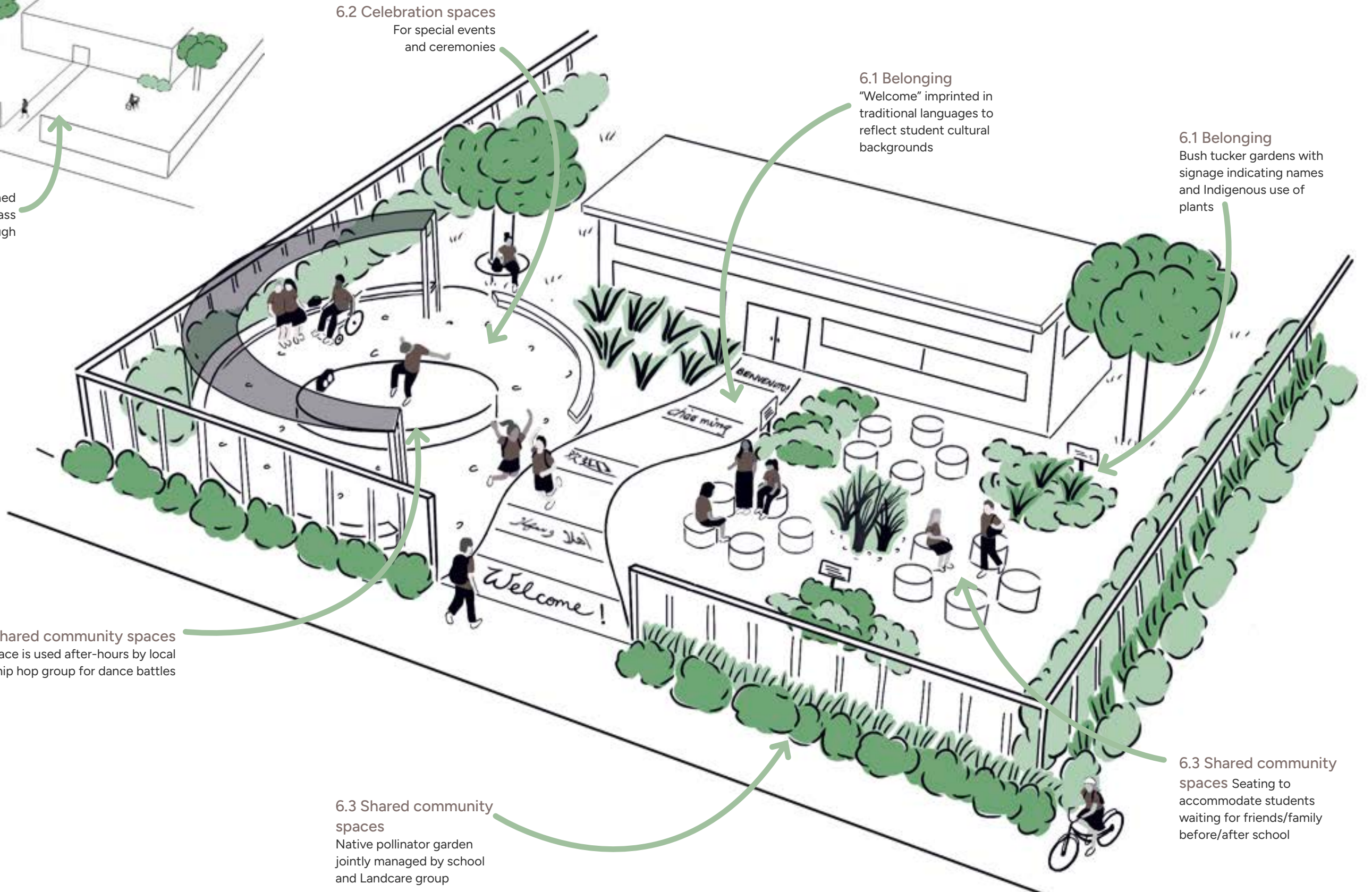
Cultural Needs

Before



The front entry functioned mostly as a space to pass through

After



6.2 Celebration spaces

For special events
and ceremonies

6.1 Belonging

"Welcome" imprinted in traditional languages to reflect student cultural backgrounds

6.1 Belonging

Bush tucker gardens with signage indicating names and Indigenous use of plants

6.3 Shared community spaces

Front space is used after-hours by local youth hip hop group for dance battles

6.3 Shared community spaces

Native pollinator garden jointly managed by school and Landcare group

6.3 Shared community spaces

Seating to accommodate students waiting for friends/family before/after school

6.1 Belonging

Create spaces that connect students to their group, school, history, place, Country and nation

Student insights

During adolescence, teenagers develop a sense of belonging to their community, which can support mental wellbeing, school engagement and retention. As one indigenous participant noted, “Some of the Indigenous students... absent from school because they don’t feel a sense of belonging...” (Needs and Strengths Workshop).

The schoolyard can signal that diverse groups are welcome. For one queer student, rainbow-painted stairs became a sign of belonging: “She saw those rainbow colours, [she] thought, well, I’m welcome here.” (Andrew FitzSimons, Principal, Working Group). Similarly, the schoolyard can connect students within their community and history. At Alkimos College in Western

significant historical event: “a ship that was wrecked on the coast there, and so [the sculpture takes] the shape of waves” (Andrew Thomas, Landscape Architect)

For First Nations students the outdoors can play a powerful role in supporting their wellbeing by connecting to Country. Designers noted that schoolyards can miss the mark for indigenous students when they design for nuclear families: “a culturally safe space for Aboriginal students, it would mean that if their families were coming to talk to somebody at the school, they won’t just come with one parent, they’ll actually come with a mob.” (Marguerite Bartolo, Landscape Architect).

Young people and advocates stressed that inclusion must be embedded across the whole school: “the rainbow murals are not the safe space. ...it needs to be everywhere” (Queer Advocate, Adelaide workshop). They also cautioned that singling out particular groups can create additional risks: “a queer mural [can] create a prejudice against these people...” (Student, Adelaide workshop). As a result, a mural that reflects various diverse groups can be just as powerful for the queer community

Principal insights

Principals recognised the role outdoor space plays in fostering belonging. For some principals, this included creating spaces that communicate shared identity, such as school values written into murals, religious iconography and spaces, such as a “bush chapel”. For Principal 3, yarning circles were “important for our non-Aboriginal kids to see how those spaces function” and use them as a space for “connecting all the cultures together”. Principal 2 designated an internal courtyard for LGBTQ+ students where “about 20 kids go and sit in the pride space during break times”. However, not all students want spaces that label their identity, as “kids do not want to stand out... they’re very, very insecure and very worried about public perception,” (Principal 9).

Zoning spaces for specific year levels also helps develop belonging. For Principal 1, the creation of a senior space “makes them feel that they’re important” and communicates “that this is our space. We get to be here... it’s been made for us.” In response to graffiti, Principal 6 engaged a local artist of Chinese and Aboriginal background to work with students on a mural. As Principal 6 noted,

“For students as they’re growing up, that connectedness to community and that identity with that school is really important... It’s like living in a house that’s got windows and it’s got a big garden rather than, you know, a view of cement: it’s so important for wellbeing.”

Growing cultural diversity can complicate designing for belonging. Principals differ on whether inclusion should come from whole-school design or designated spaces, reflecting debate over whether “it is more appropriate to design spaces that are designated for LGBTQIA+ students or integrated safe spaces into the schoolyard” (Adelaide Workshop). Youth Voices noted possible parent pushback when specific cultures or groups are highlighted. Similar tensions affected efforts to connect to Country: some saw it as “highly political and the tensions... make it incredibly hard to get traction” (Principal 3), while others created meaningful spaces such as “a sand circle for dance... a women’s business area, a men’s business area and communal spaces” (Principal 10).

“I think by having places that students feel safe and accepted in terms of their own individuality and being able to connect with like minded people and that you know it’s an opportunity for them to build relationships and connect with each other. So you’ve got to have spaces that facilitate those connections and facilitate those positive relationships”.

Principal 2



As a faith-based school, the “outdoor chapel” was an important expression of School L’s culture and valued by students.

6.1 Belonging

Practical solutions



Informal yarning circle in Canberra.
Photo credit: Hannah Richardson

6.1.1 Embed student participation in contributing to the schoolyard, caring for Country and the landscape. This includes contributing artwork such as murals and sculptures throughout the schoolyard. These can be varied over time (for example painting over murals) as new student cohorts move through. Give students ongoing roles in planting, monitoring and caring for school landscapes. Use adopt-a-plant program, seasonal planting (bulbs, herbs, endemic species natives), bush tucker plants, student-made interpretive signs about species and opportunities to display student artwork outdoors. Support curriculum links through growth logs, habitat care and seasonal observation.



School L in QLD had school values painted into an artwork at the school entry.
Photo credit: Gweneth Leigh

6.1.2 Engage local Elders and Aboriginal community members so schoolyard spaces meaningfully reflect Country. Create opportunities for ongoing community use. Include cultural protocols, permission-based storytelling and dual naming of key features. Consider providing outdoor spaces to support the families of indigenous students to meet with the school outdoors; consider providing sufficient space for members beyond the nuclear family.

6.1.3 Provide culturally safe spaces for gathering, yarning, teaching and sharing. Create designated places for yarning circles, cultural learning and community gatherings, supported by nearby small breakout spaces that allow classes or groups to split into smaller, comfortable circles. Design spaces that allow indigenous students to lead conversations, celebrations and cultural activities.

6.1.4 Use artwork, plants and materials to tell stories and histories of the school site, including First Nations and other relevant histories. This can be achieved through a landscape design process guided by professionals and in collaboration with students. Retain existing trees, especially large native trees. Use locally endemic species (not just native) to reflect the ecology of the specific Country the school sits on. Use planting to mark seasons and cycles through flowering and fruiting changes. Include native productive gardens and hands-on activities that strengthen students' relationship with living systems. For further information see Schoolyard Greenprint: Engagement Toolkit.

6.1.5 Create a school frontage that welcomes and represents the school community through designs that prioritise and respect student needs. For example, through multilingual welcome signs; rotating displays of student-designed artworks that express local identity; drop-off and pickup areas that respect student needs ie shade, mobility, waiting areas.

6.1.6 Connect the schoolyard to the broader landscape through views of landforms, waterways, sky, mountains to reinforce Country beyond site boundaries. Use paths, thresholds and everyday movement routes as opportunities for micro-moments of learning and reflection.



Wave sculpture at Alkimos College, WA
Designer: Four Landscape Studio
Photo credit: Four Landscape Studio

“I worked [in a school] for nine years, where 50% of our students are English as a second language ... we want to make everyone feel like they belong and everyone feel safe. And that's incredibly challenging to do when you've got kids from 40 to 45 different backgrounds all in one space at the same time.”

Teacher, Adelaide Workshop

6.1 Belonging

Case study

Brighton High School, Tasmania
by Playstreet

The challenge: The school wanted a courtyard design that connected to Country in a meaningful and respectful way.

The solution: The design integrated design narratives of the nearby *kutalayna* (Jordan River) and its endemic Short Finned Eel. Culturally important plants were selected through consultation with members of the Tasmanian Aboriginal community.

The benefits: The courtyard functions as a 'learning street' that fosters cultural connection to the Mumirimina Peoples of the *kutalayna* (Jordan River) valley.

“The two school buildings are representative of the two Aboriginal tribes, Big River and Oyster Bay, that inhabited the area 60,000 years ago. The Jordan River is nearby and there’s a native eel called the brown [Short Finned] eel that inhabits the river. That’s where the shapes came from. It is quite fluid and meant to represent the river throughout the centre.”

Miriam Shevland, Director at Playstreet

Stories in the landscape

The nearby *kutalayna* (Jordan River) and its native Short Finned Eel inspired the sinuous shapes moving down the spine of the courtyard.

Culturally important plants

Native edible plants and those traditionally used for weaving were integrated to provide hands-on cultural education.



Brighton High's central courtyard and pathways
Photo credit: Adam Gibson

What is a design narrative?

The underlying story, concept or theme that guides how a physical space is built. This ensures every material, shape, and colour serves a deeper meaning.

The school's 'Learning Street'
The central courtyard connects classrooms to the wider landscape through its flowing layout. It serves as the central community zone for study, relaxation and cultural gatherings.

Culturally symbolic textures

Varying textures and experimental materials represent local waterways and cultural connections.

Right top: Custom she-oak nut patterns etched into concrete celebrate a plant deeply relevant to the local culture.

Right bottom: Cobbles embedded with abalone shells signify traditional billabongs and gathering points.



First Nations

Cultural Needs

First Nations students value continuous active connection to Country, culture and community rather than symbolic gestures. The physical environment of a school can positively impact student wellbeing and identity when it is used as a teaching tool.

Needs

Designing with Country builds a sense of place by embedding local cultural landmarks and geographical stories into the schoolyard: "It is extremely important... to understand...what are the key cultural landmarks ...within the vicinity of the school and ...if there is any stories [that can be expressed in the schoolyard]. (Workshop 2)

Active community engagement and cultural visibility creates welcoming environments for First Nations peoples. Many participants shared that a "lack of visibility can make community feel unwelcome. Visibility and engagement can help to make [First Nations] people feel welcome." (Needs and Strengths Workshop)

Participants prefer open community-connected boundary designs rather than perimeter fencing. "You don't want to feel like you are in an institution." (First Nations workshop)

"if a child got lost they were told to find the [casuarina] trees, because snakes don't like pines. [Also] they make a whirring noise to calm you down and stay put because your Elders will know where to find you. It's important to tell stories about the trees."

First Nations workshop

Challenges

Understanding unique local identities and experiences is valued over stereotypical representations. "Essentialised representations [of Aboriginal people are harmful]. It's easy to present deficit imagery too. Both are seriously damaging." (Needs and Strengths Workshop)

Training staff of cultural protocols is an important step when implementing the cultural practices of First Nations peoples. This can often be missed. "In schools yarning circles are not being used properly, it's a waste of money because it's not backed up with training about why they are there and how they are used. For our people a yarning circle is all about creating a space where people come and connect, share stories and learning. It can be anywhere. A yarning circle isn't defined by 5 blocks it's defined by the people who are sitting around it." (First Nations workshop)



Successful examples

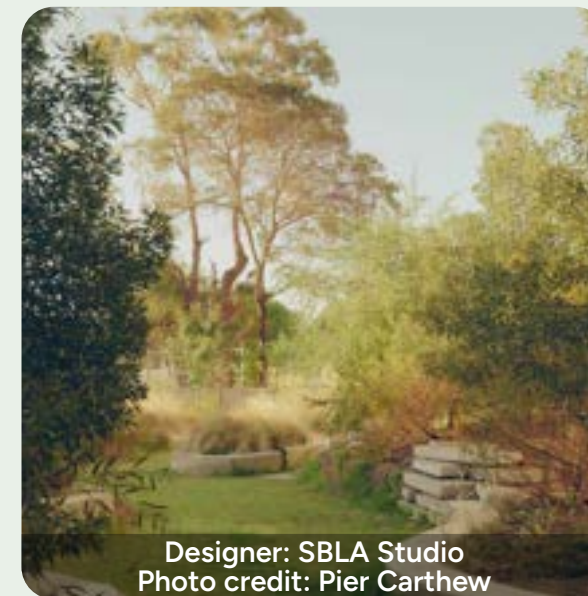
A productive garden in the school where indigenous students are custodian of a plot and able to plant native trees that belongs to paternal/maternal lineage

A cultural celebration space where students can lead conversations about local knowledge or history. This could be a cultural dance, painting or a space for weaving and yarning.

Indigenous place naming and dual language signage around the school.

Teachings about endemic plants and their significance to Country and its peoples. For example signage indicating plant name in a local language and how it is used.

A bush tucker garden which invites engagement with the local First Nations community and fosters awareness and understanding of cultural practices.



Above: This outdoor space at a public school in Vic was designed in deep collaboration with local First Nations Elders and features endemic species. It is used as a pedagogical tool that teaches students about the land and First Nations custodianship.

"We are engaging with some of our Elders around place, you know, particularly when we're talking about edible gardens, like Bush Tucker. And just using the outside space as a resource to actually build awareness around First Nations culture and things, even if you put in a plant and [be] like, what is that? And then someone can be like, oh, well that's another bush apple, that kind of thing."

Practitioner 1



Signs indicate local indigenous uses for plants. Photo credit: Antonia Kish.



Photo credit: Gweneth Leigh

Above: The landscape at an Indigenous boarding school in Vic is an important place of connection and celebration.

6.2 Celebration spaces

Create a central outdoor school heart that comfortably hosts whole- school gatherings to celebrate important milestones, perform or commemorate significant dates.

Student insights

Students want opportunities to share their skills and milestones with their school and community. While not figuring as a high priority for students, they notice when these spaces do not function well. For example lighting: “the light is coming [in] so you can’t actually see what’s on [the projector]” (School L, Year 11–12F). Students spoke of uncomfortable outdoor gathering spaces for example the possibility of getting a dirty uniform: “I’m getting an award... [and] we’ve got to sit on the floor, but you’re in your skirt.” (School L, year 11–12F)

When outdoor assembly spaces were shared with sporting spaces, some students felt that they were not as successful. Referring to significant celebrations one student noted: “it’s made to be something fancy, but also sports. And I feel like it really needs to be separated” (School L, Year 11–12F).

Celebration and performance spaces can also provide a school heart or meeting place, building a strong sense of identity. At School R, a central Green with a large canopy tree created a “heart” for the school which was often noted by teachers as one of the best features of the school. In addition to creating a sense of school identity, it was a gathering space for large numbers and enjoyed by students at lunch.

“We have our assemblies [in the COLA]... in summer, it’s hot and sunny; in winter, it’s cold and wet.”

School L, Year 11–12F

“I’m not going outside for whole school assemblies.”

School M, Year 8–9F



Left: The central Green at School R was described as the ‘heart’ of the school. Photo credit: Year 9–10F

Principal insights

Having an outdoor ‘cultural heart’ where the school can assemble for ceremonies or performance was acknowledged as important, but not a common priority among interviewed principals. Quadrangles were most often identified as a place for assemblies. When included, natural shade made these spaces attractive and highly valued: “we know how important the trees are in that quad. [It creates] lots of shade, creates a really nice place” (Principal 5). In one case, constructing hillside stairs beside a quadrangle opened up seating for occasional performances: “We’ve had bands play there, for example, and that’s been just wonderful. And the kids will come from all over the school just to sit down and listen. So it’s a very communal area” (Principal 6).

To many principals, the visual appeal of student gathering areas was a way to communicate school values. At one school, the concrete was cleaned annually

to communicate student expectations of looking after the environment: “We are working with our kids to actually uphold our values with that...Mum’s not here to pick up after you...you need to put [rubbish] in the bin yourself” (Principal 1). This promotion of environmental consciousness was a common heard priority: “The whole way in which we should be setting up the outdoors so that kids have direct experience of it, hand in hand, can get the idea that they can make a difference” (Principal 18).

Successful school hearts, including at School R, are designed to support multiple functions. Large infrastructure such as an amphitheatre can be expensive and occupy valuable space. Designing these spaces to also accommodate socialising, lunch and class breakouts increases the return on investment and extends their value across the school day.

“Our main courtyard area is the focus of the school....I try and make sure the gardens are maintained and all of that, because it is the heart of the school and it’s what everybody sees when they’re walking through the place.”

Principal 2

6.2 Celebration spaces

Practical solutions



Performance space at Mathew Flinders school, Qld includes a raised stage and tinted shade structure that does not create overly dark spaces. Designer: Tract, Photo credit: Renee Green

6.2.1 Create a performance space, ideally adjacent to buildings and with some cover. Include power/AV points for technology. Where appropriate co-locate near performing arts centres and allow for storage nearby.

6.2.2 Size the assembly zone at $\sim 1 \text{ m}^2$ per student with a raised presentation edge.

6.2.3 Design clear sightlines to the stage from all positions in the audience. Sloping topography provides excellent opportunities for amphitheatres.

6.2.4 Include tiered/semi-circular seating sized for different group scales with all-access routes to every level and clear sightlines. Use topography to provide seating rather than requiring portable seats.



Amphitheatre at Aunty Agnes Shea school in Canberra makes use of the landform to create a multipurpose space suitable for gatherings, classes and socialising. Designer: Made L., Photo credit: PJ Lilly

6.2.5 Ideally create these performance spaces to be multi-purpose so that they can be used at lunch, for socialising or curriculum rather than just assemblies. These spaces are most successful when they are subtly built into the land form (for example where slopes already exist) rather than being an additional amphitheatre which may not be useful outside of assemblies.



School heart at Brighton High School, Tasmania. This multipurpose space takes advantage of the sloping site creating spaces for assemblies and break times. Ramps used for disability access. Designer: Playstreet, Photo credit: Natasha Mulhall

6.3 Shared community spaces

Offer spaces that invite in the broader community including parents and the local community for shared activities such as fetes, night markets and sporting events.

Student insights

Schools are important social infrastructure that provide a central point of contact for parents and community members.

Students can strengthen their sense of connection to the school when they play there on the weekends. One indigenous teacher described a school removing school fences for outside school access: “I thought the kids would wander off during breaks, but they don’t. It works. It’s good for the community ... the community put in a bike track ...to use it on the weekend ... [which] helps keep the school safe” (First Nations workshop).

Schools often want to host activities that are open to parents and the broader community such as night markets, fetes or sporting events. These provide excellent opportunities for students to take leadership roles, share their work and for the school to communicate its values. As climate change intensifies in Australia, schools are becoming climate refuges during extreme weather events such as cyclones, floods or fires making them valuable community and green infrastructure assets.

Sharing assets is “It’s a really interesting way of not doubling up on a whole bunch of things ... it’s good in principle. It has other issues.”

Marguerite Bartolo, Landscape Architect

Students nonetheless seek a level of privacy from the public. It is important to keep some areas private particularly those related to emotional regulation, quiet study and young children. As one student noted: “I chose hidden spaces ...where you can go and not many people can see you.” (School M, Year 8–9M)

“We have local elders that are able to come and provide us some insight [at our yarning circle]...It’s a space that’s utilised by all of our students, and not just Aboriginal students, which is great.”

Principal 7

Principal insights

Activities such as fetes sporting events provide opportunities for students to share their work, build leadership and connect to the community. Some schools demonstrate innovative partnerships. One school was given a ‘bush block’ by a local landholder, now used for land care and collaboration with groups such as Farm it Forward. Another co-designed an Anzac Memorial with the local RSL: “One thousand kids walk past that [memorial] every single day; I think it’s really important.” (Principal 7)

Shared use of school assets can create economies of scale. One government official noted the benefits for maintenance:

For “public sporting fields where they’re co-located with schools, they’ve been very successful because...that can negate that maintenance burden on the school.”

After hours access to school infrastructure can pose challenges regarding theft, vandalism and injury as “the school feels really sort of anxious and nervous about undesirables or what does it mean around community using these spaces.” (Government Workshop)

Some schools have resolved this through tiered access to spaces. At Aunty Agnes Shea High School in Canberra, barriers between publicly accessible and school-only infrastructure help manage this risk.

Government silos, however, remain a challenge. Government officials noted the complexity of funding and phasing joint school–council infrastructure such as ovals, as schools are State or Territory owned while facilities are often council-owned. This creates differences in accountability, budgeting and election cycles that can affect the development of shared assets. (Government Workshop)

Government Workshop



At School L, space was set aside for an Anzac Memorial overlooking the school oval.
Photo credit: Gweneth Leigh

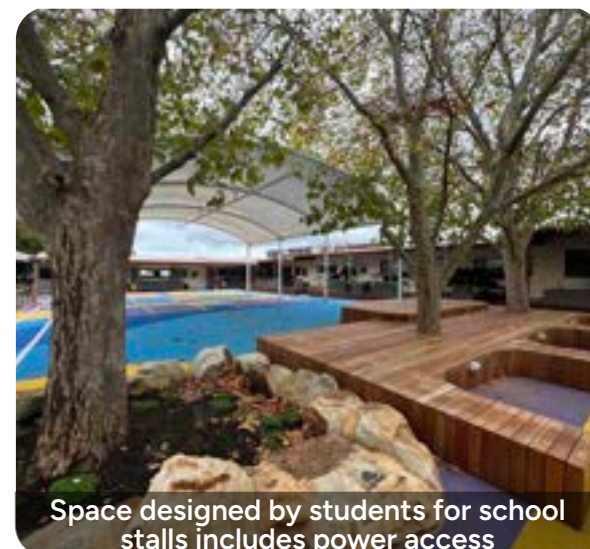
6.3 Shared community spaces

Practical solutions

6.3.1 Zone the campus into school-only areas and public-facing, after-hours accessible areas to enable community use of fields, courts, outdoor gym equipment, hall and selected learning spaces. Facilitate community access to these facilities with clear boundaries, obvious entrances, effective signage and the ability to secure the remainder of the campus when community use is occurring. For facilities that pose a risk to injury, secure with after-hours gates.



6.3.2 Include a central semi-public outdoor space that is sufficient in size for whole school gatherings. To support activities such as night markets, provide power access, lighting, sufficient hard stand for temporary infrastructure uses such as market stalls and car access for both activities and any emergency access that might be required. Treat 2 people/m² (0.5 m²/person) as the default planning density for a general standing audience; use lower for comfort, higher only in tightly managed zones.

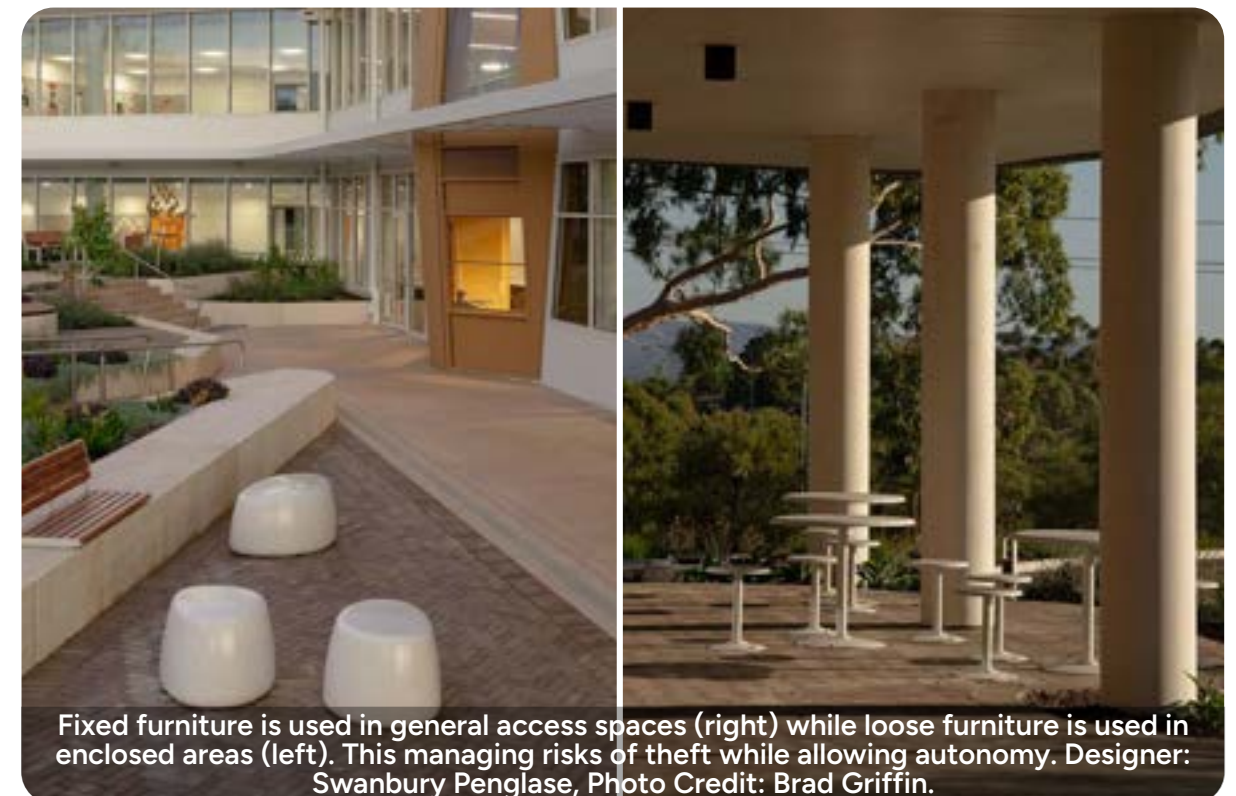


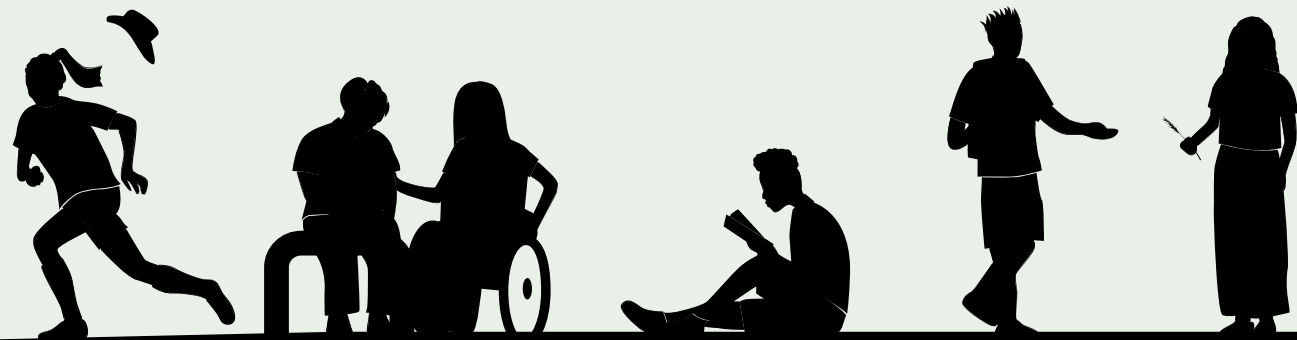
6.3.3 Use building orientation and the location of shared facilities to maximise passive formal surveillance. Where possible locate community facilities nearer the site perimeter to facilitate safe, easy after-hours entry. Locating community assets on the street front or nearby windows reduces the likelihood of anti-social behaviour in these spaces. Where necessary, employ CCTV and street lighting to promote safe behaviour outside school operating hours.

6.3.4 Where additional car parking is required, minimise the extent of car parking presented to the street and provide landscaped buffers and tree planting to maintain a strong civic and educational character.

6.3.5 Provide pedestrian and bicycle access to community facilities on schools. Consider key walking and cycling routes to and from the facility to support local access and safe journeys with a focus on nearby public transport, public facilities, services, open space and local centres.

6.3.6 Conduct community engagement, planning and testing of proposed shared assets to ensure they reflect community needs. Shared facilities are best designed to reflect specific residents' needs, future population growth and existing infrastructure. For new school builds, coordinating with adjoining developments can create economies of scale and avoid duplication. This includes nearby sports fields, libraries, community centres, public open space, walking and cycling paths or public transport links.





Appendixes

Glossary

1:3:6 upper: mid:lower storey planting ratio	The 1 : 3 : 6 upper : mid : lower storey planting ratio is a simple rule-of-thumb for structurally diverse plantings. It means that for every 1 upper-storey plant (a canopy tree) you include 3 mid-storey plants (shrubs or small trees) and 6 lower-storey plants (grasses, sedges, forbs or groundcovers).
30% canopy cover	A target where around 30% of the site or neighbourhood is shaded by tree canopy to reduce heat and improve comfort.
3–30–300 rule	Guideline that everyone should see 3 trees, live in a neighbourhood with ~30% canopy cover, and be within 300 m of quality green space.
Acoustic overload	Excessive or chaotic noise that makes it hard to think, focus or regulate emotions.
Acoustics	How sound behaves in a space, including reflection, absorption and transmission that affect comfort and learning.
Active edges	Edges for sitting, leaning and gathering so students can watch, join in or passively socialise.
Ambiguously programmed spaces	Areas not assigned to a single use so students can invent activities and adapt them over time.
Attention Restoration Theory	In psychology ART explains that exposure to natural settings facilitates recovery from directed-attention fatigue by engaging effortless, involuntary attention (“fascination”) within contexts that provide a sense of being away, sufficient extent and coherence, and compatibility with the individual’s purposes, thereby allowing executive control resources to replenish (Kaplan & Kaplan, 1989; Kaplan, 1995).
Bioswale	Vegetated linear or meandering channels or sloping depressions designed to receive stormwater runoff from impervious surfaces
Biophilic	Design that connects people with nature through plants, materials, water, light and views.
Bouldering	Low-height climbing that builds strength and coordination without ropes.
Building–outdoor interface	Where indoor spaces meet yards; verandas, doors and thresholds that shape comfort, shade and supervision.
Canopy	The overhead spread of tree crowns that provides shade, cooling and habitat.
Caring for Country	Working with First Nations knowledge-holders to respect and steward land, water and sky systems in design and care.
Charging rails	Fixed power rails or outlets that safely support device charging in sheltered outdoor areas.
Circulation routes	Primary walking paths for moving safely and efficiently between entries, learning areas and play zones.

Claimable space	Small, clearly bounded areas a group can adopt as “their spot”, supporting identity and belonging.
Co-design	Designing with students, staff, families and community to set priorities and solutions together.
Cognitive load	The mental effort needed to process information; lower load improves wayfinding and learning.
Compact root systems	Tree or shrub species with relatively contained rooting to suit tight site conditions.
Concave seating	Seating that curves inward to support group focus and social connection.
continuous root development	continuous root development refers to a plant’s ability to grow new roots steadily over time, without significant interruptions.
Convex seating	Seating that curves outward, encouraging outward views and looser social interaction.
CPTED	Design strategies that improve safety through natural visibility, clear sightlines, lighting and welcoming, well-defined boundaries.
Cross-flow ventilation	Air movement across a space driven by openings on opposite sides, improving comfort and air quality.
Cultural protocols	Agreed processes that show respect for First Nations cultures in engagement, design and storytelling.
Dead-end paths	Routes that terminate without through-connection, which can cause confusion and crowding.
Deciduous species	Trees that drop leaves seasonally, offering winter sun and summer shade.
Desire lines	Informal paths created by repeated use, showing the routes people naturally prefer to take rather than the ones formally designed for them.
Down-regulation	Design features that help students calm and reduce sensory load.
Drainage	Systems that collect and convey water away from surfaces to prevent flooding and erosion.
Dual naming	Using both Aboriginal and English names for places or features to recognise culture and history.
Edge elements	Features at boundaries—low walls, seats, planters—that define spaces and invite use.
Endemic species	Plants native to and restricted to the local area, supporting biodiversity and cultural stories.
End-of-trip facilities	Amenities supporting walking and cycling, such as bike parking, lockers and showers.
Exotic species	Plants introduced from outside the local bioregion, used for seasonal colour or resilience where appropriate.

External annexes	Covered outdoor extensions to classrooms that support learning and breakout.
Filtered shade	Dappled light created by tree canopy or slatted structures that cools without full darkness.
Gaga pit	An enclosed play area, usually circular or octagonal with low walls, designed for a fast-paced ball game that encourages group participation, agility and inclusive play.
Groundcovers	Low plants that spread across soil, reducing heat, erosion and maintenance.
Hardscape	Paved or built surfaces and elements in outdoor areas (paths, courts, walls).
Hardstand	Durable paved area designed for intensive use or equipment set-down.
Informal vs formal sport spaces	Open areas for casual play versus marked courts/fields with set rules.
Interpretive signage	Signs that explain stories, ecology or design features for learning and wayfinding.
Irrigation	Applying water to planting to keep landscapes healthy, ideally using efficient systems.
Kinetic sculptures	Artworks that move with wind or touch, offering sensory engagement.
Landform	The shape of the ground—mounds, terraces and slopes—that influences play, drainage and sightlines.
Layered planting ratios	Combining trees, shrubs and groundcovers in set proportions to create structure, shade and habitat.
Lean rails	Narrow rails at comfortable height for resting or informal conversation without sitting.
Legibility	How easily the place reads at a glance—where to go, how to enter, and what each area is for.
Level changes	Steps, ramps or terraces that shift up or down to define spaces and manage runoff.
Limb drop	The risk of branches falling from trees, managed through species choice and arborist care.
Low-stimulus materials	Finishes with muted colour and texture to reduce sensory load and glare.
Macro spaces	Large areas suited to big groups (12–20+ students) or whole-school events.
Material diversity	Using varied, durable materials for interest and learning while avoiding clutter.
Meso spaces	Medium-sized areas for groups of about 6–8 students.

Micro spaces	Small nooks for 2–4 students to talk, read or decompress.
Microclimates	Localised climate conditions (sun, wind, shade, moisture) created by landform and planting.
Micro-infrastructure	Small, repeatable pieces—benches, shade cells, planters, taps—that add function and comfort.
Multi-purpose performance zones	Spaces that support assemblies, performances, sport or outdoor classes with simple services.
Nature play	Play using natural elements—logs, rocks, plants, sand and water—to build curiosity and resilience.
Neutral background	A calm base palette that keeps stimulation low and lets students regulate.
Ninja-style play	Agility and obstacle-style equipment encouraging climbing, balancing and coordinated movement.
Outdoor rooms	Semi-enclosed outdoor areas framed by planting and structures for comfort and use.
Parallel play spaces	Layouts that allow side-by-side engagement without pressure for direct interaction.
Parkour	Movement activity focused on vaulting, balancing and traversing obstacles.
Passive surveillance	Everyday visibility from paths, windows or staff areas that improves safety without overt monitoring.
Pause points	Small widened places to stop, wait or choose a direction without blocking flow.
Perch spots	Short-stay places to lean or sit briefly while watching or waiting.
Permeable edges	Edges you can see and move through, maintaining connection between spaces.
Permeable paving / green swales / rain gardens	Nature-based systems that let water soak in or be filtered to reduce runoff and heat and improve water quality.
Place-based design	Design that reflects local climate, stories, materials and ecology so spaces feel of their place.
Deep soil provision	The soil volume available to plants in planters; deep soil provision supports healthier, longer-lived plants.
Positive risk taking	Opportunities for manageable challenge that build confidence and competence.
Progression features	Elements arranged from easy to hard so students can build skills step-by-step.

Prospect and refuge	An environment that offers a balance of two things: an unobstructed view of the surroundings (prospect) and a sheltered place for concealment or safety (refuge). When these two elements successfully blend, humans feel psychologically secure and comfortable.
Psychological distance	A sense of separation from classrooms that supports autonomy and agency in the yard.
Resin-bound aggregates	Gravel bound with resin to form a smooth, durable, permeable surface.
Responsive façade (operable shading)	Façade or shade elements that adjust to sun, heat or glare to improve outdoor comfort.
Semi-permeable screening	Screens that filter views and light, maintaining safety and connection without full enclosure.
Sensory load	The total amount of sensory input a student experiences; high load can be stressful.
Shared-use agreements	Agreements that let schools and community share facilities like ovals or halls.
Sightlines	Clear lines of sight that improve safety, supervision and wayfinding.
Soft fascination	Soft fascination (from Attention Restoration Theory) is the quality of gently engaging, low-demand stimuli—most often found in nature—that hold your attention effortlessly while leaving mental bandwidth free for reflection and recovery
Spatial decisions	Choices about how land is organised—what goes where and how spaces connect.
Spatial-network structures	Play structures made of nets or ropes that build balance and coordination.
Stabilised gravels	Gravel mixed with binders to create a firmer, low-dust surface.
Stormwater	Rainwater that runs off hard surfaces; can be managed as a resource through capture and treatment.
Structural soil	A soil mix that supports pavements while providing roots space to grow.
substrate depths	Substrate depths refer to the thickness of the growing medium (soil or engineered soil mix) used to support vegetation—especially in green roofs, planter boxes, raised beds, and constructed landscapes.
Succession planting	Planting staged over time so as trees age, younger plants are ready to replace them.
Thermal comfort	Combination of levels of heat, humidity and air movement considered pleasant for humans
Thresholds	Transitions between zones that signal change and help orientation.

Topography for seating	Using slopes and steps to create informal seating and views.
Transition space	Low-stimulus pause zones that ease shifts between inside ↔ outside or class ↔ break.
Transpiration	The process where plants release water vapour, cooling the air and cycling moisture.
Traversable edges	Edges designed to be walked or climbed along, encouraging play and movement.
Tree canopy cover	Combined area of tree crowns that obscures the ground when viewed from above
Urban heat island (UHI)	Localised warming in towns and cities as compared to surrounding non-urbanised vegetated landscapes
Vegetated swales	Shallow, planted channels that slow and filter stormwater.
Vertical greenery	Climbing plants or green walls that cool, shade and soften facades.
Visual language	Visual language is the intentional arrangement of landform, materials, planting, colour, texture, light, scale, and edges to make places legible and express character. Site-wide consistency in visual language creates a coherent whole design. Deliberate shifts in visual language for specific spaces signal a different quality or use in that space.
Visually permeable	A quality of a space or boundary that allows clear views through it (such as a fence), maintaining sightlines for safety, connection and ease of movement while still defining space.
Water sensitive urban design (WSUD)	Contemporary approach to the planning and design of urban environments that is sensitive to the issues of water sustainability, resilience and environmental protection
Water sensitive urban design (WSUD)	Planning and design that integrates stormwater, water supply and wastewater with urban form to capture, treat and reuse water, protect waterways and cool places.
Wayfinding	Helping people navigate using paths, signs, landmarks and consistent cues.
Yarning circles	Culturally safe circular gathering spaces for listening and sharing.

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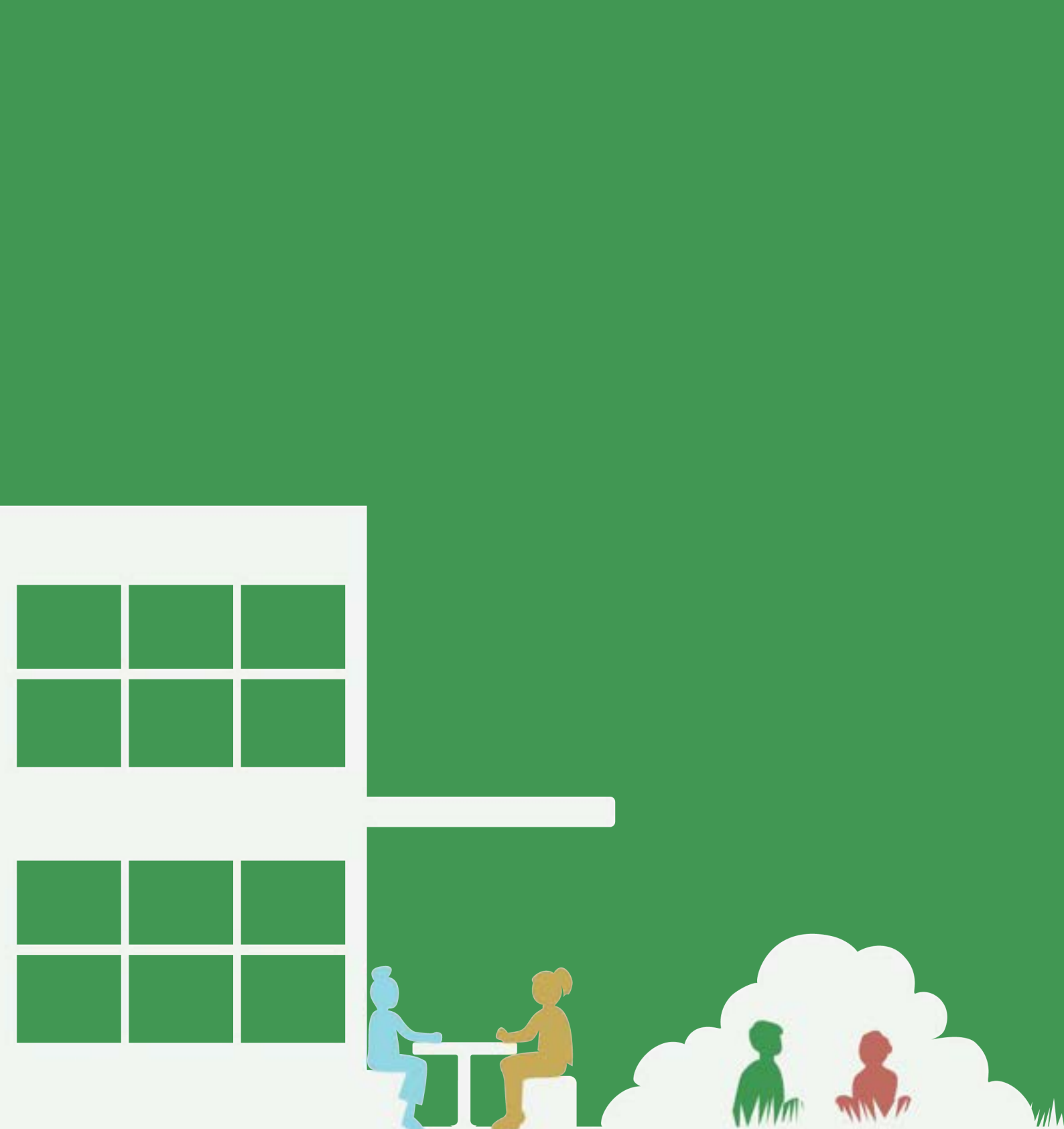
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The Schoolyard Greenprint

2026

The Schoolyard Greenprint

Volume 4

Engagement Toolkit



Tools and templates to involve students, staff
and communities in shaping their schoolyards

Authors

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The creation of the Greenprint Guides would not have been possible without the contributions from the following people: Linda Corkery, Noel Corkery, Marta Day, Kristen Douglas, Dean Farquhar, Andrew Fitzsimons, Maria Grainger, Deb O’Riley, Jacqui Simpson.

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The Health Research Institute at the University of Canberra acknowledges that it stands on Aboriginal land. We pay our respect to the Ngunnawal people, the Traditional Custodians of the land on which this work has taken place. Country shapes many of the spaces we move through, especially our schools, where it is a powerful teacher that invites curiosity, learning and responsibility. We appreciate the privilege of living on this Country and consider its future grounded in respect, understanding and reconciliation.

Enquiries

For enquiries or more information on the Schoolyard Greenprint please contact the Schoolyard Greenprint team at the Health Research Institute at the University of Canberra via email: schoolyardgreenprint@canberra.edu.au.

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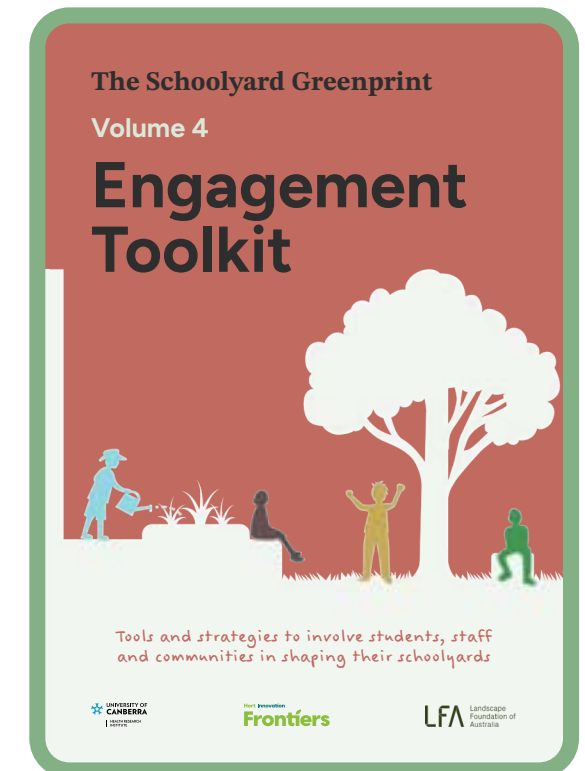
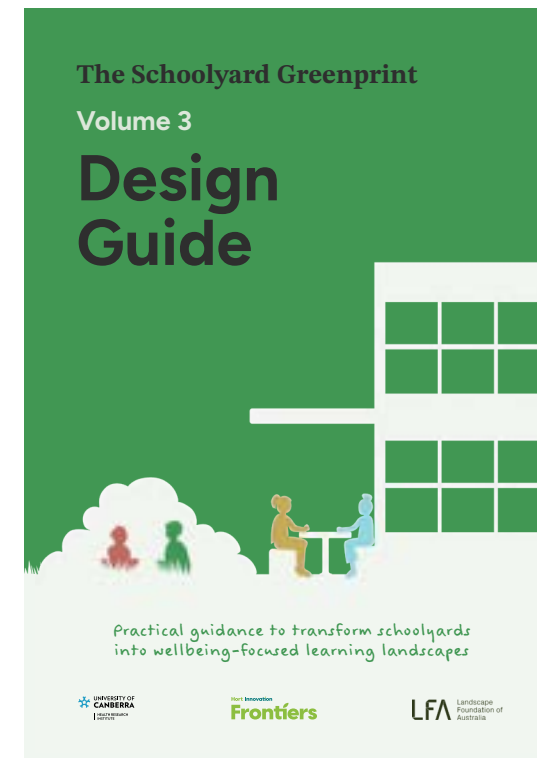
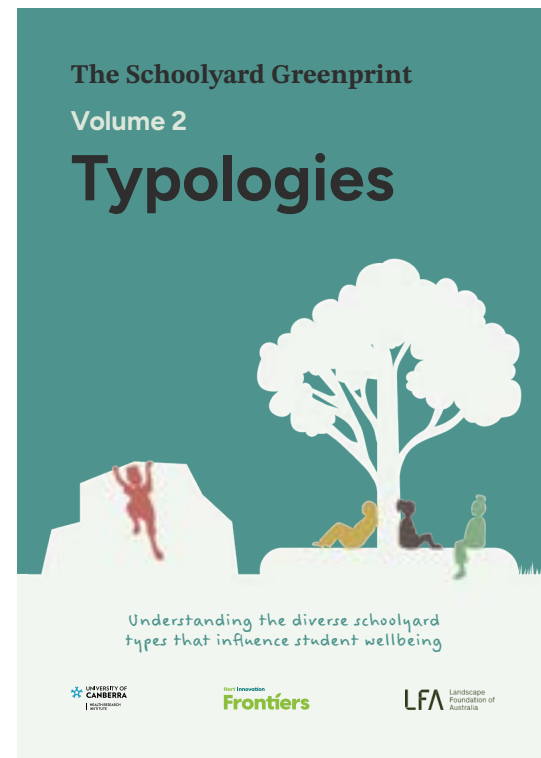
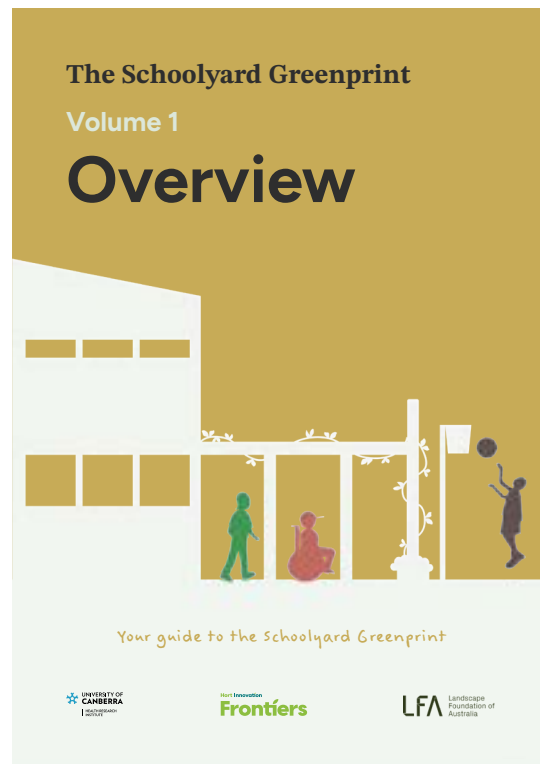
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The Schoolyard Greenprint



About the Schoolyard Greenprint

The transition to secondary school involves not only new routines and relationships, but also a shift in how students experience outdoor spaces. Moving from playgrounds to playing fields changes how students build connections, manage emotions, and navigate belonging. The **Schoolyard Greenprint** responds to this change by positioning outdoor spaces as essential to wellbeing and inclusion.

Developed over two years with input from students, educators, designers, and community members across Australia, the Schoolyard Greenprint provides a coordinated suite of resources to guide better schoolyard design. Grounded in student voice and research evidence, it helps schools understand what young people need from outdoor environments, explored through the following four key documents:

- Overview:** Explores how outdoor spaces influence student health and wellbeing.
- Typologies:** Guides planning through different campus layouts, showing how design shapes activity, social interaction, and connection to nature.
- Design Guide:** Offers evidence-based principles and wellbeing design strategies
- Engagement Toolkit:** Provides tools to capture student experiences and evaluate how well spaces are performing.

Together, these resources offer a roadmap for creating schoolyards that support diverse student needs. They equip principals, designers, and communities with practical guidance to advocate for and deliver outdoor environments that help students feel safe, connected, and able to thrive.

About the Engagement Toolkit

The Greenprint Engagement Toolkit brings together practical tools and approaches to understand how schoolyard design influences student behaviour, wellbeing and daily habits. Such information helps principals and designers better understand students' experiences, perceptions and preferences.

Most students do not get a choice of where they attend school. Many will spend a significant portion of their childhood on school grounds. Understanding how these environments shape daily experiences can inform the future practice of their design and use.

“We know if we engage with students with different ages we get better results.”

Designer, Reference Group 1

Welcome

The Greenprint Youth Voices, a group of 5 young adults who have shaped the Greenprint, welcome you to this document.



Chloe Richards

Gamilaroi woman
Lives on Wiradjuri country,
New South Wales,
Rural school



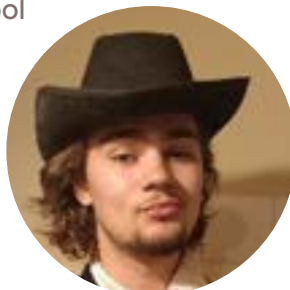
Emily Garrett

Lives on Yugambah land,
Queensland,
Suburban school



Finlay Robinson

Lives on Ngunnawal land,
Australian Capital Territory,
Suburban school



Hunter Jackson

Lives on Wiradjuri Land,
New South Wales,
Rural school



Rhy Baumann

Lives on Kurna land,
South Australia,
Suburban school

Our role

We have had a diverse schoolyard experiences, having attended schools from Queensland to South Australia, rural to urban, both independent and government. Despite this, we all agree that the current quality of schoolyards had an impact on our day-to-day wellbeing while at school, and that the quality of schoolyards across Australia can be improved.

As young people, we hope that this document is used by and with young people so they thrive in schoolyards. We hope that these documents inspire you, especially young people, to consider future schoolyards differently. We think the content in the following documents will provide school executives and designers with practical solutions to schoolyard problems that many students, us included, have experienced.

The Greenprint Youth Voices has been a continual source of insight in developing the Greenprint. We have spent time talking to other students and young adults, ensuring that the information in the Greenprint accurately reflects our experiences. This approach upholds the methodology of working with young people to achieve better outcomes for young people.

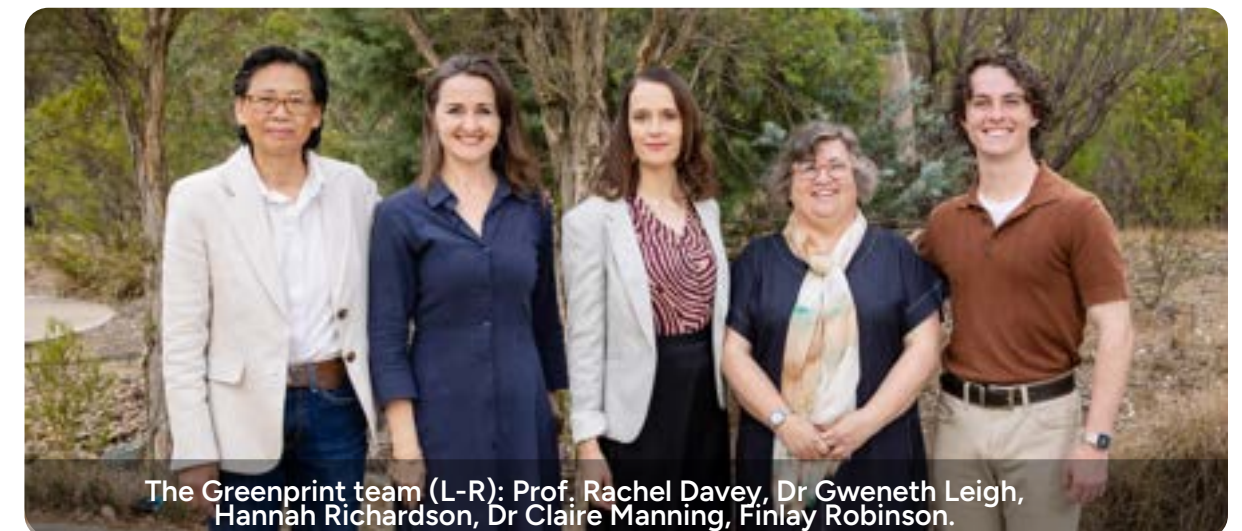
The future of schoolyards, in our words

We want schoolyards that are safe. We want schoolyards that are open, not crowded, sunny, grassy, natural, with some sort of shade or cover for if it rains. We need safe spaces in our schools for times of stress and hardship so that we can regulate ourselves. We want schoolyards that give everybody space but still connection. We want schoolyards that function in many ways, spark creativity and show an element of joy.

As young people we want schoolyards that:

- inspire young learners while providing a greener and more inclusive space to do so.
- are more sustainable, nurturing and innovative future. Making change for future generations.
- provide students free access to areas that support engagement between the environment (gardens, paved shaded areas, murals/art), each other (social areas) and ourselves (exercise, sport and study).
- create greener spaces, focusing on the development of students' wellbeing and ensuring we experience an enriching range of activities within schools that also provide inclusive and accessible spaces for our learning.
- create outdoor education spaces where students can succeed in all aspects of life.
- are green outdoor spaces where all students can get their daily dose of nature to support their personal development and wellbeing

Thank you for caring about a schoolyard in your life. We hope this guidance inspires you as much as this journey has inspired us.



The Greenprint team (L-R): Prof. Rachel Davey, Dr Gweneth Leigh, Hannah Richardson, Dr Claire Manning, Finlay Robinson.

The need for evidence

In the same way that classroom conditions of lighting, noise, air quality and thermal comfort can affect student performance, the design of school outdoor spaces can influence how students engage with friends, be physically active and recuperate from social and academic stress. To realise these benefits, outdoor spaces must be designed so students feel connected to them, and so they are accessible and safe to use.

Building evidence on the range and types of outdoor settings that students find desirable clarifies the opportunities and constraints of existing schoolyard designs. It also provides insights to inform improved design and use of these spaces to support student wellbeing. This includes improving understanding on which schoolyard design factors generate different psychological and emotional responses in students, and how these relate to perceived self-esteem and academic achievement. Such evidence can also provide valuable feedback to guide future investment in these outdoor environments in the following ways:

Demonstrating need and campaigning for change Evidence drawn from students' schoolyard experiences can clearly demonstrate unmet needs by showing how current spaces do, or do not, support their wellbeing, engagement and daily use.

Raising funds: Evidence can help raise funds for schoolyard improvements by providing proof of student need and impact, giving schools a compelling case to secure funds.

Empowering students: Involving students gives them a meaningful role in the design process at a time when they are growing more independent. It also fosters a stronger sense of ownership and belonging.

Future planning: By identifying what works and what doesn't within outdoor spaces, schools can make informed decisions about how to design and prioritise schoolyard improvements. This information can also provide policymakers a benchmark against which to evaluate current standards of design and assess where change is needed.

Linking design and student experiences

Schoolyards are dynamic settings where physical design and student experiences are closely linked. Understanding this complexity requires attention to both the built environment and how students engage with it. Using a range of tools to document the schoolyard and capture students' lived experiences can help identify patterns, highlight challenges and provide insight into how designs support or hinder wellbeing.

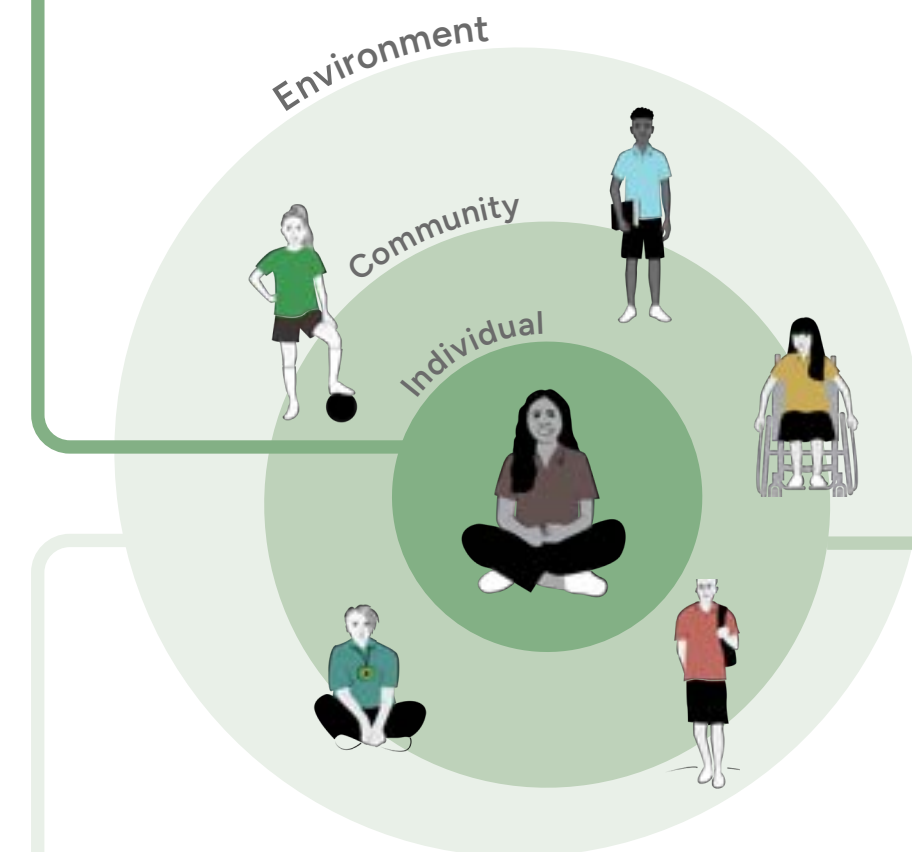
“Young people should be consulted in the design stage and their opinions taken into account.”

Anti-bullying advocate, Reference Group 1

1 The Individual

Student schoolyard perspectives

Tools that collect information about students' lived experience of schoolyards to reveal how they actually use and value these spaces and identify where improvements are needed. [Page 10](#)



2 The Schoolyard Environment

Mapping schoolyard preferences

Documenting how students use school grounds through maps and images can reveal design challenges associated with visibility, circulation, maintenance and the range of activities and programming available. [Page 20](#)

3 The Community

Affecting change

Ways to collaborate with students, staff and key stakeholders to translate insights into schoolyard design outcomes that support the needs of the whole school community [Page 28](#)

Chapter 01

Schoolyard Individual Needs

Students' uses and preferences for outdoor spaces change with age. Compared to younger school children, less is known about which schoolyard qualities best support secondary students. Better knowledge on what types of school ground activities are needed and desired by this cohort can help reshape these spaces in positive ways.

In secondary school, opportunities for student autonomy can be limited. Classroom settings are often organised around adult rules and expectations. Schoolyards, by contrast, provide a more fluid environment where students transitioning from childhood to adulthood can experiment and safely express themselves.

As daily users of school grounds, students have important lived experiences of these spaces. Giving students opportunities to share insights empowers them to influence the design and use of school grounds and apply learnings from the classroom in practical ways. For adults, it also provides a valuable window on how young people see their outdoor spaces, their role in them, and deepen understanding of how students engage with and interpret the natural world.

Snapshot

Tool	Type of research		Time	# Partici- pants	Resources
	Explore	Design			
1.1 Focus Group			1 hour	6-10 per group	Recording device Structured activities (Optional)
1.2 Either / Or Activity			5-10 minutes	Unlimited	Paper or online questionnaire
1.3 Story card template			15 minutes	Unlimited	Paper or online activity
1.4 Wellbeing survey			10-15 minutes	Unlimited	Paper or online summary

1.1 Focus group

A guided, small-group conversation where students share their experiences, ideas, and preferences on a specific topic to inform school decision-making and design. [Page 12](#)

1.2 Either / or activity

A quick questionnaire to capture outdoor preferences; a good warm-up activity to initiate schoolyard focus group discussions with students. [Page 14](#)

1.3 Story card template

The story card tool gives you data that students might not articulate in group discussions. It enables helps to uncover their needs, challenges, and desired design outcomes for outdoor spaces. [Page 16](#)

1.4 Wellbeing survey

A survey developed to assess the strengths and weaknesses of school outdoor spaces in how they support student physical, emotional, psychological, cognitive and social needs. [Page 18](#)

“It’s like almost, perhaps 20-30 years since we were in high school. And for us to decide now what kids want to do and what they like, it just feels a little bit weird....I think it’s super important that we ask them, and that we don’t make assumptions.”

Practitioner 16

1.1 Focus group

Overview

A focus group discussion is a structured conversation with a small group of students (typically 6–10 participants) facilitated by a teacher or designer to explore schoolyard experiences, preferences, and needs. Guided questions or activities encourage discussion and generate insights to inform planning and design. Consider differences in age, gender, confidence, and participation when selecting students. Multiple sessions with different student groups can help identify both common themes and specific cohort needs.

Why it's useful

Student perspectives help create better schoolyards that meet their needs. Without student input, design decisions may be based on adult assumptions rather than lived experience. Regular engagement also helps schools stay attuned to changing student behaviours, and trends, ensuring outdoor spaces remain relevant over time.

Resources required

Select a diverse group of students that reflect the wider student body. Sessions can be conducted during school hours and generally require up to one hour. Consider combining classroom discussion with an outdoor activity, such as a student-led schoolyard walk or the Frame It activity (see page 26). Have at least two facilitators present – one to moderate the session and a second to record notes.

Tips for effective engagement

Build trust and value student expertise.

Students are expert users of schoolyards and can provide insights adults may overlook. Listening carefully helps students feel respected and encourages meaningful participation.

Use age-appropriate engagement methods.

Adolescents may be influenced by peer judgement and less likely to speak openly in large groups. Small group discussions of fewer than 10 students can create a more comfortable environment for sharing ideas. Keep the age range of participants within two years. Give consideration to whether sessions are co-ed or single sex. For those students in adolescence (ages 11–14) it may be better to conduct sessions with girls and boys separately, as they can have different views and may feel socially uncomfortable together.

Keep activities simple and purposeful. Use guided worksheets, visual prompts, ranking exercises, or comparison activities to help students communicate their experiences, priorities, and design preferences.

Select participants who reflect the diversity of the school community. Include students with different abilities, interests, and needs. Consider accessibility and sensory preferences, and use feedback to inform decisions about layout, furniture, and key design features.

Sample Focus Group Questions

Questions around schoolyard experience

Tell me a time when you had a happy schoolyard experience.

Tell me a time when you had a difficult schoolyard experience.

How do you typically feel when you're in the schoolyard?

What do you think of your school grounds? Which spaces work well? Which ones don't?

What does an inclusive schoolyard space mean to you? What does it look like?

Questions around schoolyard use

Where do you typically go in the schoolyard? Why?

What is your favourite place in the school grounds. Why? Describe it. What do you do there?

Where would you go in the school grounds on a warm day? On a cold day?

How do you currently use the school grounds? What types of activities do you do?

Are there areas in the schoolyard that you avoid? Why?

Describe for me some of the spaces you typically use and why.

How do you decide where you will go in the schoolyard?

Questions around schoolyard design

What keeps you from using the schoolyard in a way that you would like?

Does the schoolyard support your needs? How?

What would be something you would like to do in the schoolyard that you currently can't?

If you could change one thing about the schoolyard, what would it be? Why?

1.2 Either / or activity

Overview

The Either / or activity is a paper exercise for students that focuses on a particular design theme or aspect of the school grounds. Themes could be grouped based on area of schoolyard interest or need. Intended as a quick activity, it can be most beneficial in sorting preferences for specific landscape design elements (such as ‘metal seats’ or ‘timber seats’). Each theme consists of 2 to 4 questions - potentially accompanied by imagery - where students must pick between these two schoolyard qualities (‘A’ or ‘B’).

Why it’s useful

This activity is an effective warm-up for focus group discussions because it helps participants become comfortable making decisions and sharing their views in a group setting. By focusing on schoolyard elements relevant to your school, it also encourages students to reflect on their experiences, preferences, and needs within the school grounds. After completing the activity, inviting students to share one of their responses can provide an effective starting point for broader discussion.

Resources required

Either / or activity template (see right) and pen.

Tool Tips

The activity takes approximately five to ten minutes to complete and is best completed either on paper or online.

The either / or activity provides a quick snapshot of student preferences, but it does not provide enough detail on its own to support design decisions. It works best when used alongside focus groups or other student engagement activities. As a discussion starter, it can help uncover why students prefer certain spaces and encourage them to share experiences that have shaped their views. These conversations can provide valuable context for interpreting student preferences and identifying priorities for improvement.

Choose one option	Option 1	Option 2
Socialising needs		
Socialising spaces	☐ I prefer being around friends without having to do anything	☐ I prefer talking directly with friends in deep conversation
Seating	☐ Upright seating	☐ Lounge seating
Size of spaces	☐ Small spaces	☐ Large spaces
Sport and activity		
Energy levels	☐ Low energy (hammocks, walking paths)	☐ High energy (trampolines, soccer game)
Play	☐ Playful (swivelling seats, climbable furniture)	☐ Play equipment (swings, slides)
Sports	☐ Sports and competition (ovals, courts, handball)	☐ Other types of exercise (yoga, dance, walking)
Materials and screening		
Buidling materials	☐ Natural	☐ Man-made
Surfaces	☐ Grass	☐ Concrete
Visibility	☐ Hidden spaces	☐ Exposed spaces
Risk and autonomy		
Risk	☐ Low risk	☐ High risk
How you use a space	☐ A space that can be used in many ways (eg: ambiguous furniture for climbing)	☐ A space that can only be used in one way (eg: slide)

1.3 Story card template

Overview

The story card template is a way for students express their outdoor needs by recounting or crafting a specific schoolyard experience. The template is deliberately structured to tease out student schoolyard experiences, needs and desired design outcomes.

Why it's useful

As a structured narrative, the tool is useful for capturing nuanced viewpoints from students who may otherwise struggle sharing opinions (i.e. shy, young, or neurodivergent students). Being an independent written activity, the story card template also allows students to share sensitive information without direct adult interaction or feel the need to conform their views to align with those of fellow peers.

Resources required

Story card template (see right) and pen.

Tool tips

To give students time to provide a considered response, it's recommended to allocate at least 10 to 15 minutes to complete, although best to monitor on a case by case basis. The task can be undertaken on paper or online, as a focus group activity or independently in class. Consider ways to capture participant demographic background on the story card, such as year level and gender, to reveal where there may be patterns in student responses.

By not explicitly asking students to talk about their own experiences but instead relying on the creation of a 'character', the tool allows students a level of anonymity, creativity - and honesty! - in their responses. The value of this tool also extends beyond the themes it reveals. Students' handwritten responses add a personal and authentic dimension that can be deeply moving.

Template

Introduces us to the students
so you know who you are designing for

Context
so you can make
design decisions
beyond stated
needs

Needs

Features
of space

Outcomes or benefits
So you understand what the student is trying to achieve

Meet Maddie they are 14 years old, a female, really
Name your student About your student: age, gender, etc

smart, and great at soccer

they sometimes feel overstimulated, tired, bored
Feeling in schoolyard

One day when Maddie was stressed out from the school work
What happened?
(other thing)

What they needed was an area in the school that was low
What did they need from the space?
energy, calming, something that would calm and relax
her mind and body

It was important that the space was comfortable (to the brain and
What qualities / functions / features were important?
body), hidden away, and not too calming that it would
make her bored

So that then Maddie (and even other students) can have
What is the impact or outcome? What is the moral of the story?
an area to calm and relax in a stressful environment
Moral:
In school, students can feel stressed easily and a break is needed,
if a calm environment is provided people can feel better

Inspired by the Jobs to be Done framework popularised by Clayton Christensen and further developed by practitioners including Bob Moesta and Tony Ulwick.

1.4 Wellbeing survey

Overview

The Greenprint Schoolyard Survey tool was developed and piloted in case study schools to assess how effectively outdoor spaces support student wellbeing. Schoolyard qualities were benchmarked based on the following criteria:

- **Physical wellbeing:** accessibility, comfort, visibility and opportunities for active use
- **Emotional safety:** inclusion, belonging, relaxation and enjoyment
- **Psychological wellbeing:** opportunities to express identity and autonomy
- **Cognitive growth:** opportunities to explore ideas, interests and learning
- **Social connection:** positive peer interactions, collaboration and community

Why it's useful

Undertaking schoolwide surveys helps to identify trends in how the design of school grounds influences student perceptions and experiences. They can also help identify differences in schoolyard preferences among students based on factors such as age, gender and cultural background. This information can help identify strategic planning priorities while also monitoring change over time. For schoolyard interventions, conducting surveys both before and after an upgrade can be particularly useful for tracking its impact.

Combining survey data with insights from student focus groups and observations of the school ground can provide a rich understanding of what is working well and where opportunities for improvement exist. When findings from these different research methods point to the same conclusions, we can have greater confidence that the results are accurate and meaningful.

Resources required

The survey can be conducted as a classroom activity on paper or distributed online through platforms like Microsoft Forms or SurveyMonkey. It takes approximately 10 to 15 minutes to complete. To capture the diversity of your students, include a few demographic questions such as age, gender, year level and cultural background. Keeping responses anonymous helps protect student privacy and encourages honest feedback. Results can be analysed using descriptive statistics.

Tool tips

Be mindful of when you conduct the survey. Undertaking it after a recess, lunch or another break is preferable as student experiences' will be fresh in their minds. Similarly, consider the timing of the survey, as seasonal conditions may influence how students experience and evaluate outdoor spaces. A survey taken in summer may generate very different responses to one taken in winter.

Survey Questions

Please indicate whether you agree or disagree with the following statements as they relate to your school grounds based on the following scale: 1=strongly disagree 2=disagree 3=neither agree nor disagree 4=agree 5=strongly agree

Focus	Question	Rating
Physical wellbeing	The outdoor seating works well for me	
	The active outdoor areas meet my needs	
	There are places outside where I feel safe trying new things	
	All students, including me, can use the outdoor spaces equally	
	I can see clearly across the school grounds	
	Being able to see across the school grounds is important to me	
	There is enough outdoor weather protection to keep me comfortable	
	The outdoor walkways are wide enough for me to use safely	
	Items like benches and play equipment are comfortable in both really hot and really cold weather	
Psycho-logical wellbeing	There is a selection of outdoor spaces where I can be with friendship groups of different sizes	
	There are places outside where I feel safe to explore my identity	
	It's easy to connect with different groups of people in the schoolyard	
Cognitive growth	There are places in the school grounds that support my learning	
	I use the school grounds to explore my interests	
	I get to help make decisions about how we use the schoolyard	
Social connection	There are safe places outside where I can connect with my friends	
	There are places outside where I can do my own thing while being around others	
	The school grounds have areas for different kinds of group activities	
	There are different sizes of school outdoor spaces so I can choose how and where I want to hang out	
Emotional safety	There are lots of different things to do in the schoolyard that suit my interests	
	I see my values reflected in my school outdoor spaces	
	There are spaces outside where those without a friendship group can be near others	
	There are quiet outdoor spaces where I can de-stress without getting in trouble	
	There are outdoor features - like gardens and artworks - that reflect the stories of my school	
	The design of my schoolyard makes me feel welcome	

Chapter 02

Schoolyard Environment Conditions

Rating the design quality of school grounds has traditionally been guided by factors such as environmental impact, aesthetics and cost. The activities in this section introduce a new category for consideration: user experience.

The tools introduced here draw on the lived experiences of schoolyard users. Students are asked to map their routines and evaluate their school outdoor spaces. The aim is to investigate how students and staff perceive and use these environments. The tools are intended to explore how school users value their school grounds based on their interactions with the physical landscape and the emotions those interactions may trigger. Such information provides important insights into the qualities and characteristics of school grounds that students and staff value.

Snapshot

Tool	Activity type		Time	# Participants	Resources
	Explore	Design			
2.1 Mapping my school day			10 minutes	Individual	Aerial map of school Dot stickers Markers
2.1 Affinity mapping			10 minutes	Individual	Aerial map of school Dot stickers Markers
2.3 Frame it!			5-10 minutes	Groups of 2-4 students	Camera Clipboard Pencil and paper

2.1 Mapping my school day

This student mapping activity captures how students move through, use and experience different areas of the school grounds during a typical day, helping to identify patterns of use, valued spaces and areas where improvements may be needed. [Page 22](#)

2.2 Affinity mapping

Students mark on a map of the school areas they like, dislike, or want to change. This reveals patterns in use and preferences across different student groups and genders. [Page 24](#)

2.3 Frame it!

Students use green and red frames to document schoolyard spaces. This activity, popular with students and fun to complete provides visual evidence of what changes may be needed. [Page 26](#)

“It’s so critical to ask the students what they would like to do in the outdoors, sometimes the answers are so brilliant and fun!”

Designer, Reference Group 1

2.1 Mapping my school day

Overview

Students document their movements within the school ground on a typical school day. The purpose of this exercise is to identify where patterns may exist in how students perceive and engage with particular school ground features. Collating this information onto a single map reveals common patterns of perception and use across the school site.

Why this is useful

Having students think through and map their daily schoolyard routines is useful for getting them to think about the school grounds, how they use these spaces and how it makes them feel to be in these spaces. During focus group discussions, it's a good warm-up exercise to help students think about their schoolyard experiences.

Once student maps have been created, it's helpful to consolidate student feedback by transcribing it onto a few base maps. Coding responses by student year level and gender can help to reveal where there are common patterns of perceived purpose and use by specific cohorts.

Resources

This task can take up to 15 minutes to complete. Each participant is provided with an aerial map of their school (A3 is recommended) accompanied by a set of stickers and/or markers coded to particular questions / attributes. It is suggested that a few stickers be allocated for each criteria, as students can be changeable in their habits. The aim is for students to nominate those spaces that they use most frequently.

The following are suggested attributes to map, but can be modified based on school needs and priorities. Students document:

1. Points of arrival (A) and departure (D) from the school campus
2. Where on the school grounds they spend their breaks (B1 for break 1, B2 for break 2)
3. Areas they perceive as places for active play (AP) – this includes sport, informal play, running around, throwing a ball, etc
4. Places that are 'loudly' social (LS) – where larger groups of students eat or hang out together
5. Outdoor places that are 'softly social' (SS)– only small groups, places of calm and more quiet
6. Spaces that make them feel uncomfortable or unsure (U)

Tool tips

This task can be administered individually or conducted as a group. Instead of stickers, students can also record responses with color coded markers.

Example maps



top: Students use different coloured dots to indicate how they use the spaces.

bottom: by compiling all the dots, patterns emerge about the spaces that different students use.

2.2 Affinity mapping

Overview

Students identify on an aerial map of their school those areas they like, dislike and would like to change. Mapping these preferences can help identify where there are shared student schoolyard perspectives. The exercise can also highlight where there are student discrepancies in schoolyard use, based on demographic factors such as age and gender.

Why this is useful

Mapping the areas of students' likes and dislikes on a single base map is useful for identifying those areas of the schoolyard that are working well (based on total green dots) and those areas that aren't (based on total red dots).

It can also reveal those areas where the design of school grounds may not equitably support use by different students based on factors such as year level and gender.

Resources required

Students are each provided with an aerial map of their school and a set of dot stickers coloured green, yellow and red. On the map, students are to indicate the following:

- Favourite outdoor spaces with green dots
- Disliked or avoided areas with red dots
- Areas they wanted to change or improve with yellow dots

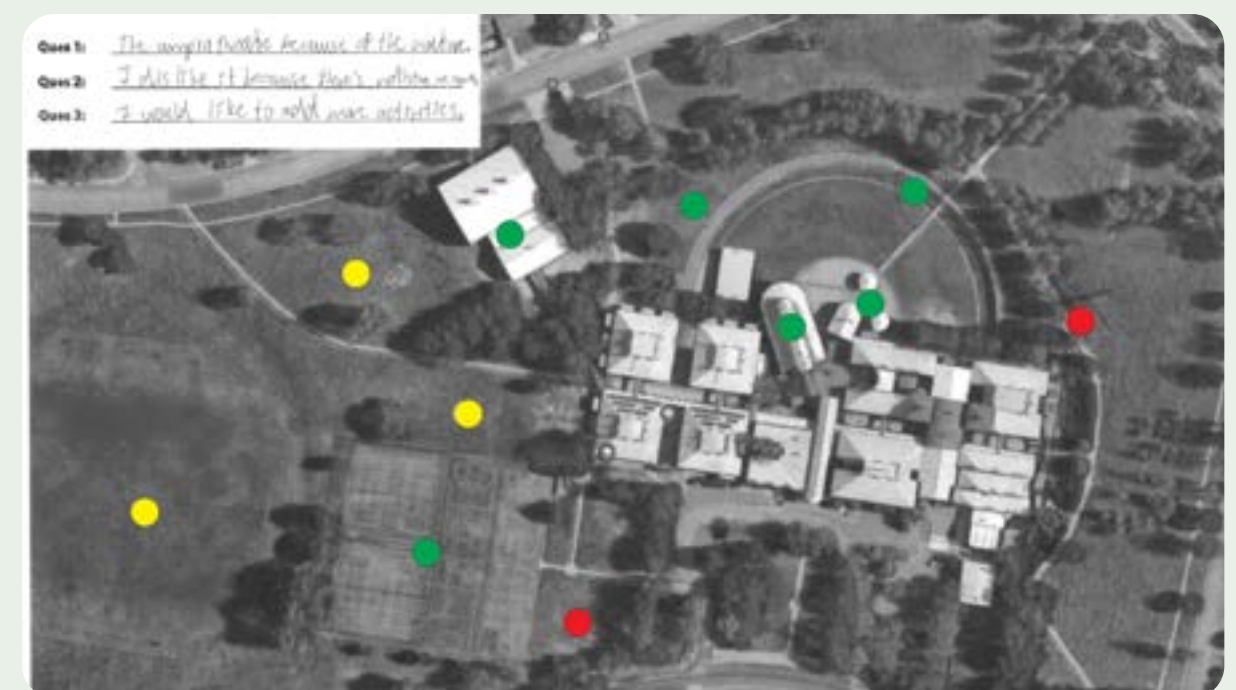
For each of the three categories above, students are also asked to nominate their top choice (their most favourite, most disliked, most desired for change), draw a circle around each of these three nominated spaces and write a reason why at the top of the page.

Tool tips

In addition to being an independent activity for students, affinity mapping can also be undertaken as a school-wide exercise. In such cases, one large base map - A0 size - can be mounted at a central location at the school onto which students can add their preference dot stickers, say over a period of a day or a week. However, while such a method can be efficient, students may be swayed in their nominations based on what others have marked on the base map.



Students use different coloured dots to indicate the spaces they like (green), dislike (red) or want to change (yellow)



2.3. Frame it!

Overview

In this activity, students take photos of the schoolyard using a green frame for spaces they value or feel comfortable in, and a red frame for places they avoid or find uncomfortable.

Why it’s useful

This activity gives you clear data on what is working well and what is not in the schoolyard. Because the activity is mobile, visual and hands-on, it can engage students who are less comfortable contributing through writing, surveys or group discussion. Walking through the schoolyard also allows students to respond directly to the places they use every day, rather than relying on memory.

Resources required

Students are provided digital cameras and photo frames for capturing elements of the school grounds that they enjoy (using the green frame) and elements that they don’t (using the red frame). Working in groups, students also bring a clipboard and record onto data sheets the elements they photograph, with a brief explanation on what they like about the spaces or what they don’t like and would like to remove or change.

Tool tips

Frames can be found from second-hand shops and local office supplies, while students can use cameras from phones or ipads. Prepare frames in advance; paint both sides of the frame in alternating colours (one side red, one side green) to minimise supplies. The data sheet (see example to the right) is a piece of paper with a table where students record the image number of each photo and explain what they like or do not like about the space. This provides clarity on students’ rationale for each photo. Make sure students record the image number on the data sheet so that it aligns with their feedback.

This task benefits from time. If possible, allow students at least 30 minutes to locate spaces and record findings. Allow 5–10 minutes to explain the task, including how to record image numbers and reasons. The activity is best done in groups of 2 to 4 so one student can hold the frame while others take the photo and record notes. Check school photography and media-consent procedures before the activity. Blur faces or identifying features if using the photos more broadly.

Using the outputs: After the activity, sort the images by location, frame colour, sub-theme within each frame, or age group as appropriate. Common themes may include shade, heat, seating, sporting facilities, crowding, privacy, safety, comfort, maintenance, or access. The gallery of data can then be used to inform working group discussions, co-design workshops, data gallery, posters or “How might we…” questions.

This activity pairs well with the Story Card template, as photos may not capture less visible experiences such as social territories, boundaries or rules.

Framing exercise

Instructions: Please record image # and notes about why you chose it

Image #	What I DO like (Green frame)	Image #	What I DON'T like (Red frame)
3020	Could be smaller/comfortable, good for talking	3019	Splatters, d. gussing/cumbersome
3024	Natural and relaxing	3022	NO COVER!
3026	good student hangout	3023	Trashy and BROKEN
3027	great cover from rain	3025	Gross rubbish
3029	good natural features.(Trees)		



above: examples of student data sheet and photos

Adapted from photo-frame methods used by Isami Kinoshita and refined by Louise Chawla, Debra Cushing, Victoria Derr and Mara Mintzer.

Chapter 03

Schoolyard Community Impacts

Outdoor school spaces set up important social scaffolding for students through providing opportunities for shared experience. Capturing how students rate the quality of these experiences through school-wide activities helps to identify broader trends and needs. Surveys undertaken by all year levels at a school can reveal patterns based on factors such as student age, gender and cultural background. Involving students and the broader school community in co-design workshops provides the opportunity for stakeholders to collaborate on schoolyard solutions. Such participatory design processes can help young people understand the different users of a space and their unique needs. It also gives young people the chance to share their ideas with others and discover how to affect positive change in their environment.

Snapshot

Tool	Activity type		Time	# Participants	Resources
	Explore	Design			
3.1 Working group			Monthly x 1-3 hours	4-6	Large room
3.2 Gallery of data			20 minutes	School-wide activity	Paper Sharpies and Post-it notes. Phone / camera to document feedback.
3.3 Co-design workshops			2-3 hours	Flexible, depending on facility and number of facilitators/ coordinators	School classroom, butchers paper for sketching, pencils/ markers, magazines for cutting out images
3.4 Testing solutions			2-4 hours	5+	Plan, spray paint, prototype objects

3.1 Working group

Establish a small working group including a school leader, students, teachers, maintenance staff and designer. The group helps refine ideas, test assumptions and translate workshop feedback into a clear design brief and next steps. [Page 30](#)

3.2 Gallery of data

Summarise key findings from schoolyard exploration activities and display them as a gallery during co-design workshops. This help participants focus on the challenges that need solving rather than their own particular design preferences or unrealistic options. [Page 31](#)

3.3. Co-design workshops

Co-design workshops bring relevant stakeholders together to jointly design solutions. Including diverse perspectives in group activities helps prevent unrealistic solutions. Using evidence from earlier Toolkit activities, participants develop low-fidelity sketches and proposals that can be refined by the working group. [Page 34](#)

Student empathy activity

Using personas as a starting point, this activity helps participants empathise with other perspectives to ensure their designs move beyond personal preferences and identify what different students may need from the schoolyard.

Brainstorming solutions

Develop solutions based on existing data using this activity. Use “How might we...” questions to direct solutions. If student engagement is not possible, use personas to direct idea generation. The aim is to produce many quick ideas before evaluating or refining them.

Feedback and improving ideas

Participants then select an idea and receive feedback to strengthen the proposal. This helps improve the idea especially if grounds managers, teachers or designers are included in the activity.

Student personas

Student personas are short, evidence-informed stories that represent different student needs and pain points. They help workshop participants empathise with different perspectives and develop solutions that meet a range of needs. They are particularly helpful for design teams to use when student engagement is not possible (for example during new builds) or if it would be inappropriate to ask specific questions such as students to identify as Queer or neurodivergent.

3.4 Testing solutions

Testing solutions involves marking out proposed designs at full scale on site using spray paint and temporary objects. It helps you de-risk and refine your project, reducing costly mistakes. [Page 46](#)

3.1 Working group

Overview

Establish a small working group to guide the schoolyard design process. This should include people with different expertise, including a school leader, students and teachers who use the space, and technical experts such as the appointed designer, grounds manager or facilities staff. The role of the working group is to help refine ideas, test assumptions, communicate with the designer and make sure the design process stays connected to student needs, school priorities and practical constraints.

Why it's useful

Establishing a small multi-disciplinary team will help articulate a vision for change, manage the design process, define scope and problem solve. It takes feedback from workshops and translates into a design brief and next steps. The group provides a structured way for the school, students and designers to communicate throughout the project, rather than relying on one-off consultation.

Resources required

Once the working group has been formed, co-design a one-page project scope outlining the project purpose, site, budget, timeline, constraints and decision-making process and how student input will be used. This is to help focus the efforts of the working group and keep the project progressing. Organise a meeting schedule, beginning early in the design process and continuing at key project milestones. Consider what outputs are needed to achieve desired outcomes. In addition to workshop outputs, gather plans, site photos, aerial images and any draft design drawings to help progress discussions.

Tool tips

Keep the group small and diverse. Include school leadership, everyday users of the space and people who understand design, delivery or maintenance. Establish a routine meeting schedule punctuated by key milestones. To guide the project, consider issues such as the following:

Feasibility: Can it be delivered within the budget, site and governance constraints?

Inclusion: Will it work for a wide range of students?

Environmental value: Will it improve shade, cooling, biodiversity or climate resilience?

Educational value: Can it support learning or student stewardship?

Testability: Can a small version be trialed first?

3.2 Gallery of data

Overview

Once you have explored and collected data using Toolkit activities (such as in chapters 1 and 2) have the working group review the data and consolidate it for display and feedback. This could be a series of posters or just pinning up photos and other data. The gallery summarises key findings from earlier engagement activities and makes them visible, which can be helpful for getting feedback including during a co-design workshop. Organise the gallery around themes such as social spaces / play / belonging and inclusion, and combine evidence, student stories, site photos and quotes. Position the data in the foyer of a school or in a co-design space and gather feedback. Participants read findings and add feedback using Post-it notes. This gives school stakeholders a chance to validate, challenge or add to the findings.

Why it's useful

This is a good way to summarise evidence and findings to help the reader quickly understand the schoolyard problem and need. It's also an effective way to validate findings, where stakeholders can provide feedback on anything that resonated, confused them, did not match their experience or needed to be added

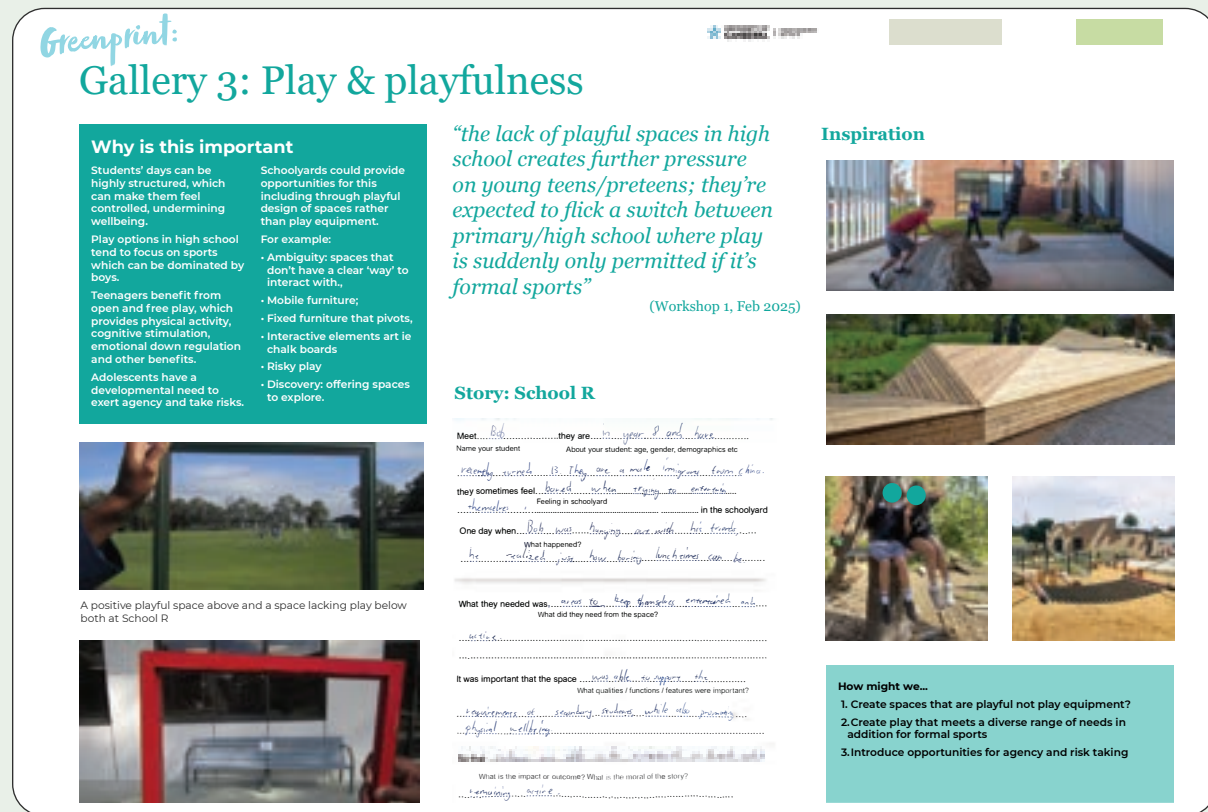
Resources required

Use the activities in this Toolkit to develop content for the galleries. Include inspiration images of other schoolyards for precedents. Have Sharpies and Post-it notes available for viewers to provide feedback.

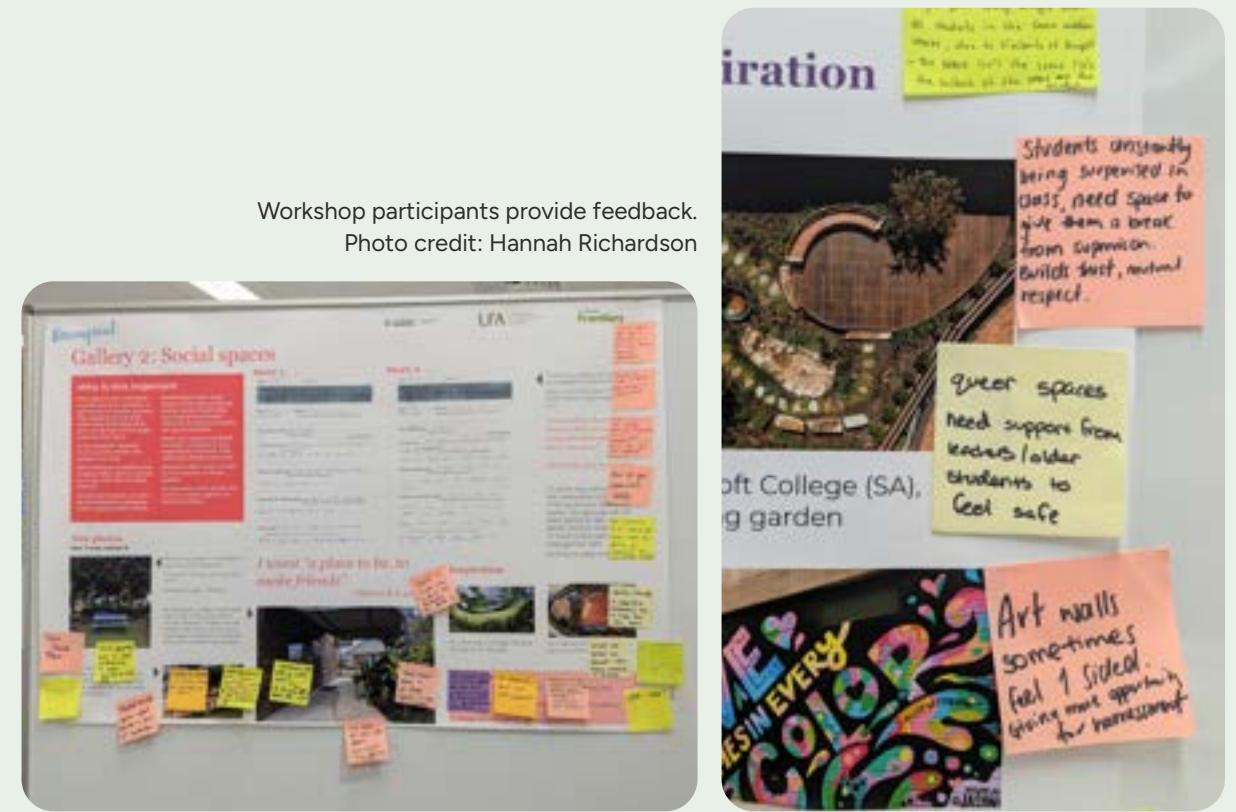
Tool tips

If making posters, include the theme, why it matters, key findings, student stories, quotes, site photos and inspiration examples. Keep the evidence visible, using short quotes and concise findings. Include student stories to what qualities mattered and what the outcome was. If being used in a co-design workshop, have participants review and add Post-it notes before group discussion, so everyone has a chance to respond.

3.2 Gallery of data



Play and playfulness poster. Photo credit: Hannah Richardson



Workshop participants provide feedback.
Photo credit: Hannah Richardson

Poster idea: "How might we..."

On each poster, consider including some "How might we..." questions that reframe a student need or problem into an opportunity for design.

How: asks what could be done; **might:** keeps it exploratory; **we:** keeps it collaborative

For example, if a theme is exploring student social spaces, a question could be framed as:

How might we create social spaces that feel private without becoming hidden?

Try to avoid putting the answer in the question.

Instead of: How might we install more benches near the year 7 area?

Try: How might we create places where year 7 students can settle and feel they belong?

A good question should allow multiple responses, such as planting, seating, surfaces, supervision, layout, programming or student-led use.



3.3 Co-design workshops

Overview

Host an in-person co-design workshop to generate ideas for a schoolyard retrofit or new build. Invite students, parents, teachers, facility managers and, where relevant, a contracted designer. The workshop can use data collected through other Schoolyard Greenprint Engagement Toolkit activities. Set aside enough time – a morning or an afternoon (around 2-3 hours) - to digest materials and generate solutions. The aim is to produce low-fidelity sketches that can be refined by a working group and later developed into detailed designs.

Why it's useful

Involving students results in better designs and provides opportunities for learning and leadership. By starting a co-design process with specific inputs, such as data, imagery, student insights and questions drawn from other Engagement Toolkit activities, you can avoid the workshop from becoming a wish list for individual preferences rather than broad community needs. Toolkit activities are there to help participants generate many ideas, then refine them into proposals that respond to evidence, site conditions and student needs.

Resources required

- Compile data gallery materials from earlier Toolkit activities, such as Frame It images, story cards and affinity mapping results, and arrange on walls for review.
- Create an agenda with suggested structured activities. These help to keep focus guided towards a specific outcome.
- Print activity materials including student empathy exercise (Activity 1), brainstorming solutions (Activity 2) and improving solutions (Activity 3). Include site photos, aerial images or base plans of the spaces to be redesigned, plus trace paper for sketching; markers, post-it notes, pens, tape / blu tack and large wall space or pin-up boards
- Optional materials could include magazines, coloured paper, scissors and glue sticks for collage.
- Phone or camera to photograph all workshop outputs

Tool tips

Start with a tightly framed challenge.
A good workshop gives participants enough direction to be productive without closing down creativity. This could be something broad such – such as exploring how to design spaces to encourage more movement and physical activity – or as specific as upgrading a courtyard.

Compile data (such as from other Greenprint activities) as well as other site context information and arrange for display (see Activity 3.2 Gallery of data) to better understand opportunities and constraints / wants and needs. This information helps to 'set the stage' on understanding opportunities and challenges.

Aim for lots of ideas – not the best ideas! The included activity suggestions are ways to consider multiple perspectives, brainstorm and iterate. After the workshop, feed the proposed ideas into a working group process. Use the working group to assess, refine and choose those ideas to progress to the next stage.

Example Co-design workshop agenda

Proposed timeframe: Approximately 2.5 hours		
1	Welcome. Why are we here? A leader such as a principal sets the scene: why is this important and what are we trying to achieve together.	10-15 minutes
2	Gallery of data validation (see 3.2 on p 31) As a whole group, go around the gallery of data and validate it. If you don't have time, you can use the personas in Activity 2.3. Using post it notes each participant silently provides feedback.	20 minutes, depending on how much content is on display
3	Group discussion Discuss the gallery: was anything surprising?	15 minutes
4	Student empathy activity (see p 36) Ask participants to select a theme based on the gallery information that resonates with them. Ask each participant to fill in the empathy exercise (example template on page 36). This helps people to empathise with alternative perspectives and avoid 'lobbying' for particular outcomes.	5 minutes
5	Brainstorm session Using the Brainstorming Solutions template (p 37), ask participants to generate as many solutions as possible for the How Might We questions (see p 31) linked to their theme. Start with individual brainstorming, capturing one idea per Post-it note using Sharpies. Encourage quantity and creativity over evaluation.	20 minutes
6	Feedback and improving solutions (see p 38) Pair participants, ideally with someone from a different perspective. Use the Improving solutions template (see p 38) to give each other feedback and then come up with ways to improve their idea.	20 minutes
7	Draw solutions Participants choose the best idea and begin to draw their idea. Use trace paper over a photo of your space. If drawing is challenging, source magazines for collages.	20 minutes
8	Share and feedback Pin drawings up on the wall and share with the group	30 minutes, depending on group size
9	Close and next steps Photograph all the drawings and identify a committee of people to take the work forward.	

3.3 Co-design workshops

Student empathy activity

Overview

Use this activity at the start of a co-design workshop to help participants understand different student experiences. Participants are asked to select a theme that is of interest and relevant to the schoolyard. For instance, this could be risky play, spaces for quiet, outdoor learning (consult the Greenprint Design Guide for further ideas). The Student empathy activity then explores this particular idea through the lens of a spectrum of student and staff stakeholders.

Why it's useful

The student empathy activity helps participants to think beyond their own preferences. Pair this exercise with the Greenprint personas so that participants consider how different students experience the schoolyard. By filling in the boxes in response to personas, participants begin to identify what different students might need from the schoolyard. This creates a stronger foundation for brainstorming because ideas are linked to student experience, rather than personal preference or assumptions.

Resources required

Print those Greenprint personas that are relevant to your workshop theme – and feel free to create new ones. Have sharpies available or marker pens and post-it notes to make observations. Have accessible a large wall space or boards on which to display completed sheets. Bring along a phone or camera to photograph outputs.

Tool tips

To begin, workshop participants select a schoolyard theme (social spaces, places for down-regulation, autonomy). They then write a quote about the theme from the perspective of each persona – how would Isla feel about play spaces? This helps uncover a broader range of student experiences and needs. The completed worksheets are displayed and used during brainstorming and design activities to guide proposed changes, and are shared with the project working group and designers to inform the retrofit process.

below: an example of an empathy card

1 Outcomes

Imagine that it is January 2050, what is the future state for different people? Write a quote for each person

 I have spaces that I can go to when I need some quiet time Miles, an introverted neurodiverse 15 year old	 There are spots I can go to when I need to downtime with my besties Isla, a social and creative 14 year old
 I know my daughters are safe at school Sara, a parent	 There are places at school that reflect my culture. I can find my nubs and go there when I want to. Dylan, indigenous, Regional age 17

Brainstorming solutions

Overview

Use this activity during a co-design workshop to help participants generate possible schoolyard solutions. Following the student empathy activity (p 36), participants select a theme of interest and respond to "How might we..." questions. These question topics are typically developed beforehand by a working group and can be on display as part of the Gallery of Data (see Activity 3.2 on p 31). Questions are typically linked to themes such as social spaces, play and playfulness, privacy (see the Greenprint Design Guide).

For example, if the theme is focused on play, questions could be: How might we....

...introduce play and playfulness that is not childish?

...make sure play features are not 'owned' by a few?

Participants should work quickly and capture one idea at a time. The aim is to generate a broad set of possibilities before evaluating or refining them.

Why it's useful

This activity helps workshop participants move from understanding student needs to imagining possible solutions. Because the activity starts with personas, outcomes and "How might we..." questions, ideas are more likely to respond to student experience rather than personal preference. It also helps participants avoid settling too early on one idea. These can be captured through quick diagrams and sketches to illustrate ideas.

Resources required

Post-it notes or Printed brainstorming activity sheets (see right), "How might we..." questions linked to each theme and completed student empathy/outcomes sheets. Student personas can be on hand for reference. Use sharpies or marker pens, Post-it notes or large paper for capturing ideas. Wall space or pin-up boards; phone or

right: sample "how might we" questions

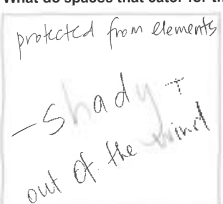
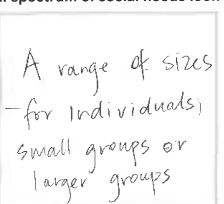
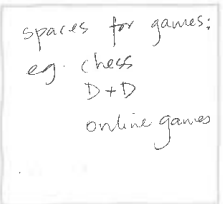
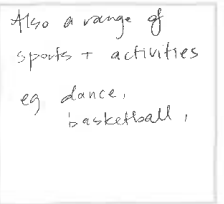
camera to document outputs.

Tool tips

Start as a follow-up exercise from the empathy activity. Ask participants to refer back to the personas and future-state outcomes before generating ideas. The "How might we..." questions should frame the challenge without prescribing the answer. Keep them visible while participants brainstorm. The aim is to generate a large quantity of quick rough ideas, with one idea per Post-it note. This makes ideas easier to

2 BRAINSTORMING

What do spaces that cater for the full spectrum of social needs look like?

How can we combine play and socializing?

3.3 Co-design workshop

Feedback and improving solutions

Overview

Building on the initial brainstorming (see p 37), this step helps participants refine one idea before drawing or prototyping it. Each participant selects a brainstormed solution and pairs with someone from a different perspective (for example, a staff member and a student) to exchange feedback. Together, they identify strengths and opportunities for improvement or expansion. The solution is then revised through writing, drawing, or diagramming.

Why it's useful

Feedback helps participants refine ideas before they become fixed. It encourages building on others' thinking rather than defending early concepts, which are often interesting but incomplete. Feedback can clarify who the idea serves, the need it addresses, how inclusive it is, and what could make it more practical or inclusive.

Resources required

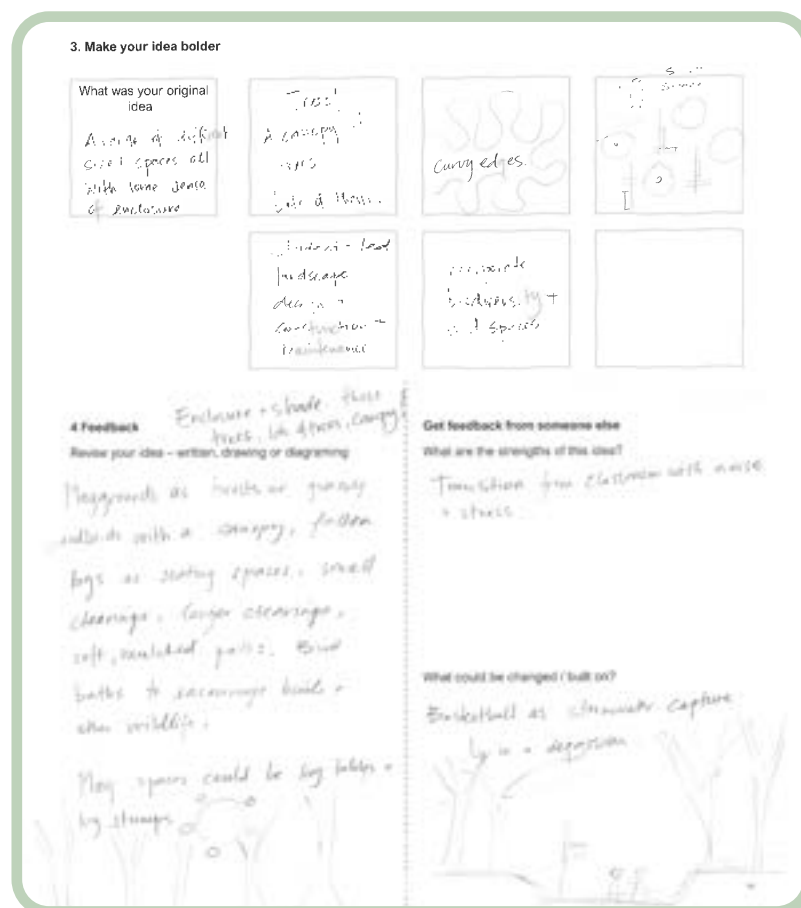
Completed brainstorming notes or Post-it notes, Feedback and Improvement templates, and student personas and student empathy activities for reference. Provide markers, tracing paper or blank paper for revising ideas, and use a phone or camera to record outputs.

Tool tips

Focus feedback on improvement. Encourage "yes, and..." rather than "no, but..." and identify strengths before suggesting changes.

Consider how the idea supports the student or school community member it is designed for. Revise it through annotations, diagrams, or sketches.

Keep the activity moving, as this is a short improvement round before drawing the concept in more detail. Photograph both the original and revised ideas to document how the idea developed.



above: sample feedback

Student personas

Overview

Personas are a tool to help workshop participants generate ideas from different perspectives. They are short, evidence-informed stories that describe a student's needs, preferences and experiences. You can use these personas as part of workshops with both students and other adults.

These personas represent the needs of the over 500 students who participated in the Schoolyard Greenprint research. They were drafted by the Greenprint Youth Voices based on lived experience, survey data and focus group sessions. Each persona represents a realistic bundle of needs and painpoints that need to be designed for in schoolyards.

Why it's useful

Personas represent a range of student experiences and help designers consider diverse needs. They are especially useful when students cannot be directly involved, allowing participants such as P&C members, teachers, or school leaders to adopt a student perspective when responding to design prompts, testing ideas, or role-playing how a proposed space might be used.



above: the Greenprint personas

Resources required

Personas in this Toolkit.

Tool tips

Provide personas to workshop participants before the student empathy activity (see p 36)

Choose personas that match the design challenge. Use personas linked to the theme being discussed, such as social spaces, privacy or play, and use them as prompts from which to further build ideas.

Invite each participant to respond from the perspective of a specific persona. Walking through the schoolyard, what would that persona notice? Where would they go? What would make the space easier or harder to use? Compare how different personas might respond to the same idea. A design that works for one student may not work for another. Capture these tensions in your brainstorming.

Keep personas connected to student quotes, workshop data and site observations. Use them to support, not replace, evidence.

3.3 Co-design workshop

Student personas



The Active Explorer
Isla

Age 12, Year 7, Pronouns she/her

Isla loved her playground in year 6. By contrast, her new schoolyard feels boring. Exercising is how she regulates, socialises and gets ready to return to class.

At high school there are wide open spaces where Isla feels on display, and uncomfortable in a skirt. She moves constantly and gets in trouble for jumping from the picnic table to retaining wall.

Isla sees how older students dominate the oval and how sitting still becomes the default for many girls.

Her school decided to put in a swing but there were lots of rules. These frustrate Isla, as she wants to swing with her friends but there's a rule of one person per swing.

"lunchtimes
[are] incredibly,
incredibly boring."
School L, Year 9–10F.

In summer months, the synthetic playing field is too hot to use. Black pellets get in Isla's shoes. The area has experienced drought and it's often very hot in the school, especially the quadrangle in the centre where there is a lot of concrete.

Isla's high school was designed to house 1000 students, it currently has 2000 students and 58 demountables on site.

Isla is worried that they will lose their oval and her exercise options will be restrained.

Isla wants schoolyards that recognise growing bodies, changing confidence, and the importance of active play beyond sport.

When spaces support safe risk taking and physical expression, Isla regains joy, confidence and energy.



The Quiet Recharger
Alex

Age 14, Pronouns: they/them

For Alex, breaktime is about recovering. Noise, crowds, and heat can be a lot, so Alex looks for calm spaces where they can breathe, think, and reset. Sometimes they'll sit with one close friend, sometimes just nearby others, and sometimes completely alone. Alex doesn't want to be excluded, they want to observe and enter when they are ready.

Being in nature is important to Alex yet they can't access it at lunch. There's a natural area on the side of the school used during class but it's out of bounds during lunch. Alex feels a walk through these trees and hearing the birds would help them down regulate at lunch.

Because comfortable spaces are dominated by louder and more popular students, Alex sits in front of a doorway or in a stairwell to feel safe, enclosed and like they belong.

Alex wants to exercise but doesn't feel like they belong on the oval. They would like to walk or swing but they are worried other students will judge them as strange.

"I would sit
in the doorway,
because ...no one
would bother you"

Brisbane Youth Workshop

How to design for Isla

- More diverse exercise options such as ping-pong, a half netball court or a volley ball net.
- Risky play like a climbing wall or parkour set
- Ambiguous spaces such as a rope to climb a hill, a creek with stepping stones
- Informal activity like a small grassy area for casually kicking a ball
- Rest options after a game such as a hammock surrounded by vegetation with a bubbler nearby.
- Larger social spaces with mounds so her friends can sit on the ground.
- Smaller spaces and furniture reflecting that she's still just 12, like a tunnel to crawl through or netting to lie on.
- Activity that's social such as a walking loop wide enough for her friends or swings that take more than one person.

How to design for Alex

- Quiet zones with soft grasses that make gentle sounds, different textures to touch, moveable seats to avoid harsh sun to support their neurodivergence.
- Seats in convex or L-shapes so friends are nearby without looking face-to-face
- A swing to regulate that's big enough for an adult body and a friend
- A walking track or ping-pong for exercise that's not gendered
- Gender neutral toilets or stall only toilets with screening over the basin as Alex is still figuring out their gender and toileting is confronting
- A space that's LGBTQIA+ supportive without outing Alex before they are ready.



3.3 Co-design workshop

Activity 4: Student personas



Emerging Adult
Sylvia

Age 15, Pronouns: she/her

Sylvia sees herself as a competent young adult, yet she feels like she's not treated that way. For example, there are trip hazards and long windy ramps that are hard to use in her wheelchair, which means she's often late to class.

Sylvia feels like adults make decisions about students without actually asking for their input, making them feel like their opinions don't matter. She asked the principal if an area at the front of the school could be used as a hangout space. The principal said no because he doesn't want it to look like kids are not in class. The principal wants to turn this space into a neat decorative garden that looks beautiful for the local community.

Sylvia was really annoyed when a new mural suddenly appeared over summer. Being about healthy eating, it felt really patronising. The students had not been

consulted. She felt this was a missed opportunity to celebrate student artwork.

Sylvia is social and creative, but acutely conscious of where she is allowed to be. Schoolyards have social territories, areas where popular girls dominate and Sylvia feels she's not welcome in. When she is alone and looking for friends, she feels she is being watched and judged for being lonely.

She feels strongest in places that are easy to navigate, socially welcoming, and celebrate student's contributions.

Breaktime is important to Sylvia not just for rest, but as a time to connect and imagine better possibilities. She thrives when school environments recognise her independence and treat access as a shared benefit, not a special request.

How to design for Sylvia

Sylvia benefits from spaces that support connection, agency and access without drawing attention to difference.

- When ramps don't look like an "add on" but are subtly incorporated into the landscape.
- Picnic tables with gaps in seats so she can roll her wheelchair in
- Clear sightlines so she can see and be seen on her terms
- Spaces designed with students and not just for them, such as murals and productive gardens.



The Structured Scholar
Marcus

Age 16, Pronouns: he/him

Marcus wants to spend lunch times pursuing his hobbies of chess, rubicks cubes, reading. Having a focus helps him relax and feel capable.

At home, he has experienced violence, and spaces can trigger his anxiety. His old school felt like a rabbit warren of spaces; he often couldn't see who was coming, which was stressful. The access to the canteen was like a dark tunnel and triggered his anxiety. So he stayed sitting on the balcony during breaks.

That changed at his new school, which has a quiet space that's shady and natural. He can see the whole schoolyard so he feels part of the action but safe with hedges at his back and soft materials that create quiet.

For Marcus it's very mentally draining when it's not clear how to use a space. When the school created a sculpture at the front he was stressed about whether students could sit or play on it.

Now that he's in Year 10 study is important to him. Marcus wants to study outdoors but the outdoor classroom is out of bounds during lunch.

I want "a quiet space to read, relax and play games that don't require lots of physical movement and prepare study for important things. ... in a safe place, that doesn't feel empty or crowded, was at least partially undercover on wet days. [so that] this place could be versatile, safe and comforting.

Story, Year 7-8M
School R

How to design for Marcus

- Tables or benches for making and working
- Calm areas with low noise and distraction
- Spaces that allow solo or shared activities
- Clear rules and signals about how spaces are used
- Opportunities for creativity and problem solving outdoors
- Clear footpaths and sightlines between spaces
- A calm and welcoming front entry



3.3 Co-design workshop

Activity 4: Student personas



The Social Connector

Noah

Age 17, pronouns: he/him

Noah is all about people. Breaktime is when he checks in with his mates and makes sure he's part of the group.

Movement is part of socialising for Noah. He wants to shoot some casual hoops while eating and chatting but there are rules that prevent this. Noah would like recently fundraised money to be put towards pingpong tables so he can exercise, socialise without being as serious as the usual soccer games that happen at lunch.

He's tired from exams and he wants a space where he can lounge and hang out with mates. There are couches indoors but they are off limits at lunch. He wishes there were hammocks or bean bags.

Noah and his friends want a space they can claim for themselves. Because most of the school is open and flat, the grounds feel too exposed. So they sit on their lockers, which are in front of their class; Noah gets in trouble for this. With the classroom right there, it feels study is looming over him.



At School L, students preferred seating areas where they could lounge and rest

How to design for Noah

- Comfortable group seating that feels "claimable"
- Spots that are easy to find and return to every day
- Clear social zones where expectations feel predictable
- Good sightlines so he can see who's around
- Spaces designed for talking and lingering, not rushing through



Creative empath

Shreya

Age 17, pronouns: she/her

Shreya is a Wiradjuri woman from regional NSW. She's very aware of who feels welcome where, and which spaces send signals about inclusion or exclusion.

In previous schools she felt she didn't belong - it was in an historical building which had been an orphanage where some elders and ancestors had experienced trauma. As a result, many elders found the building really emotional, especially since a heritage upgrade emphasised the historical features of the orphanage. They didn't want to come to school to contribute their thoughts on a proposed native tucker garden.

Things changed when Shreya moved to her new school. The school recently put in place a yarning circle and Shreya has led some cultural events there. This has helped her connect to her ancestors and play a leadership role in the school.

"For our people it's about shared knowledge spaces to teach and learn... That shared environment where students are connected are so important so that students don't feel so disconnected... allowing kids to explore and learn about country and feel grounded... It's about connecting back and feeling what's in that area at that time."

First Nations Workshop

It's not all smooth sailing. The school received funding to manage its trees. The cost of arborists and maintenance was high. So the school used the money to cut down a number of large eucalyptus. Shreya found this really hard.

Shreya is creative and loves to break dance but there's no real space for outdoor events and performance especially with lighting or electrical access.

Shreya led a design process with her school to create a market space for community events which the school then implemented. The space opened last year and has been great for raising school funds.

How to design for Shreya

- Places that tell stories and reflect diverse cultures
- Opportunities for student expression and co creation
- Small group spaces that feel intentional and respected
- Clear signals that older students still belong
- Environments that show care, meaning and respect



Outdoor student artwork at School L

3.4 Testing solutions

Overview

Before implementing change, test proposed plans outside. Mark the placement of key features, at scale on site, using spray paint or cheap prototype objects, such as cardboard boxes, to represent real elements of the design.

Why it's useful

Testing helps ensure proposed designs are fit for purpose. It's an effective way to prevent costly mistakes and provide students a meaningful way to contribute to change.

“Very quickly [students] start to understand what they have designed isn't going to work on site.”

Tanya Wood, Landscape Architect

Resources required

- A scaled plan of the proposed changes
- Chalk, spray paint, rope or cones to mark the layout on the ground
- Prototype objects to represent future features

Tool tips

Coloured spray paint: Use different colours for paths, planting, seating and gathering spaces. Draw elements at actual size, not symbolically.

Prototype objects: use readily available objects to represent the final design. This could be milk crates or moveable furniture for seating, cardboard boxes for built elements or screening, pot plants or rocks for planting and landscape features.

Testing: Step back regularly and view the layout from different approaches. Involve students, teachers and facilities staff with different perspectives. Revise and photograph each version before making further changes.

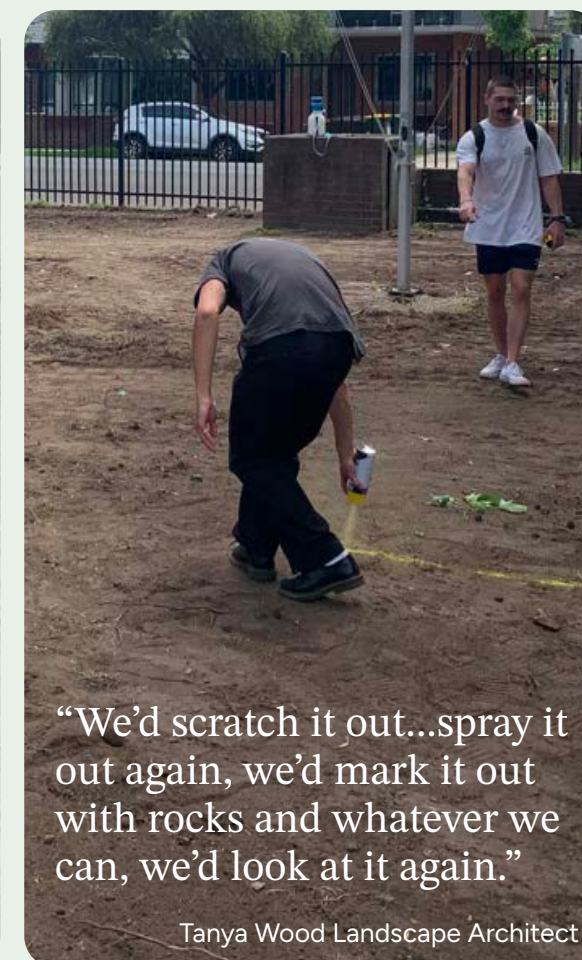
Types of testing

1 Functionality testing: Mark out social spaces such as seats. Ask students if the space feels appropriately sized, supports conversation or retreat, has room for bags and materials, and works in relation to paths, activity and views.

2 Movement and accessibility testing: Ask students to walk the proposed routes check whether paths are wide enough, routes are direct, access points are clear, and there are places to pause. Measure out the width needed for two wheelchairs or groups of students to pass.

3 Supervision and emotional comfort testing: Stand where supervising teachers would stand and test whether supervision is possible. Measure out the potential height and width of proposed vegetation and check whether teachers can see into the space. Ensure students can see who is in the space before entering.

4 Revision: After each test, photograph the area and mark up any changes onto a new plan, using tracing paper over the existing plan. Record why changes were made.



“We'd scratch it out...spray it out again, we'd mark it out with rocks and whatever we can, we'd look at it again.”

Tanya Wood Landscape Architect

above: students use spray paint to map potential placement



The Schoolyard Greenprint
2026