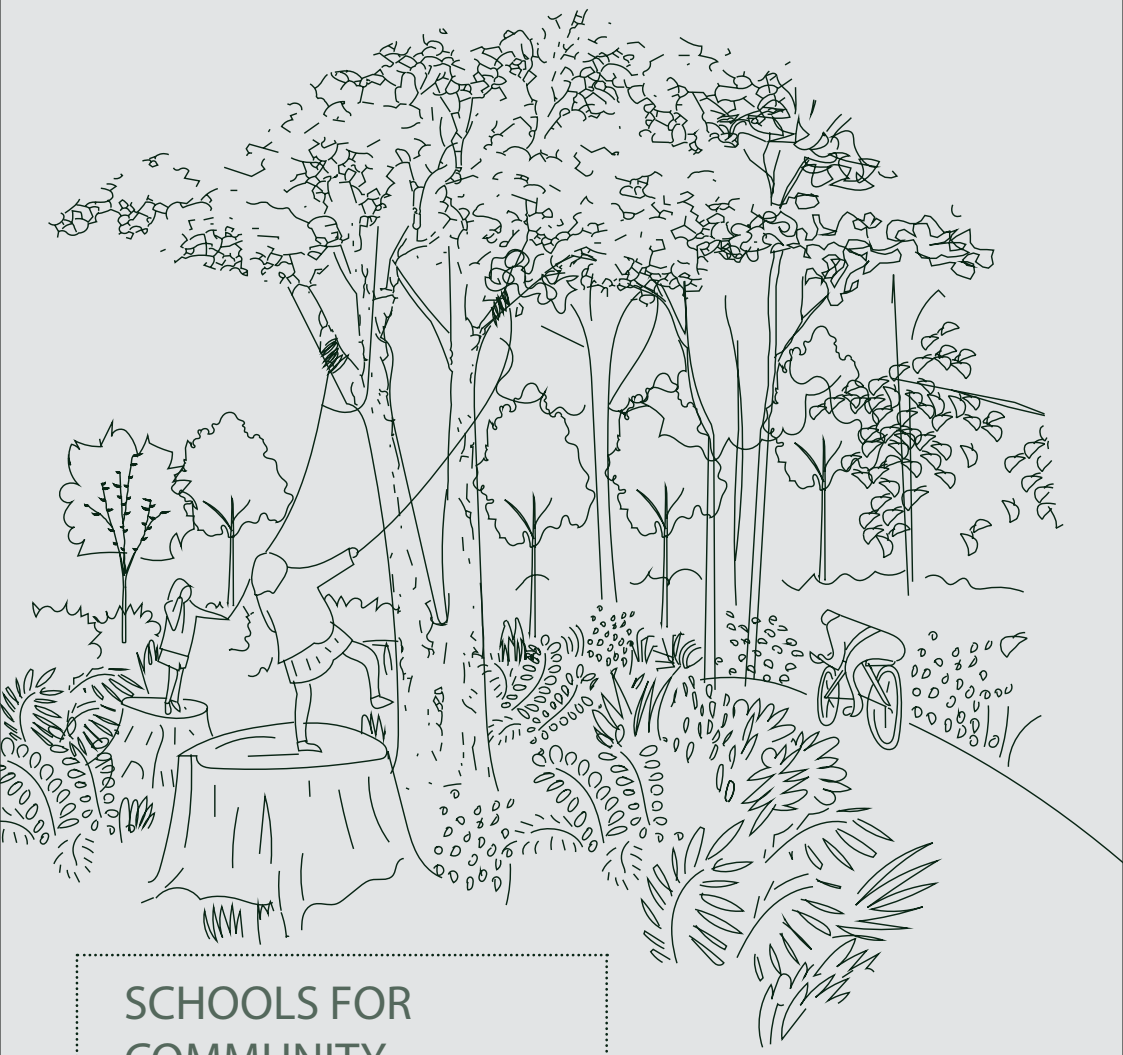

SCHOOLS FOR COMMUNITY GUIDE

A COMPREHENSIVE GUIDE THAT BRIDGES PEDAGOGY AND DESIGN

SOPHIE BUSCH, DANICA CRUZ AND RACHEL LIANG

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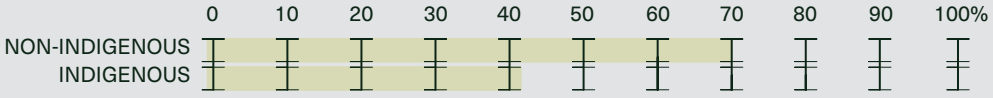
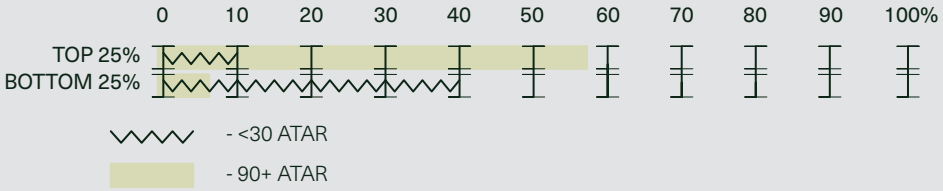
CONTENTS

00
Strategy

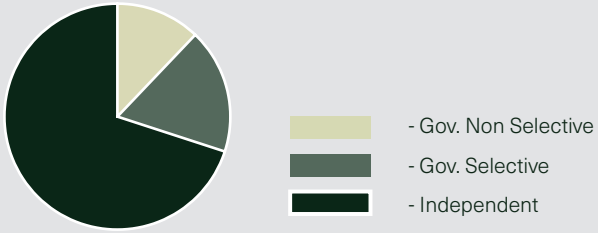
Context
Vision Statement
Strategy
Decision Framework
Objectives
Needs
Timeline
Procedure Guideline



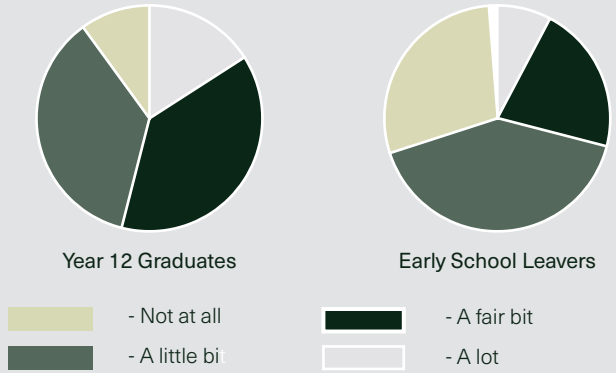
Attendance level rate comparison between non-indigenous and indigenous students (NSW DoE, 2021).



Percentage of students that receive 90+ ATAR in comparison to <30 by socio-economic status (UAC, 2018).



Top 150 Schools in NSW by Type (Matrix Education, 2022).



Survey results that queried effectiveness of school courses in preparing students for their future careers (NSW DoE, 2020)

Current School

The current school system is a complex network of institutions, policies, and practices that aim to provide education and knowledge to students. While it has many strengths, such as providing a structured environment for learning and preparing students for higher education and future careers, it also has many limitations.

Evident within current curricula and the SINSW template, the system disregards many students as it fails to consider diverse learning needs and background of students through their one-size-fits-all approach. Subsequently, there is a persistent achievement gap between diverse racial, ethnic, and socioeconomic groups.

With a heavy focus on standardised testing for tertiary admissions, curricula often leaves behind students who wish to pursue vocational careers. As a result, these students are inclined to make important decisions at an early age without prior or extensive experiences in their careers of interest.

In tandem with the standardised approach, the achievement gap is attributed to the lack of consideration to systemic factors such as underfunded schools in low-income areas, biased curricula, and inequitable access to resources.

...and its Wider Context

Sydney is occupied by a diverse population that have been siphoned to the peripheries and privatised spaces of the centre by the political and economic structures that dictate the occupation of our land.

Naturally, multi-generational microcosms developed and established a mixing pot of refined knowledge, identities, and urban character. However, as with many other cities, there is a persistent socio-economic imbalance between postcodes and many areas are stigmatised, unsafe and underdeveloped.

Such disadvantages significantly impact children's physical, emotional and cognitive development as they may experience stress and insecurity due to unstable housing, neighbourhood violence and family financial struggles, as well as social stigma and discrimination.

It is becoming crucial to prioritise sustaining symbiotic relationships between school, community, learning, and the wider context of which is our city. How can schools utilise the characteristics, facilities and opportunities of its context? What can schools do for communities to create safer and supportive environments for children?

From

(“)
A model of school as something separate from daily life, something governed in an authoritarian manner, oriented above all else to producing, as efficiently as possible, a standardised product.

Senge et al. 2012

To

A model that celebrates schools as a (“) network of human beings who feel, think, behave, and function within a human system that is alive and never static.

Barnhouse, 2020

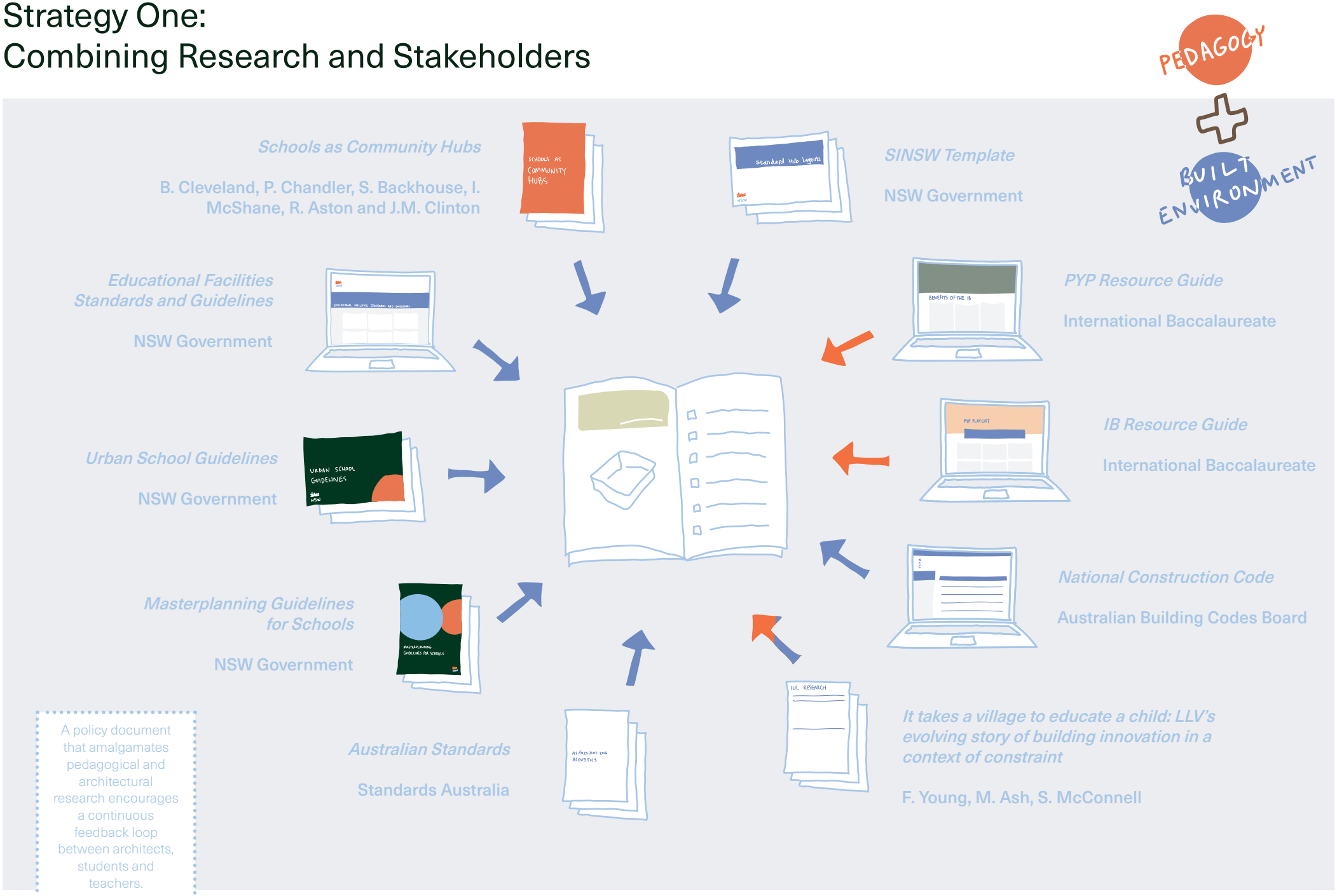
Vision

The guideline pursues a decentralised approach that utilises the knowledge and infrastructure established within the microcosms of the city. Its goal is to offer specialised education and support students in developing autonomy, identity, and a sense of belonging in their local communities.

By empowering students to have control over the educational environments that impact them, it aims to foster discussions and collaborations across various disciplines and demographics.

The educational system aims to cultivate independent thinkers who can smoothly transition from school to higher education. In contrast to the current system, which heavily relies on constant supervision and guidance, this new proposal introduces autonomy and self-driven learning, essential skills for graduates in the real world. As a result, it bridges the gap between a student's life during and after school.

Strategy One:
Combining Research and Stakeholders



Strategy Two:
New Timetable

Primary

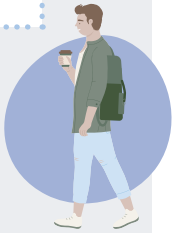
Classes are primarily held at school commons.

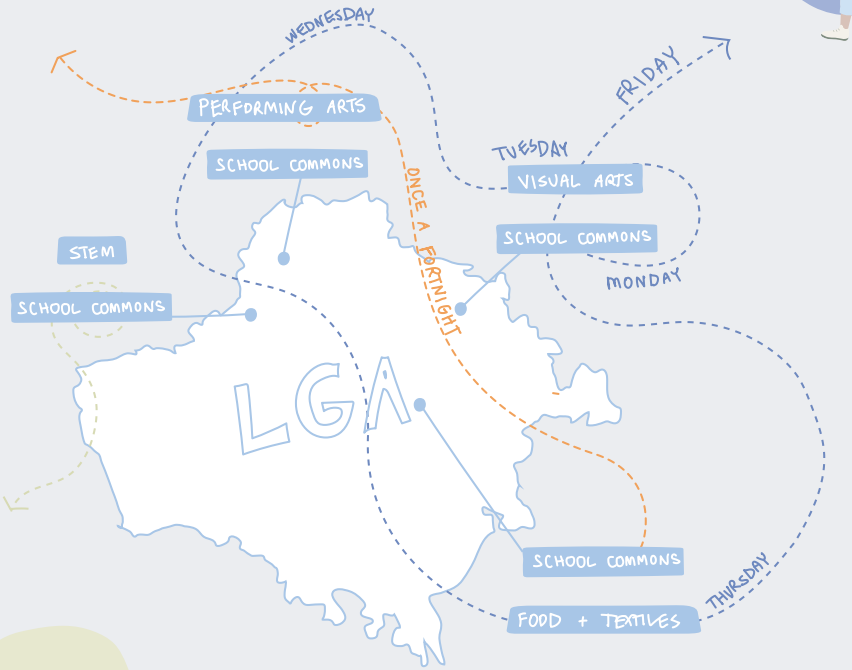
10% of classes at decentralised schools.

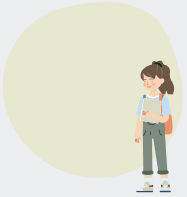
Secondary

Attends specialist subjects of interest through a network of neighbouring schools.

Up to 60% of classes are decentralised.





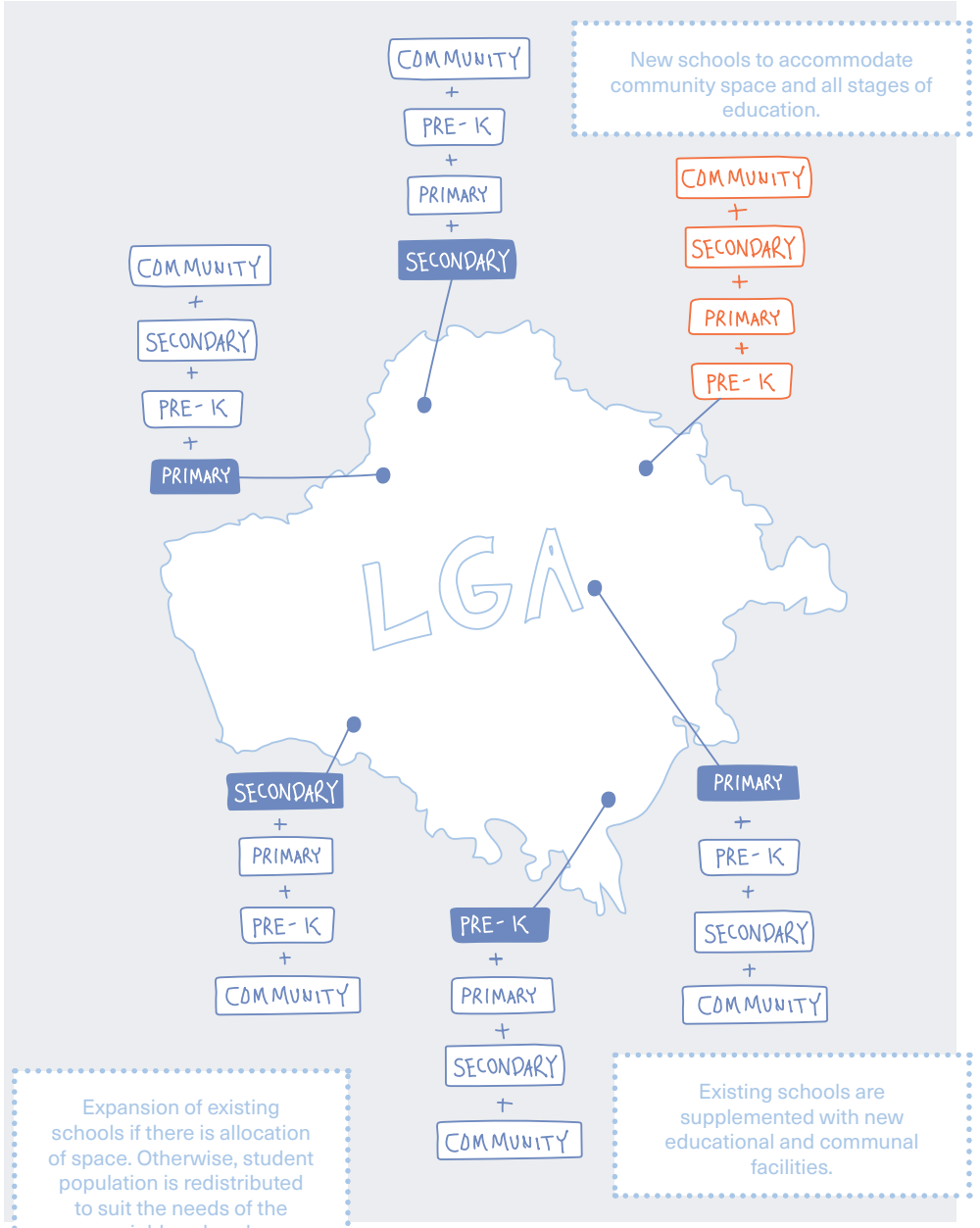


Pre-K

100% at school commons.

1 subject a day

Strategy Three:
Decentralised & Specialised Learning



New schools to accommodate community space and all stages of education.

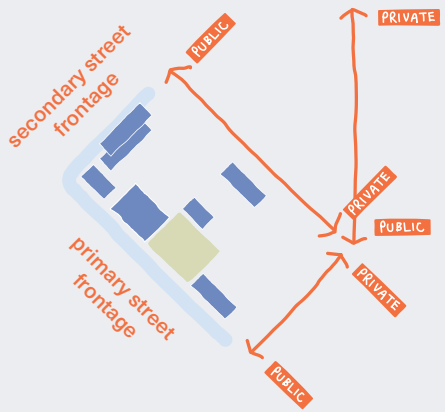
Expansion of existing schools if there is allocation of space. Otherwise, student population is redistributed to suit the needs of the neighbourhood.

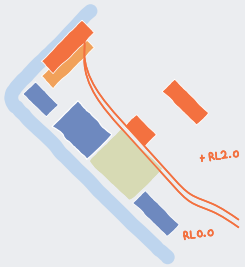
Existing schools are supplemented with new educational and communal facilities.

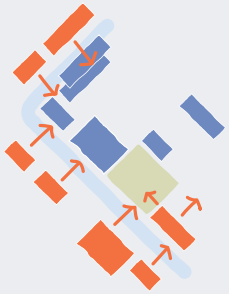
Strategy Four:
Multi-Faceted Approach to Security

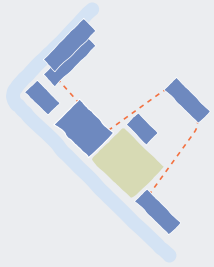
1 security through zoning

2 elevational separations







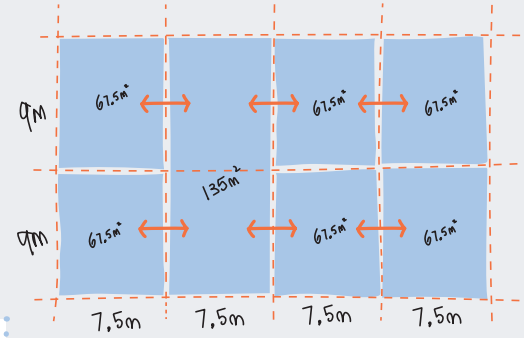


3 passive surveillance

4 physical barriers

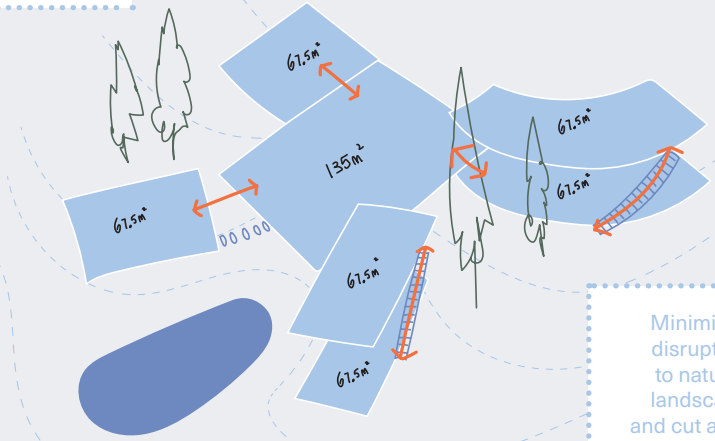
Strategy Five:
Flexible Arrangements

Placing more focus on programmatic and contextual relationships rather than the efficiency of construction creates schools that are sufficiently sustainable.



Increased cost of construction balanced by increased quality and design that promote building longevity and intergenerational use.

Flexibility of form allows for better response to existing landscape.

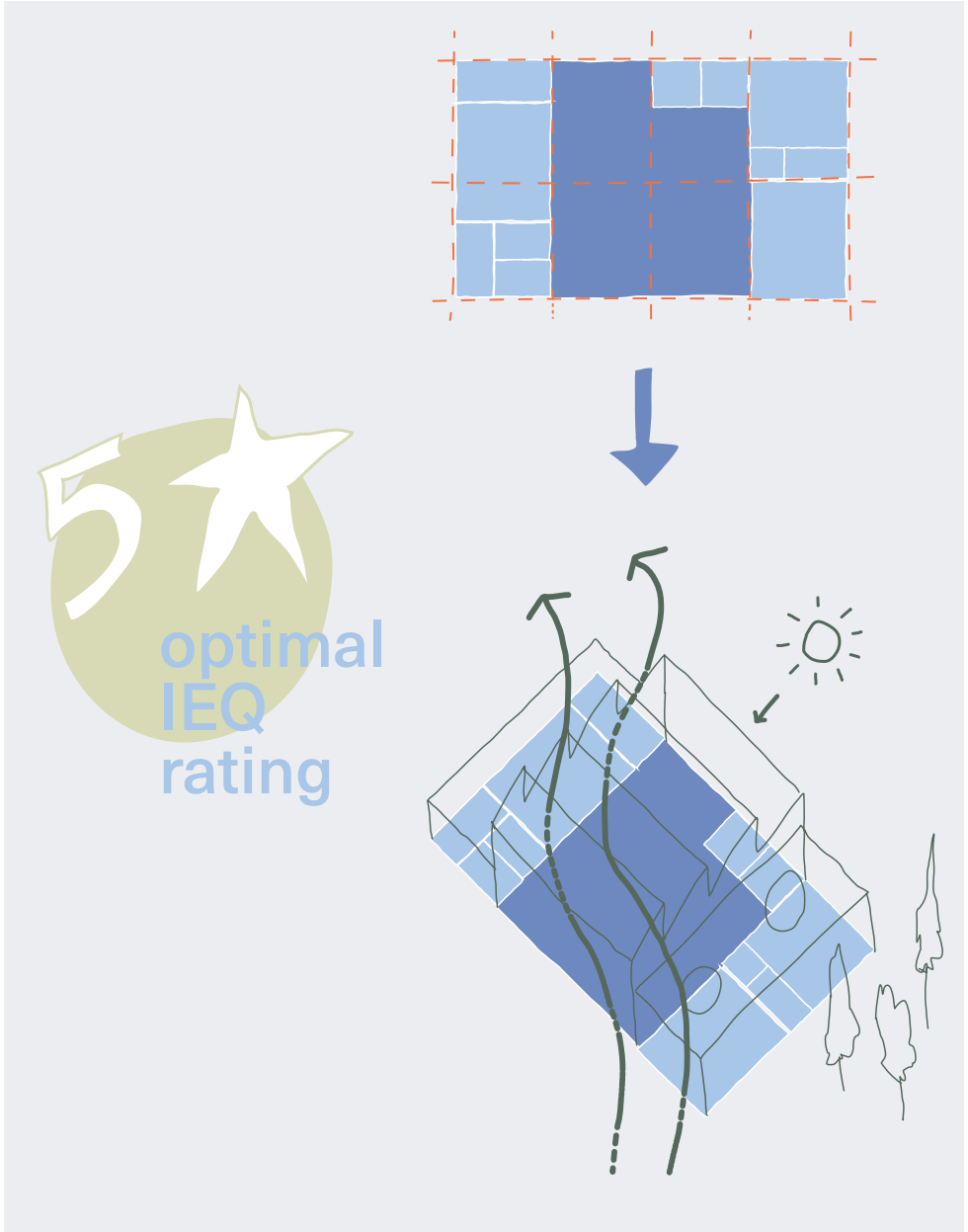


Minimises disruption to natural landscape and cut and fill through intimate response to topography.

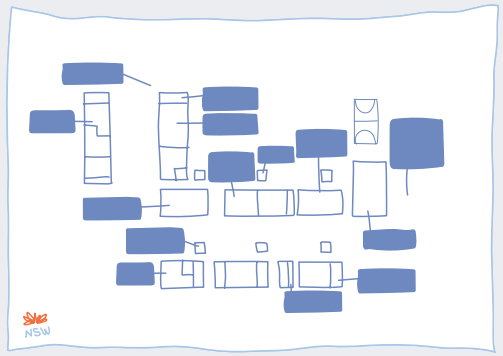
Room adjacencies maintained through visual connection

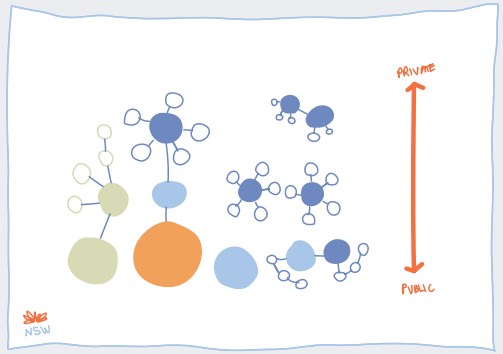
Strategy Six:
Variation of GLS Sizes for Stages

Strategy Seven:
Volumetric Qualities of Spaces



Strategy Eight:
Removing Graphic Constraints

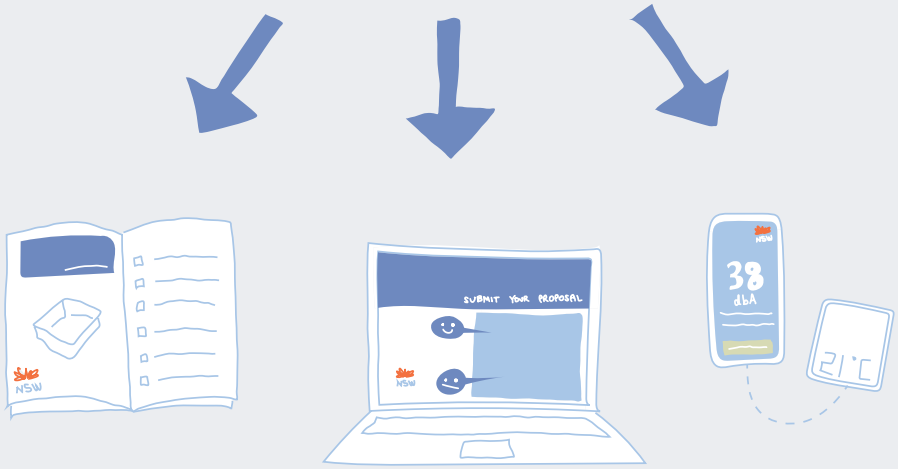




Deviating away from prescriptive layouts and one-size-fits-all architectural solutions aims to encourage designers to intimately understand spatial requirements against contextual circumstances and user needs.

Strategy Nine:
New Staged Format

Deviating away from prescriptive layouts and one-size-fits-all architectural solutions aims to encourage designers to intimately understand spatial requirements against contextual circumstances and user needs.



Handbook Guide

Provides consistent planning and design standards for schools across the state.

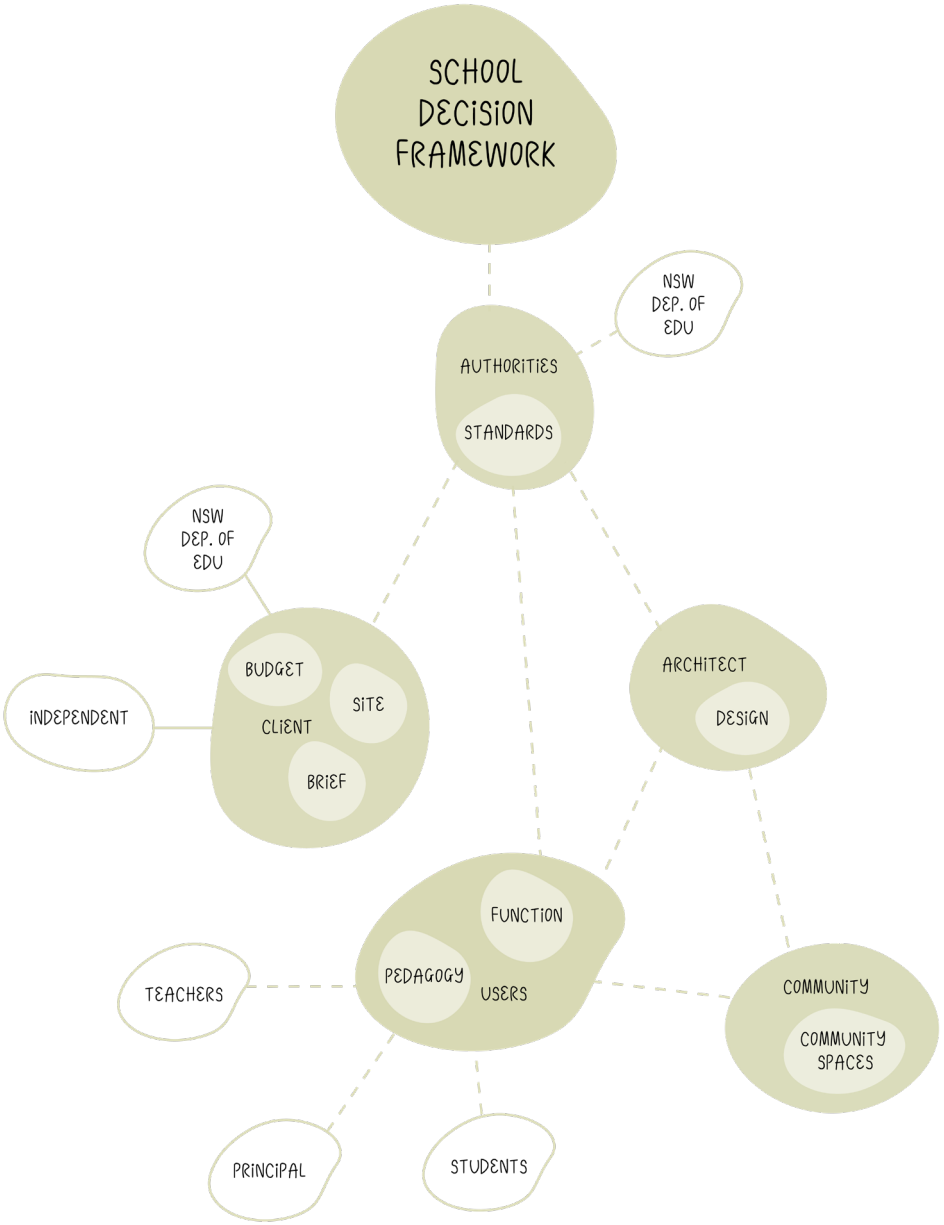
Digital Submissions Platform

Facilitates collection of feedback from members of the community and users.

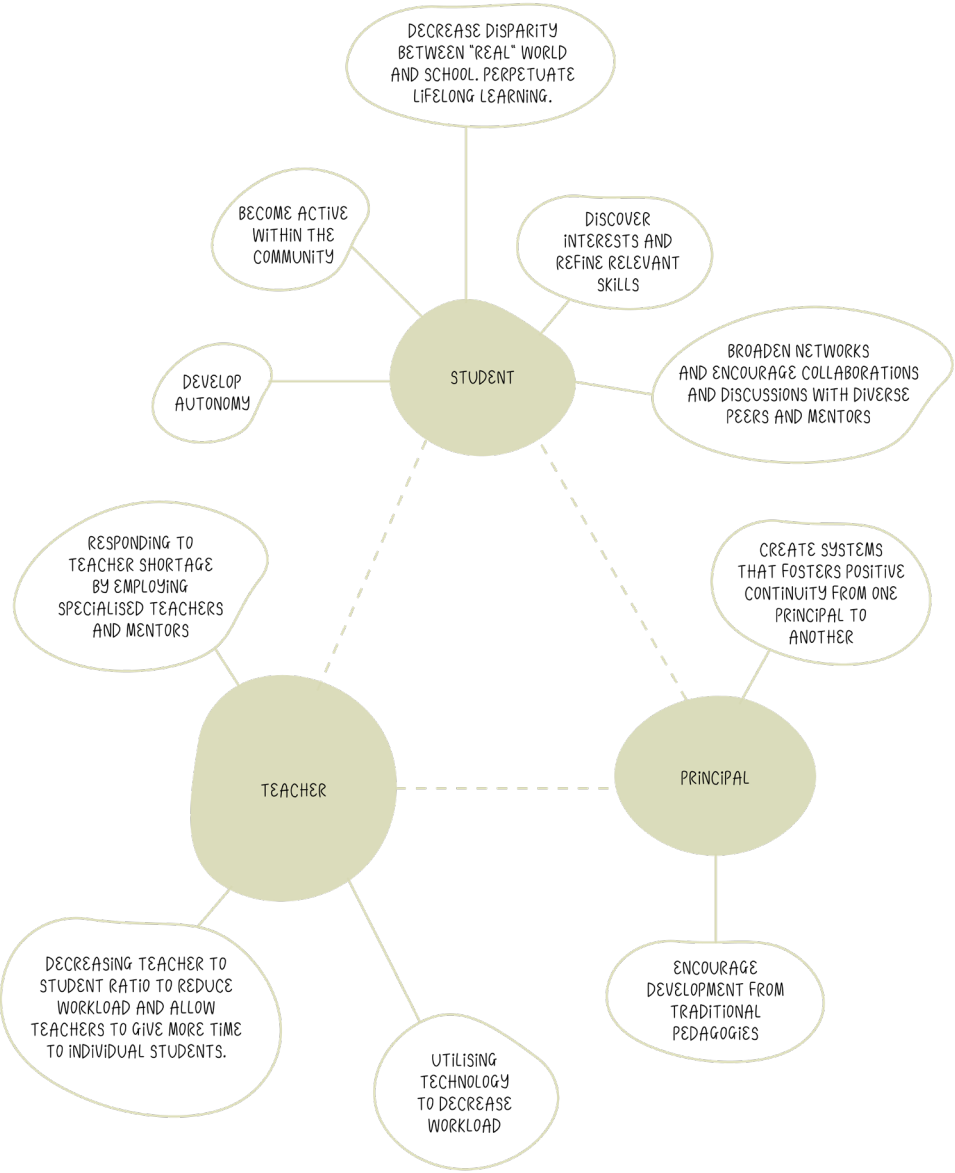
Post-Occupancy Testing

Integrated post-occupancy testing in design and pedagogy to not only test that high quality outcome is achieved and maintained, but to also extend accessibility and care to its users.

Decision Framework



User Objectives



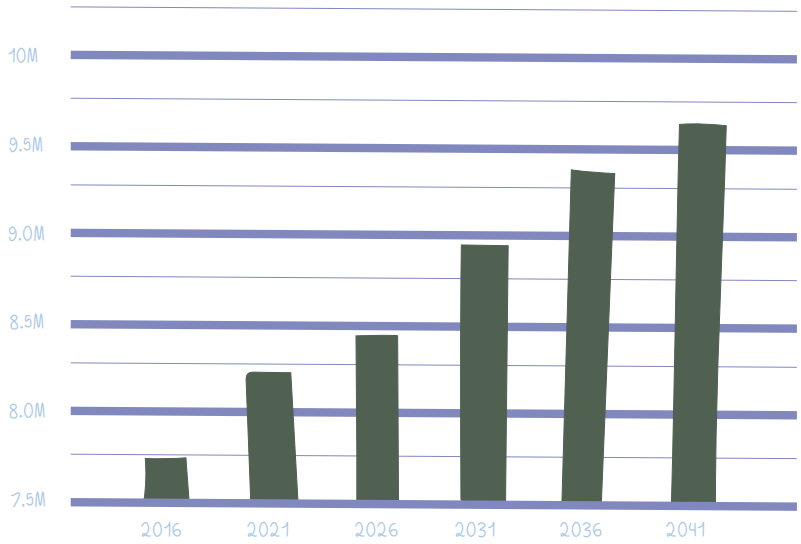
Needs

QUANTITY OF GOVERNMENT SCHOOLS

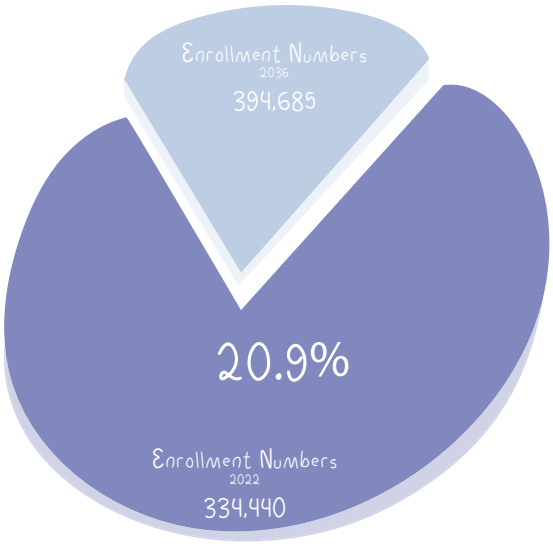
CURRENT NUMBER OF GOVERNMENT SCHOOLS
2022
2200

QUANTITY INCREASE OF CLASSROOMS
2038
7200

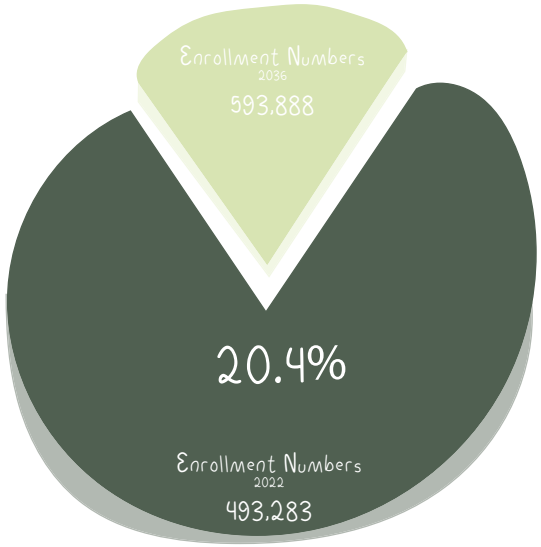
2022 NSW POPULATION PROJECTIONS



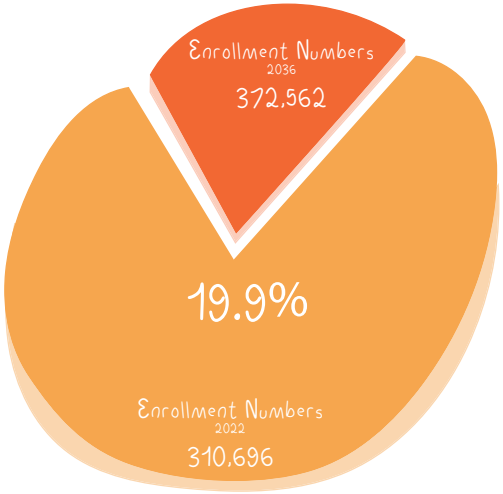
PRESCHOOL



PRIMARY SCHOOL



SECONDARY SCHOOL



Timeline

Consult with Department of Education on New Guidelines

User Consultation and Surveying

Projects to start now

Producing guideline and testing its applicability and effectiveness.

Creating digital platform for accessible collection of feedback on new guideline.

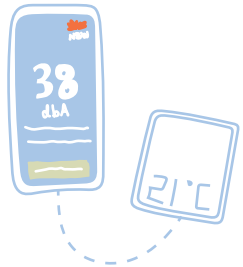
Projects to start soon

Hold community events on school grounds to encourage collaboration and demonstrate its incentives.

Later

Liaise with Department of Education and Independent Clients on developing schools with new guidelines

Implement accessible testing mechanisms to ensure high quality is achieved post occupancy.



Even later

Begin to implement new pedagogy and transition to specialised schools in stages throughout NSW

Amalgamation of specialist hubs in existing schools

Guideline Manual

Step 01
Pedagogy

1. Review Part 01, “Designing with Pedagogy”. This chapter aims to provide insights into the evolving dynamics of education and foster an understanding of the learning and teaching approaches being adopted.
2. Consult students and teachers of existing school on-site or in the local community using metric provided.

Step 02
Network of Schools

1. Review Part 02, “Designing a Network of Schools”. This chapter aims to provide insights into the new school system, which functions as an interconnected network of schools supported by public and transport infrastructure.
2. Identify specialty of school common through review of demographics, project population growth of LGA, and projected community infrastructural needs.
3. Review existing and future transport infrastructure to assess feasibility of site within the network of schools and its potential to function effectively.
4. Determine if site can seamlessly integrate into the network and identify any additional infrastructure required to ensure its viability and accessibility.
5. Ensure convenient access via public transport and a maximum 40 minute commute to other school commons within the network.
6. Conduct metric analysis.

Step 03
Shared Community Spaces

1. Review Part 03, “Designing Shared Community Spaces”. This chapter aims to provide guidance on integrating community spaces into school commons. This chapter outlines the criteria for identifying joint, public, and school facilities, while also establishing the functional requirements of the school prior to allocating spaces for specialised hubs and community use.
2. Establish required spaces for school commons.
3. Create functional brief according to student population, and review if site area will provide adequate space for student population.
4. Allocate underutilised area to specialised hub and community.
5. Prepare site analysis demonstrating topographical features, view corridors, existing trees, environmental factors, Indigenous significance, neighbouring points of interest, and access routes.
6. Identify zoning for school commons in consideration of site analysis and location of community public spaces, joint spaces, and co-located school facilities.
7. Establish organisational hierarchy:

- Public spaces to be located on the ground floor and perimeter.
- Co-located school facilities to be located at an elevational difference from public spaces and further away from the perimeter of the site.
- Cluster stage groups together and prioritise proximity to core facilities for younger stages.

8. Establish connection to site characteristics

- Topographical Features: Cluster stage groups in consideration of minimising vertical travel.
- View Corridors: Maximise favourable views on site and connection to context and nature.
- Existing Trees and Landscaping: Incorporate shading or view connections to existing vegetation.
- Environmental Factors: mitigate risks of floods and bushfires.
- Indigenous Significance: Design respectfully around culturally significant sites and engage with Indigenous consultants.
- Neighbouring POI: provide easy access to existing points on interest.
- Access Routes: utilise and improve existing access routes.

9. Conduct metric analysis

Step 04
Optimal Learning Settings

1. Review Part 04, “Designing Optimal Learning Settings”. This chapter outlines the requirements and considerations to achieve a conducive educational setting that supports effective learning while accommodating a diverse range of individual needs and preferences.
2. The design process involves utilising the kit of parts catalogue to conveniently determine the requirements for various learning spaces. This includes a breakdown of sub-space typologies based on developed pedagogies such as Cave, Watering Hole, Campfire, Maker Space, Master Class and Pop-Up Class. While these spaces are utilised daily within the GLS, their concepts can be applied to all learning spaces throughout the school and community areas. This approach ensures consistency and adaptability in creating effective learning environments across different settings.
3. Conduct metric analysis.

Step 05
Affordances

1. Review Part 05, “Designing Affordances for People”. This chapter outlines the metric needs of students based on their physical capabilities. It delves into strategies for designing with an understanding of Country, which serves as a foundational element in creating appropriate affordances within the learning environment.
2. Conduct metric analysis.

01
Designing With Pedagogy

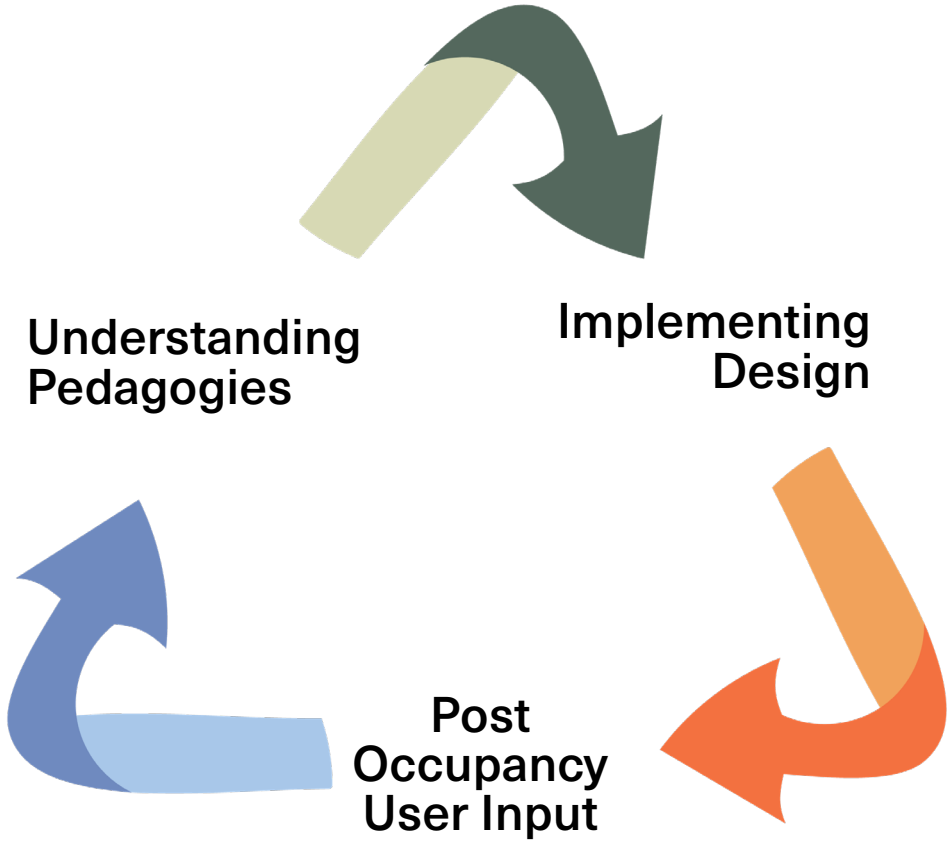
1A Designing with Pedagogy

Schools are more than mere structures; they are dynamic environments that shape children and provide support as they grow. Architects must approach school design with an understanding of teaching methods, student development, and community integration. This entails aligning the physical environment with the educational philosophy, values, and goals of the school. Consideration should be given to the diverse needs of learners, including their cognitive, physical, social, and emotional growth.

Collaboration between architects and educators is crucial to ensure that the school's design fosters learning, creativity, critical thinking, and collaboration. Moreover, the design should embrace the community, offering students a sense of belonging and promoting community engagement.

To truly create an environment that supports student development, architects must involve users in the design process. This means actively engaging with educators, students, parents, and the community to comprehend their needs and aspirations. This ongoing engagement should start from the initial design stages and continue through post-occupancy evaluation.
By incorporating user input, architects can ensure that the school environment adapts to the evolving needs of learners and the community. This participatory approach also allows architects to tap into the knowledge and expertise of users, resulting in a more effective and efficient learning environment.

In essence, architects must approach school design with a human-centered and participatory mindset, placing users at the core of the design process.

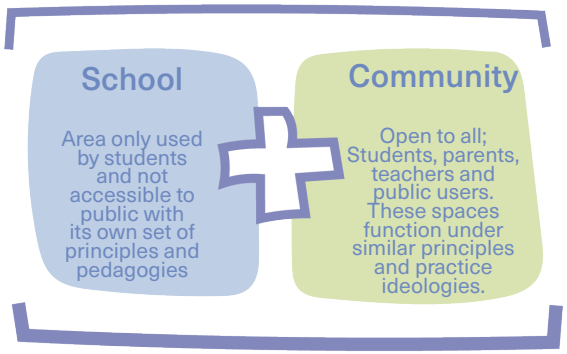


1B Understanding Pedagogies

Schools V Community Hub

Schools across Australia and other countries play a crucial role as community hubs to varying degrees. Clandfield (2010) proposed a five-part continuum to describe school-community relations, ranging from community use of schools to fully integrated relationships (Chandler, Schools as Community Hubs Development Framework: Workshop 1, Emerging Themes & Insights from Australia 2010). This includes community use of schools, parallel use and shared use of schools, co-location of community services, full-service schools, and the school as a community hub. The Building Connections project found strong support for better-developed school-community relations, especially for co-location of community services on school sites and the creation of full-service schools, as well as deeply integrated relationships between schools and community development activities.

The adoption of a 'more than a school' mindset should be paired with a clear and well-informed perspective on why enhanced school-community relations should be established. Every school should respond to its unique socioeconomic, geographic, and cultural situation differently.



When schools and communities collaborate, both benefit from collective growth. Integrating school and public programs fosters a cohesive environment where teaching and learning are enriched. This shared approach promotes shared ownership, responsibility, and increased engagement, benefiting the community's success and individual development.

Objectives for Building Schools as Community Hubs (Cleveland et al. Schools as Community Hubs):

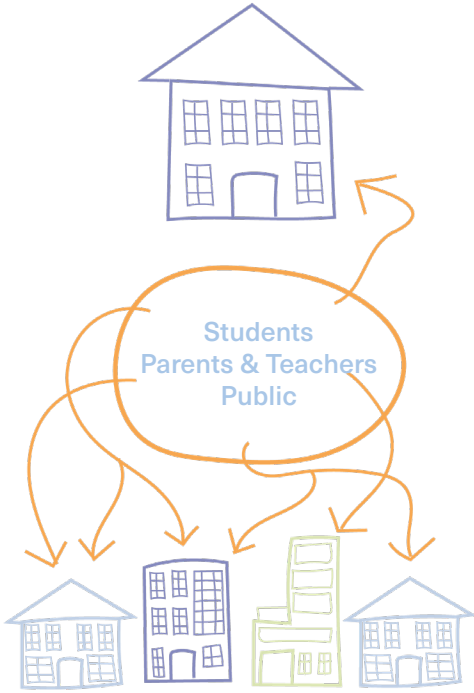
1. Detailed understanding of local community context and requirements should inform hub objectives.
2. Developing a shared vision with stakeholders is essential for short and long-term success.
3. Partnerships with community members, organizations, and service providers are critical for establishing and operating a school as a community hub.
4. School leaders should be supported to prevent burn-out and adopting distributed leadership models can help.
5. Early insights into how policies of stakeholders may influence hub development and operations should inform the way forward.
6. Reliable, long-term funding and financial management are essential, and blending funding from different sources may be required.
7. Strategic planning ensures that daily activities, programs, and services achieve desired outcomes.
8. Good facility design should identify all user groups, be digitally connected, welcoming, and inclusive, designed for all ages and abilities.
9. Achieve safety and balanced security measures while providing a welcoming environment for the community.
10. High-quality feedback, evaluation, and evidence should inform decisions and help sustain hubs.

Functional Use and User Experience

Schools can create a mutually beneficial relationship between the school and the public by opening up their spaces to the community. This can be achieved through "incursions" or field trips to specialised facilities for younger students to watch demonstrations from public figures or take part in courses. The public-run courses can now include older students who can volunteer during school time, providing an opportunity for them to learn new skills and contribute to their community while fostering a sense of civic responsibility.

Schools can also serve as a hub for the community by providing a range of services beyond traditional academics. Family services such as parenting classes, family counselling, and healthcare services can be offered, and schools can provide additional care help for families in need, including before and after-school programs, tutoring, and mentoring programs. (Cleveland et al. Schools as Community Hubs) These programs can benefit working parents who require childcare outside of regular school hours while providing educational support for students.

By opening their doors to the community, schools can create a more integrated and supportive environment where parents, students, and community members can benefit from shared resources and services. This can foster a sense of shared ownership and responsibility for the success of the community, creating a more inclusive and diverse learning environment where students can interact with people from different generations and backgrounds, further broadening their horizons. (McGuinness, Swartz, & Sproule, Student Thinking and Learning in the PYP Transdisciplinary Framework 2016) Having public and community spaces within the school can provide a sense of belonging and ownership for the local community, breaking down perceived barriers between the school and the community, and facilitating relationships and partnerships for the benefit of all involved.



Timetabling

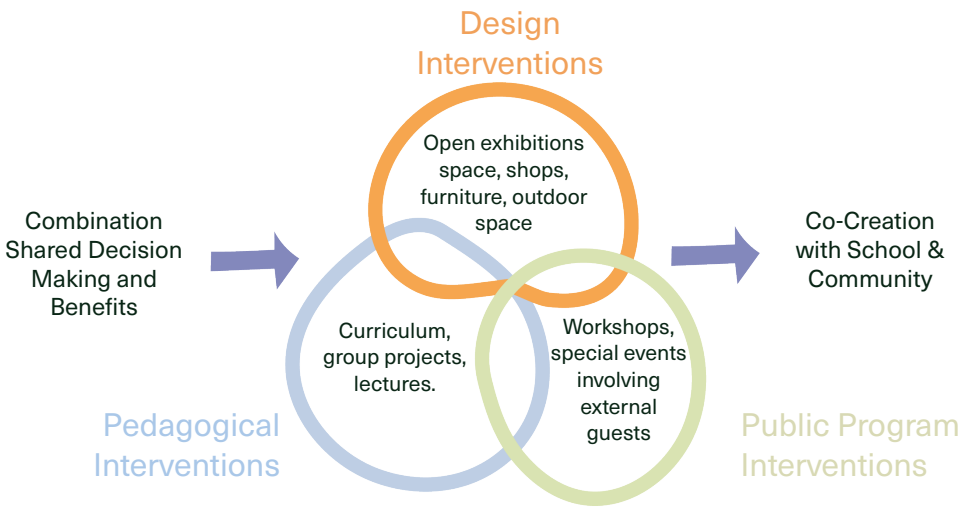
The Best Time to Learn Something New
Learning is most effective when the brain is in acquisition mode, generally between 10:00 am to 2:00 p.m. and then again from 4:00 p.m. to 10:00 p.m.

The Best Time To Brainstorm
Research has found that people are at their best for creative thinking between 11:00 a.m. to 3:00 p.m.

Reasons for Unstructured Playtime
These moments provide an opportunity for imaginary and creative play and allows children to practice divergent thinking. They benefit from the freedom to explore new ideas without fear of failure or the stress of grades, and regular exposure to new experiences can also increase their cognitive flexibility, preparing them for academic challenges. (Terada, Research-tested benefits of breaks 2018)

Stage	Arrival Time	Hours of Active Movement Across a Week	Departure Time
Pre-K	8:30	< 3	2:30
Primary Infants	8:45	< 2.75	2:45
Primary	9:00	< 2	3:00
Secondary	9:30	< 1.5	3:30

Research has been conducted which finds elements that have a positive impact on the health and wellbeing of children, which includes having access to nature, walkable surroundings, opportunities for spatial play, social connections, and a feeling of ownership and empowerment. (KRYSIAK, Designing Child-Friendly High Density Neighbourhoods 2020)



Weekly Schedule

With the organisation of schools within LGA's to be specialized to core subjects, students will be rotating between LGA schools weekly. This change comes with the pedagogy of one subject per day for all senior school students. Allowing them to focus and aim to complete tasks on a daily cycle not 30-45 min periods.

The subtle spread of new information based learning enables teachers to teach in more 10 minute pop up classes opposed to 30 minute lesson which they have found to be more productive for students and themselves.

User	STEM	PERFORMING ARTS	METAL + WOOD	VISUAL ARTS	COUNCIL FACILITY
Student A	Monday	Tuesday	Wednesday	Thursday	Friday
Student B	Tuesday	Wednesday	Thursday	Friday	Monday
Student C	Wednesday	Thursday	Friday	Monday	Tuesday
Student D	Thursday	Friday	Monday	Tuesday	Wednesday
Open For Larger Public Use	Friday	Monday	Tuesday	Wednesday	Thursday

This is an example of a rotation of users between specialised facilities enables both public and student occupancy weekly without overcrowding.

1C Approaches to Teaching

(McGuinness, Swartz , & Sproule, Student Thinking and Learning in the PYP Transdisciplinary Framework 2016)

Attitude

Attitudes we want the students to value and exhibit. They are interwoven throughout every aspect of the curriculum.

1. Appreciation
2. Commitment
3. Confidence
4. Creativity
5. Curiosity
6. Empathy
7. Enthusiasm
8. Independence
9. Integrity
10. Respect
11. Tolerance

Skills

Skills students develop as they involved themselves in the learning environment.

1. Communication
2. Social
3. Research
4. Self-Management
5. Thinking

Actions

Students are encouraged to reflect, making informed decisions, and take action to benefit their peers, school staff, and the broader community. This approach fosters a sense of responsibility and encourages positive contributions to society.

1. Reflect
2. Choose
3. Act
4. Repeat

Concepts

Concepts that drive instruction through inquiry, questions, and investigation.

1. Reflection - How do we know ?
2. Change - How is it changing ?
3. Choose - How does it work ?
4. Form - What is it like ?
5. Connection - How is it connected to other things ?
6. Perspective - What are the points of view ?
7. Causation - Why is it like it is ?

Knowledge

Throughout the school year, students will explore globally significant themes that cover interconnected concepts. These themes are designed to promote a holistic understanding of the world.

1. Who we are
2. Where we are in place and time
3. How the world works
4. How we express ourselves
5. Sharing the Planet
6. How we organise ourselves

1D Types of Learners

To ENGAGE learners with authentic experiences.

Authentic CONNECTIONS add value to learning experiences.

Empower students to CREATE their own learning pathways.

View all students as CAPABLE with capacity for growth.

The system recognises the benefits of understanding different types of learners and how they learn best. By categorising learners as principled, open-minded, caring, inquirers, knowledgeable, thinkers, communicators, risk-takers, balanced, and reflective, schools can tailor their teaching methods and resources to best support each student's unique learning style. (McGuinness, Swartz, & Sproule, 2016) This promotes inclusivity and equity in education, as students receive the necessary tools to succeed regardless of their individual differences.

Moreover, the focus on developing internationally minded individuals is crucial in creating a better world. By emphasising these attributes, such as being caring and reflective, students are encouraged to think beyond themselves and their immediate surroundings. This leads to a greater sense of global citizenship and an understanding of their responsibility to make the world a more peaceful and sustainable place. (McGuinness, Swartz, & Sproule, 2016) As students learn to appreciate different cultures and perspectives, they become more empathetic and open-minded, which is essential in creating a more harmonious society.

Designers can benefit from this information when designing schools and educational spaces. By understanding the needs of different types of learners, architects can design spaces that promote active and engaging learning. (Donnelly, 2022) This can include creating flexible learning environments that cater to a variety of teaching styles, as well as incorporating technology and resources that support different learning modalities. Ultimately, the goal is to create learning spaces that are inclusive, innovative, and supportive of all students, regardless of their individual learning styles.

How might students see the relevance and importance of their learning?

How might the learning community build stronger connections within the wider community?

How might the school use the reflections to move forward as a learning community?

1. Inquirers

Students who cultivate their curiosity and develop skills for inquiry and research are equipped to learn both independently and collaboratively with others. They approach learning with enthusiasm and maintain their passion for knowledge throughout their lives.

2. Knowledgeable

Students who acquire and apply conceptual understanding are able to explore knowledge across a diverse range of disciplines. They are capable of analysing issues and ideas that have both local and global significance.

3. Thinkers

Students who use critical and creative thinking skills to analyse and take responsible action on complex problems. They exercise initiative in making reasoned, ethical decisions.

4. Communicators

Students who confidently and creatively express themselves in multiple languages and through various mediums are able to collaborate effectively with others. They actively listen to and consider the perspectives of individuals and groups.

5. Risk-Takers

Students who face uncertainty with forethought and determination, and work both independently and collaboratively to explore new ideas and innovative strategies, demonstrate resourcefulness and resilience in the face of challenges and change.

6. Balanced

Students who recognize the importance of balancing various aspects of their lives - intellectual, physical, and emotional - understand that achieving well-being for themselves and others is crucial. They acknowledge their interdependence with other individuals and the world in which they reside.

7. Reflective

Students who thoughtfully reflect on the world and their own ideas and experiences work to understand their strengths and weaknesses, in order to support their personal growth and learning.

8. Principled

Students who act with integrity and honesty, and possess a strong sense of fairness and justice, as well as respect for the dignity and rights of all people, demonstrate a deep sense of responsibility for their actions and the consequences that arise from them.

9. Open-minded

Students who possess a critical appreciation for their own cultures and personal histories, as well as the values and traditions of others, are capable of seeking and evaluating a diverse range of perspectives. They are open to growth and willing to learn from their experiences.

10. Caring

Students who demonstrate empathy, compassion, and respect, and have a strong commitment to service, take action to create positive change in the lives of others and in the world around them.

(McGuinness, Swartz , & Sproule, Student Thinking and Learning in the PYP Transdisciplinary Framework 2016)

1E Learning is Play

"Play transcends cultural, socio-economic and political boundaries and is universal in impacting children positively"
The Lego Foundation, 2018

Inquiry

Children possess a natural curiosity and are competent learners who have a sense of control over their own learning. They are full of potential and come equipped with valuable skills, preferences, and understandings of learning. Through play, children are actively engaged in making sense of their interactions with their surroundings and the people around them. They revisit and refine these understandings based on new experiences and continued learning. (UNICEF-Lego-Foundation Learning through Play 2018)

What does inquiry through play look like?

Whilst we are all familiar with the idea of play, it can be difficult to agree on exactly what it looks like. 5 key characteristics of play

1. Play is meaningful – children play to make sense of the world around them, and to find meaning in an experience by connecting it to something already known. Through play, children express and understand their understanding of their experiences.

2. Play is joyful – of course, play may have its frustrations and challenges, but the overall feeling is one of enjoyment, motivation, thrill and pleasure.

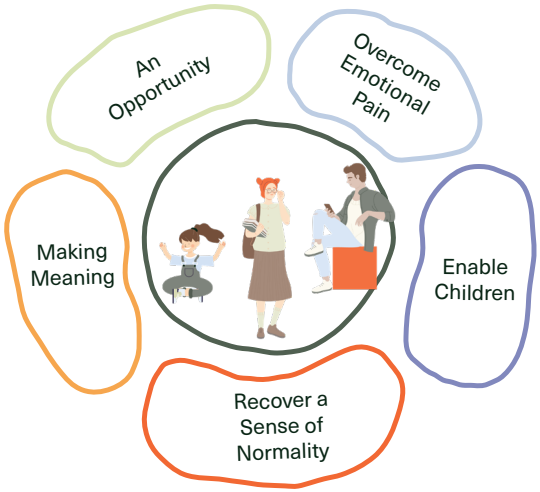
3. Play is actively engaging – watch children playing, and you will usually see that they become deeply involved, often coming physical, mental and verbal engagement.

4. Play is iterative – play is not static. Children play to practice skills, try out possibilities, revise hypotheses and discover new challenges, leading to deeper learning.

5. Play is socially interactive – play allows children to communicate ideas, to understand others through social interaction, paving the way to build deeper understanding and more powerful relationships.

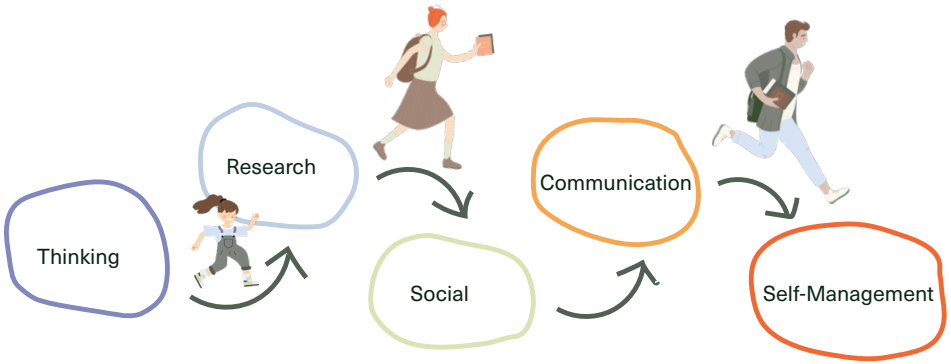
Wellbeing

Apart from fostering important skills, play also plays a crucial role in promoting the social, emotional, physical, and mental well-being of children. With the world around us constantly evolving, play provides children with a means of joyfully coping with the anxiety that can arise from such change.



Skill Development

Children are born with a natural inclination to explore and learn through interactive experiences with their surroundings and those around them. Play is a crucial element in promoting healthy development for children. By engaging in play-based learning, children acquire and refine fundamental skills and knowledge.



(UNICEF-Lego-Foundation Learning through Play 2018)

1F Pedagogical Modes

Cave

This is a individual space for closer and a more quieter setting. This withdrawal space can range in scale from a full room to a pod chair design. It allows individual students to separate themselves from larger groups while still being a part of the task. Independent or collaborative student directed learning which is structured to achieve goals.

What does it look like?

- A co-created routine and ritual for deep work to effectively operate within the Innovative Learning Environment.
- Students take ownership of their learning, either individually or collaboratively, to create or progress through personally designed or teacher-generated entry-level Evidence of Learning Tasks or learning experiences.
- Students move through checkpoints related to curriculum connected to rigorous rubrics that are designed by either the teacher or student.

Waterhole

The main common storage space for learning materials which is used by students at all ages and educators to coincide with each other.

What does it look like?

- Students leading/teaching other students to demonstrate 'Mastery'
- Provides opportunities for students to lead, teach and to support other students.
- Maintain high expectations of self and engage with work in a deep rigorous way.

Pop Up Class

A quick 7-10 minute intimate class run by one lead educator over a certain topic which seems to an common problem amongst the class. Identified differentiated learning needs; could be predicted and planned for ahead of time or spontaneous or with a select group of students or be compulsory for the whole group to cycle through.

What does it look like?

- Co-constructed ritual and routine for Pop Up Workshop to operate effectively - usually occurs when students are in Deep Work
- Teacher facilitated pedagogy that responds to student need/s, in the moment. It could be one or a number of students.
- May include modelling of exemplar process, product and/or practice.
- Could be for extending and/or supporting learners.

Campfire

Is the heart of the GLS, this is the space used mainly in the morning as a transitional space and greeting space for students and teachers. It is a space for open discussion and larger group collaboration.

What does it look like?

- Students are empowered with the tools and environment necessary to foster their innate desire to learn through a range of modes including Masterclass, Pop Up Lesson and Deep Work.
- The approach involves the explicit instruction of skills, dispositions, capabilities, content, and EQ. It is tailored to each student's capacity, wellbeing, and knowledge, understanding and skill level and need not involve all students simultaneously.

Master Class

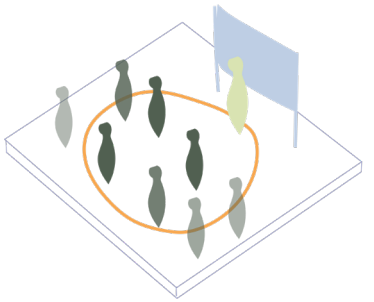
A 20 minute maximum lesson run by an expert within a certain field of learning or experience.

What does it look like?

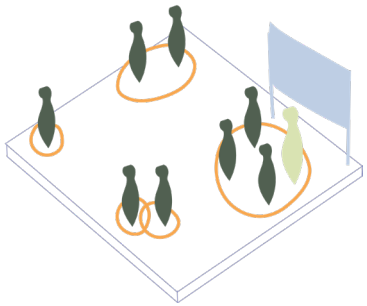
- A structured and predictable ritual and routine is established to promote students' sense of safety and encourage them to take risks in their learning.
- Modelling of exemplary processes, products, and practices may be included to enhance learning
- The learning experience is engaging, dynamic, and inclusive, and failure is celebrated as a natural part of the learning process.
- Deeper learning that involves constructing, deconstructing, and reconstructing knowledge, understanding, and skills across multiple domains.

(LLV Pedagogical MODES Version 2.0)

Implementing Teaching Pedagogies

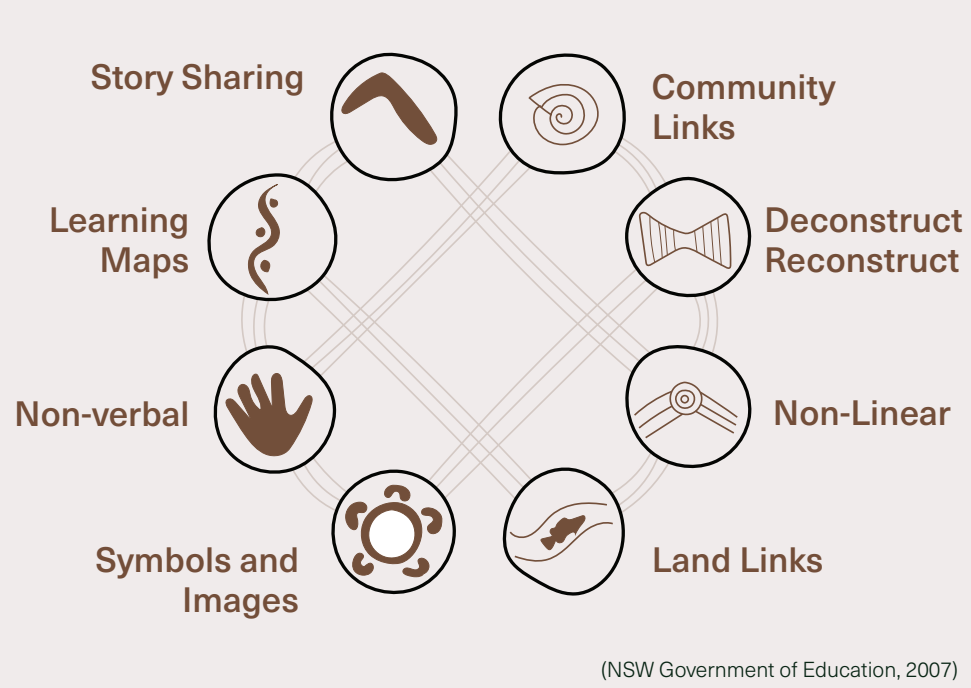


Factory school setting with one teacher projecting Information out onto students creates a small circle of engagement for all students. This typology doesn't consider different forms of learners and more progressive responses to learning. (Senge, 2012)



A room that it passively divided into the learning spaces reflecting the pedagogies allow students to work independently and collaboratively. These environments enable students to explore and take accountabilty into their learning.

1G Aboriginal Ways of Learning



(NSW Government of Education, 2007)

The Aboriginal pedagogy framework comprises of eight interrelated pedagogies that encompass narrative-driven learning, visual learning processes, reflective techniques through hands-on experiences, utilization of symbols and metaphors, land-based learning, indirect and synergistic logic, mastery of genre through modeling and scaffolding, and fostering connectedness to the community. It is important to note that these pedagogies may vary and adapt according to different contexts and settings.

Story Sharing

Practitioners now have a broader understanding of the significance of "Story Sharing" within Aboriginal yarning modalities, recognizing its role as a pedagogical tool, a process for learning, a framework for ethical and values-based teaching, a means of conveying storied experiences, a tool for cultural meaning-making, an expression of place-based significance, and a dynamic framework that enhances memory and cognition.

Learning Maps

Practitioners now have a deeper understanding of the concept of "Learning Maps" within Aboriginal intellectual processes, recognizing their potential to be visualized through culturally grounded metaphors. Increasingly, individuals are incorporating Learning Maps into their planning processes and utilizing them as a tool to effectively communicate explicit quality criteria.

Non-Verbal

Practitioners now have a greater comprehension of the significance of "Non-verbal" pedagogy in relation to Aboriginal ways of reflective, critical, ancestral, and physical engagement with knowledge. Educators are increasingly utilizing non-verbal pedagogy, primarily for behavior management and addressing challenging or problematic knowledge.

Symbols and Images

Practitioners now have a growing comprehension of the significance of "Symbol/Image" as a visual metalanguage, serving as the foundational components for memory formation and the creation of meaning. It is recognized as a cross-cultural and dynamic tool. Teachers are increasingly finding it valuable in aiding students' comprehension and retention of new concepts. Moreover, there is an evolving understanding of "Symbol/Image" as metaphor, where oral and visual representations are created to support the learning of novel ideas.

Land Links

Practitioners now have a deepening understanding of the significance of "Land Links" in relation to Aboriginal concepts of place and country. It is recognized as a dynamic framework comprising extensive schematics, knowledge systems, and intellectual processes. This understanding is guiding and enriching school systems and curricula by integrating the wisdom and insights derived from the complex relationships with the land. "Land Links" provide a valuable foundation for holistic and culturally responsive education.

Non-Linear

Practitioners now recognize the importance of "Non-linear" pedagogy in Aboriginal traditions of cultural innovation, allowing for the productive integration of community and school knowledge. This approach fosters higher-order thinking by incorporating seemingly unrelated domains to create complex, real-life problems that learners solve using holistic thinking and innovative processes. By embracing non-linear pedagogy, educators can encourage multidimensional perspectives and facilitate creative problem-solving.

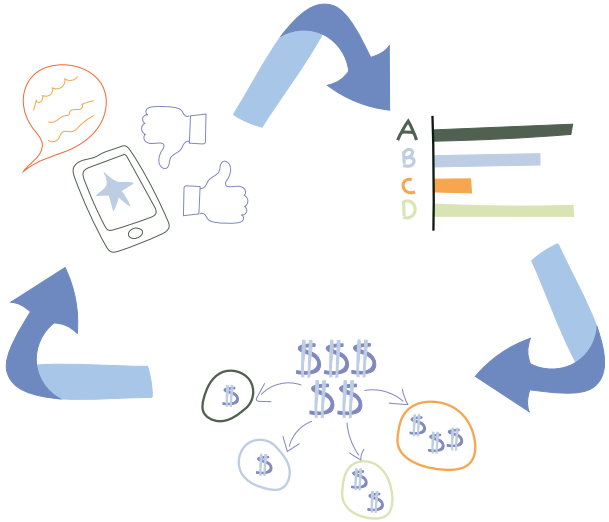
Deconstruct Reconstruct

Practitioners now have an increasing understanding of the significance of "Deconstruct/Reconstruct" within Aboriginal scaffolding methodologies. It involves engaging with entire processes and texts, with a focus on modeling and building upon students' fundamental skills and identities. This approach enables the successful transfer of knowledge and skills from familiar to unfamiliar contexts. By deconstructing and reconstructing learning experiences, educators can support students in developing a strong foundation while gradually expanding their abilities in various settings. This method promotes meaningful learning and the application of skills beyond the immediate context.

Community Links

Practitioners now have a deeper understanding of the significance of "Community Links" in Aboriginal contexts, recognizing the importance of relationships with both insiders and outsiders in the development and acquisition of knowledge. It is clear that any learning, program, or policy that does not establish connections within this relational system is bound to be ineffective in the long run.

1C Post Occupancy

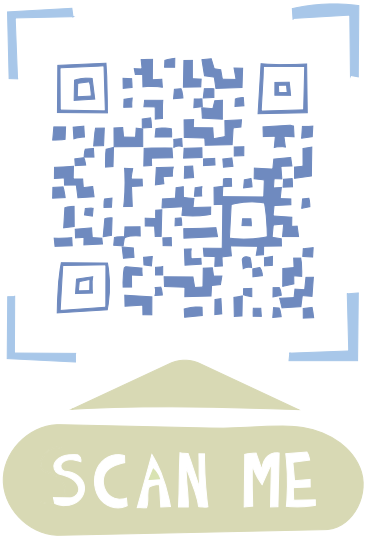


Constant Feedback Loop

The implementation of a rating system for classrooms, utilizing an app that allows students, teachers, and visitors to rate rooms on a 5-point scale, would provide valuable feedback for the governing body of a school. The data gathered from the app would provide insight into the quality of the learning environment, allowing the school to identify areas that require improvement or investment. With this information, the school can hold meetings as frequently as needed to discuss the feedback and determine how best to allocate funding or resources to address the concerns raised by the community.

By utilizing the rating system, students, teachers, and visitors are given a platform to voice their opinions on the learning environment, ensuring that their feedback is heard by the governing body of the school. This system also promotes transparency and accountability in the use of school resources, as the governing body can use the feedback to make informed decisions about how to allocate funding or additional resources. Additionally, the use of an app-based rating system allows for real-time feedback, enabling the school to make necessary adjustments and improvements to the learning environment quickly and efficiently. Overall, the implementation of such a system could lead to a more inclusive and effective learning environment for all members of the school community.

User Feedback Information



QR Codes allocated at the front of each facility

Leads to

5 Point System for Clarity

Metric
Designing with Pedagogy

Designing with and for contemporary pedagogy involves an initial understanding of user needs and current behavioral patterns. In the Stage 1 Consultation with Students and Teachers, where no physical form has been designed yet, architects have the opportunity to gather qualitative data that is specific to the site's users. This crucial phase allows for a deep exploration of the educational community's requirements, preferences, and aspirations.

By engaging with students and teachers, architects can gain insights into their pedagogical approaches, learning styles, and desired interactions within the learning environment. This qualitative data serves as a foundation for formulating a stronger set of design principles and forms that are focused on optimizing user occupancy. Understanding the users' needs and current behavioral patterns ensures that the resulting design is tailored to their specific requirements, creating an environment that supports and enhances contemporary pedagogy.

Question Number	Question For Students
1	What is your favourite class at school? Why?
2	What is your least favourite class at school? Why?
3	How do you have fun outside of school?
4	How do you spend recess and lunch?
5	What makes you feel safe outside of school?
6	What do you wish your school had e.g rock climbing wall, blackout room, ball pit, sandpit, resting spaces? why?
7	What's your favourite space at school?
8	When it rains what do you like to do during your breaks at school ?
9	What piece of equipment or furniture do you sit on or use the most?
10	Does your current daily routine allow you to get the most out of your day or are you pushed for time?
11	What do you need when you feel stressed ?
12	Do you feel like you are welcome in all parts of the school?
13	Which area of the school do you want to spend more time in?
14	Where do you sit for lunch ?
15	How do you use your free time at school?

Question Number	Question For Teacher
1	In your current classroom, what cant you work with out?
2	What have you found your students use the most and are most responsive to when you teach with it?
3	How do your students lose interest in your class ?
4	Have you ever taught a lesson completely outside ?
5	How often are you teaching with the aid of large display screens ?
6	Do you prefer to sit at the same table with your students or stand around them?
7	What do you need when you feel stressed ?
8	Do you feel like you are welcome in all parts of the school?
9	Which area of the school do you want to spend more time in?
10	Where do you sit for lunch ?
11	How do you use your free time at school?
12	When it rains what do you like to do during your breaks at school ?
13	What's your favourite space at school?
14	How often do you wish you could expose your students to more variety within a lesson?
15	What do the types of thinkers need to work alone or collaboratively?
A	Inquires
B	Knowledgeable
C	Thinkers
D	Communicators
E	Principled
F	Open-minded
G	Caring
H	Risk-takers
I	Balanced
J	Reflective

02
Designing a Network of Schools

2A Designing a Network of Schools

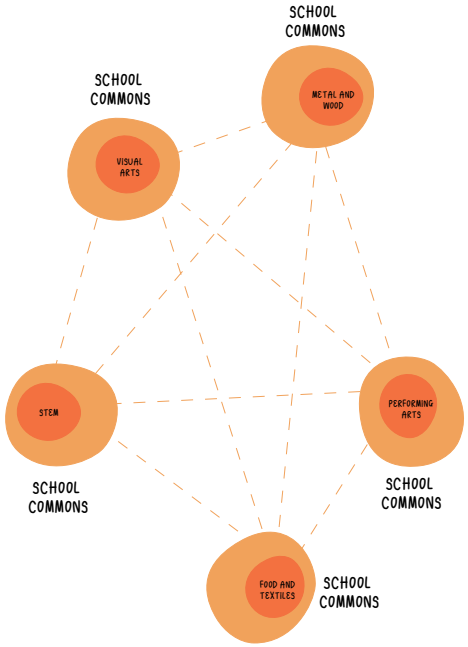


Figure 2A.1

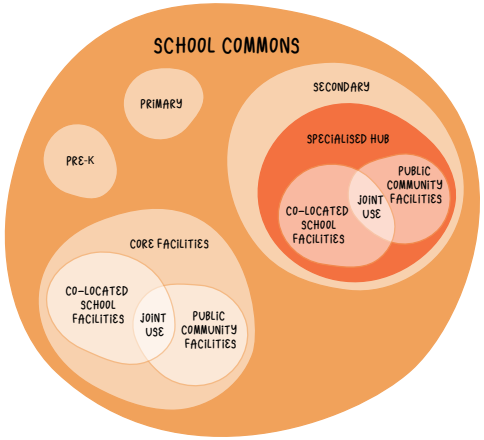


Figure 2A.2

Context
Good design responds and contributes to its context. Context is everything that has a bearing on an area and comprises its key natural and built features. Context also includes social, economic and environmental factors.

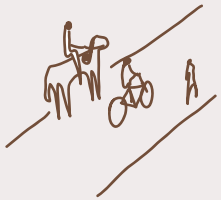
Understanding the context means understanding how the inter-relationships between all these factors, including between the local area and the region, will impact on the area over time.

The process of defining the context's setting and scale has direct implications for design quality of schools. It establishes the parameters for individual development and how new buildings should respond to and enhance the quality and identity of an area.

Creating School Networks
Figure 2A.1 and 2A.2 shows the two main scales in which the school commons perform. In a wider scale, the school commons are a network of schools, with shared facilities across a region. Zooming into a singular school common, figure 2A.2 demonstrates the facilities that are shared with the wider network of school commons.

For the safety and security of students, pre-K to primary resources are allocated as co-located school facilities. These facilities only available to the community out of school hours. Core facilities such as the multipurpose hall and the library have components that are shared with the public. Secondary is partially shared with the community only through the specialised hub.

2B Supporting Infrastructures



Shared Pathways
Bike, walking, horse trail paths.

Amenities
Amenities for cultural spaces such as weaving activities, BBQ, tables, seats, electric plug outlets, toilets, etc.

Signage
Signage, storytelling and wayfinding devices around the landscape to guide visitors.

Landscaping
Landscape or planting strategy to incorporate local indigenous species.

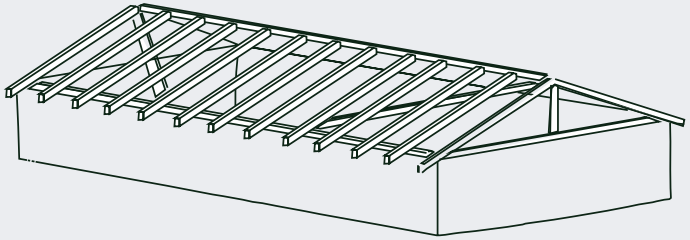
Infrastructure to Keep Sites
Provide infrastructure to Keep Sites if needed. Provision of community requirements once cultural care is undertaken.

Hromek, 2022

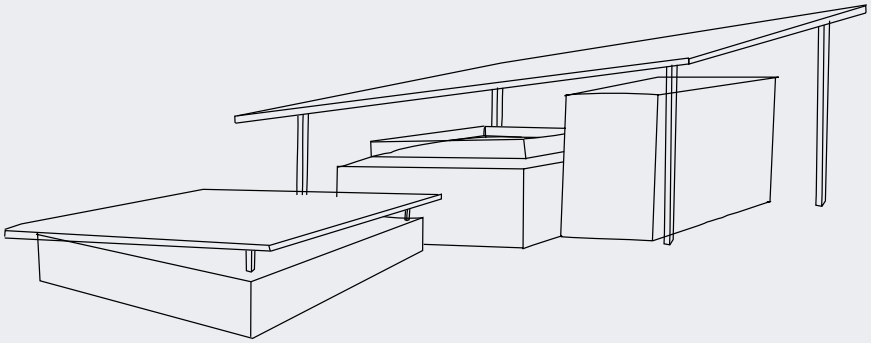
Planning for School Network

School planning should consider access to and inclusion of all forms of transport and activity, including: shared pathways, amenities, signage, landscaping, and infrastructure. These indigenous principles encourage interrelated networks, celebrated and informed use of space, and connection to Country.

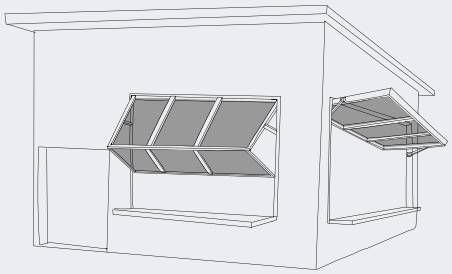
2C Specialised Hubs



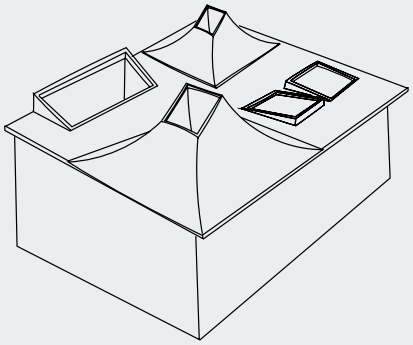
Metal and Woodwork Hub
Characteristics: Exposed Structure
Refer to 4I for more information.



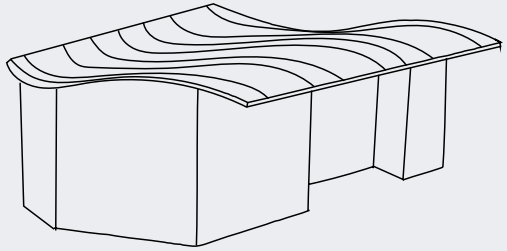
STEM Hub
Characteristics: Detachable Roof
Refer to 4K for more information.



Food and Textiles Hub
Characteristics: Operable Windows
Refer to 4M for more information.



Visual Arts Hub
Characteristics: Skylights
Refer to 4M for more information.



Performing Arts Hub
Characteristics: Sculptural Ceilings/Roof
Refer to 4L for more information.

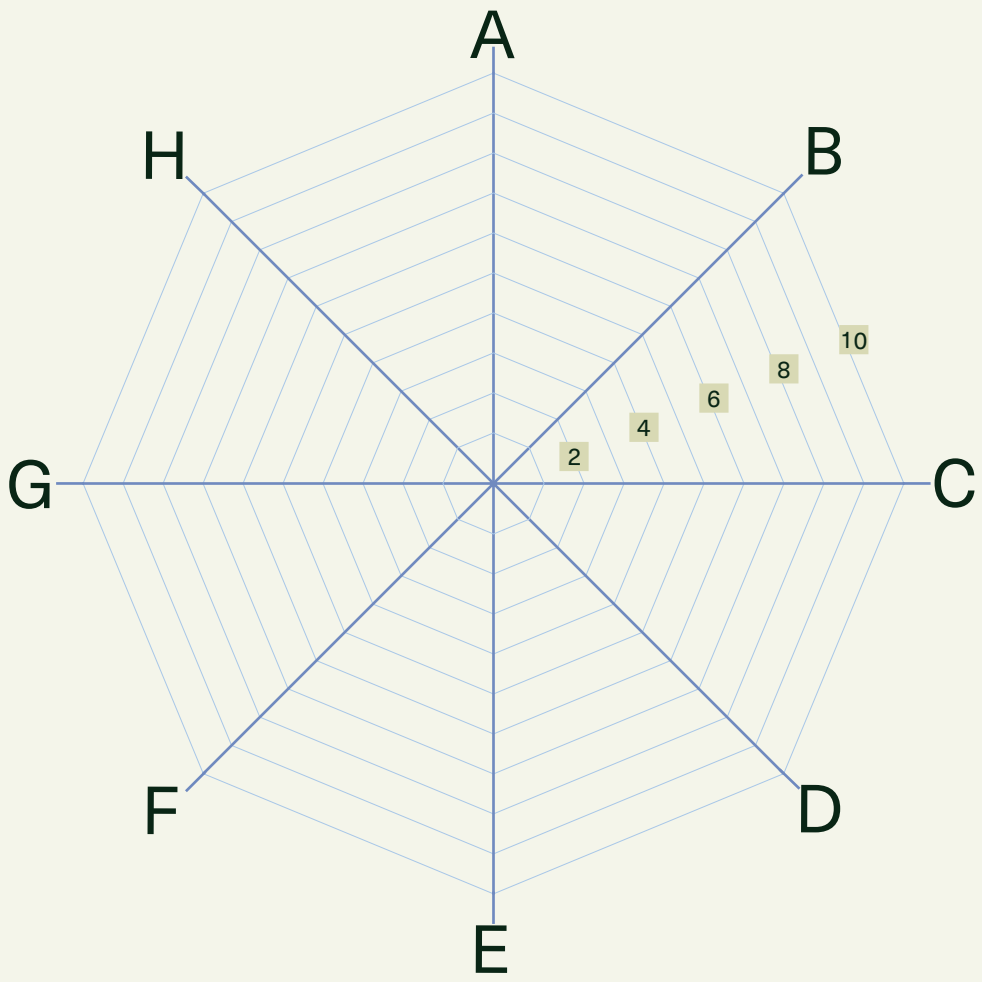
Specialised Hubs and Unique Characteristics

Specialised hubs are community-shared school facilities offering focused education in specific subjects. Typically, the specialty of the school is often decided by the community and the specialty in which the provide or need. They feature enhanced resources and expert educators in those subjects. To visually distinguish these hubs within the broader school network and foster a sense of familiarity, distinct characteristics are employed, establishing a unique identity for each specialized hub while connecting those offering the same subject.

Metric
Designing a Network of Schools

How to Network Schools at an LGA Level. Checking that the selection of schools currently existing and school still to be built can function in harmony of each other.

Allocated Letter	Metric	Unit of Measure-ment	Ideal Outcome
A	Average walking distance between the 4 Major School Specialised Hubs.	km	2.5 to 4 km
B	How often are the Senior School Students utilising adjacent Specialised Hubs.	Days In the Term	10 Days for each Hub
C	How often are the Primary School Students utilising adjacent Specialised Hubs.	Days In the Term	7 Days for each Hub
D	How often are the Pre-Primary School Students utilising adjacent Specialised Hubs.	Days In the Term	5 Days for each Hub
E	How often are the Pre-K School Students utilising adjacent Specialised Hubs.	Days In the Term	3 Days for each Hub
F	How easy will it be for Senior students to rotate between Specialised Hubs	Points 1-10	Between 1-3 (Very Easy)
G	How gradual will the transition from Primary to Senior School be with the engagement of the Specialised Hubs ?	Points 1-10	Between 1-3 (Very Gradual)
H	What infrastructure and technology requirements are necessary to establish a robust network of schools within the LGA in its current state?	Points 1-10	Between 4-6 (Equal Amount of New)



03 Designing Shared Community Spaces

3A Defining School Commons Facilities

Public Community Facilities

- Meeting Rooms
- Tertiary Study
- Reception
- Foyer
- Outdoor Library space
- Personal Locker Storage
- Resources Storage

- Optional
  - Cafeteria
  - Children's Activity Area
  - Community Stores
  - Exhibition Gallery

Joint Use Facilities

- STEM Hub
- Trade Hub
- Visual Arts Hub
- Performing Arts Hub
- Library
- Amenities

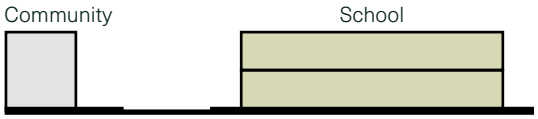
- Optional
  - Parking Spaces
  - Student Run Store

Co-Located School Facilities

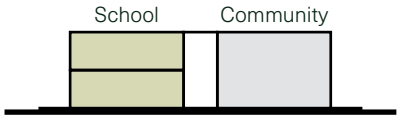
- Exhibition Gallery
- Multipurpose Building
- Fitness Rooms
- Cafeteria
- Administrative Buildings
- Change Rooms
- Collaborative Learning Spaces
- Support Learning Hub
- Outdoor Library space
- Open Unobstructed Play Space
- Resources Storage

3B Interrelationships Different Sites

Greenfield Schools



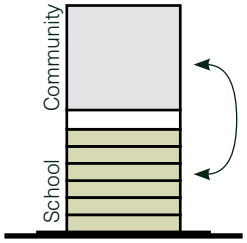
Network
Standalone school connected to a network of surrounding community facilities.



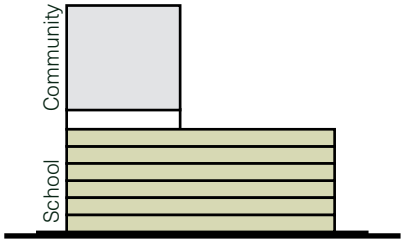
Integrated
On-site provision of integrated community facilities.

Schools in greenfield sites are commonly one to two storey low-rise buildings, typically surrounded by a suburban or sprawled context.

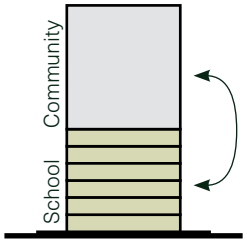
Brownfield/Urban Schools



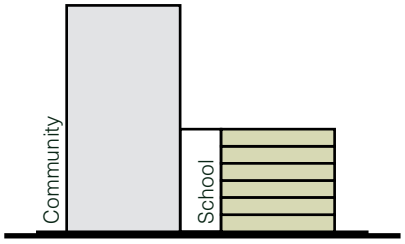
Integrated
School integrated in tower with shared lift core.



Hybrid
School integrated in tower with shared/separate lift core.



Retrofit
School is retrofitted within existing structure.

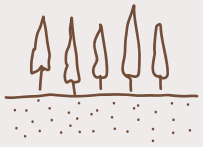


Standalone
On-site provision of separate community facilities.

Source: NSW Department of Education Urban School Guidelines
Schools in brownfield/urban sites are land efficient and commonly four to seven storey mid-rise buildings, typically surrounded by dense urbanity.

3C Identities of Country

Hills
Hills hold spiritual and practical significance including; important place for stone gathering, and other alpine resources.



Open Forest
A cool place important for giving cover to people and animals as well as resources and food with a diverse range of species.

Plains / Parklands
Important hunting grounds which are kept clear, also to provide easy access.

Wetlands / Swamp
An important part that filters Country and provides the structure and resources for much life.

Rivers / Waters
Perhaps holds the most significant practically and spiritually, with the life giving qualities of water.

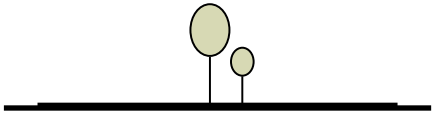
Hromek, 2022

Respect and Awareness of the Characteristics of Country

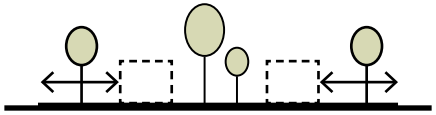
With consideration of the different site types, it is also important to understand the characteristics of Country and its significance. By drawing on indigenous knowledge, there are opportunities to create well placed, deeply connected spaces that serve as natural learning environments for students.

Designers should consult with the traditional owners and custodians of their respective sites, to further understanding of history and significance.

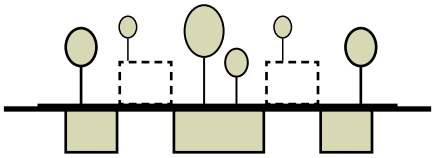
3D Establishing Form



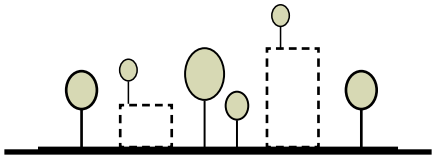
1. Tree Retention
Importance of preservation of natural landscapes for sustainability and respectful consideration of natural habitats.



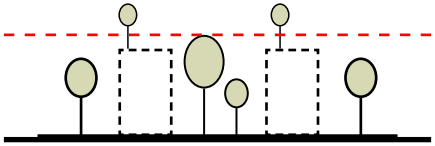
2. Setback
Setbacks create street interfaces that are an extension of public spaces and are better connected to its local context through inviting characteristics. Refer to respective DCP.



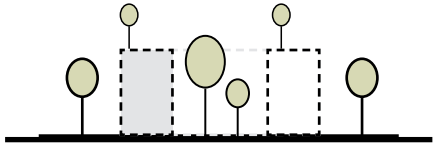
3. Open Space and Deep Soil
Ensure requirements for school and public open spaces are met and provisions for deep soil for planting.



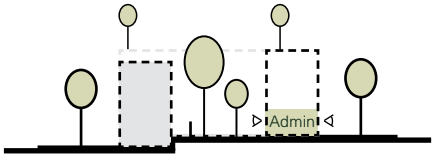
4. Internal Area Requirements
Programmatic and area requirements for the school commons are essential in ensuring students are provided the necessary spaces to learn comfortably.



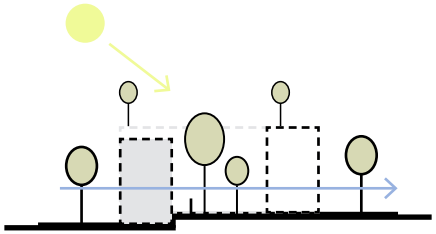
5. Height
Built form should be compliant with height restrictions and should also consider height of existing and future context to compliment street character.



6. Community/Specialised Hub
Integration of community facilities and specialised hubs once programmatic and functional area requirements are met.

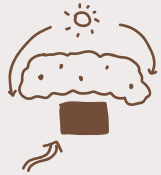


7. Safety
Utilise passive and active safety strategies such as programmatic zoning shared and dedicated areas, elevational separations, passive surveillance, and physical barriers.



8. Building Performance and Orientation
Buildings must achieve daylight, ventilation, thermal and acoustic requirements to ensure students are comfortable in their learning environments.

3E Caring for Country



Orientation
Consideration of prevailing winds and sun's position during placement.

Share the Country
Keep the important places open for all to use and benefit from. Places such as the river or up on hills should be reserved for shared parks and recreation places.

Solar Control
Using vegetation, orientation and placement of buildings, optimum solar efficiency can be achieved depending on the season.

View Points
Maintaining the integrity and quality of high view points are important to establishing and understanding of Country and place.

Topography
Design should work around topographical features as they are important wayfinding devices in the landscape and provide identity and distinction to a place.

Diverse Vegetation
Provision of diverse vegetation that is natural to the land.

Hromek, 2022

Design Principles to Establish Form and Organisation

When establishing the form and organisation on a site, it is important to take into account indigenous design principles. By drawing on indigenous knowledge deeply rooted in the land and its properties, there are valuable opportunities to create well-positioned, connected spaces that serve as natural learning environments for children.

Designers should consult with the traditional owners and custodians of their respective sites, to further understanding of history and significance.

3F Establishing Parameters

In order to determine the appropriate allocation of space for community facilities, it is crucial to initially identify the necessary areas specifically designated for the school. This includes area allocations and design objectives for learning spaces, parking, and outdoor play spaces.

School Dedicated Spaces

The table below identifies indicative area calculations broken down for specific stages for the school commons, with exclusions of circulation areas for up to the designers interpretation. Areas are further broken down in part 4 of this guide.

Allocation	Area (m^2)
Pre-K (100 Children)	636.15
Primary (1000 Children)	5,442
Secondary (1000 Children)	6,046
Amenities	331
Core Facilities	2,656
Total School Commons NUA	15,111.15

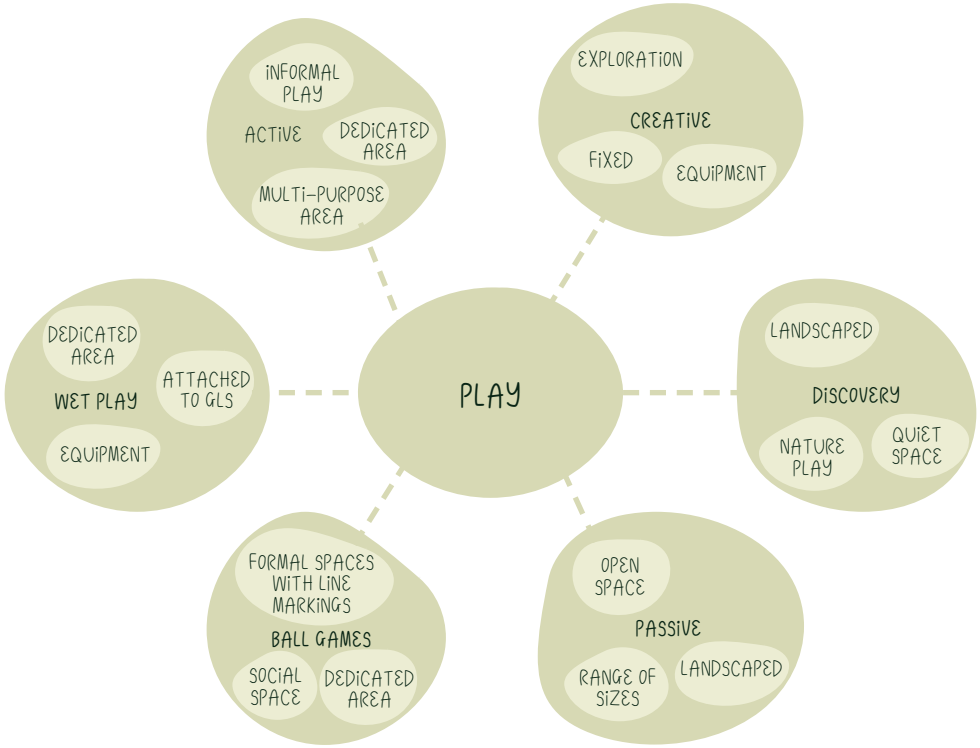
Parking

The number of car and bicycle parking spaces provided on the site should be determined relative to the availability, frequency and convenience of public transport and the safety and amenity consequences of parking overflowing into adjoining streets. Schools located in inner urban and high-density areas may require fewer off street car parking spaces than in lower density areas with limited access to transport, employment and services. School developments to submit Green Travel Plan.

It is crucial to prioritise site access and create a safe pedestrian environment both within and around the school premises to minimise conflicts and ensure the safety of children, visitors, and school users through effective design and management plans. Objectives for car parking is as outlined below.

1. Separate drop-off and parking area for Pre-K students
2. Separate drop-off and parking area for primary infant students
3. Kiss and drop-off point at main entry of school
4. Separate pedestrian access from the car park to the facility
5. Defined pedestrian crossings
6. Separate paths included within large car parking areas
7. Separate pedestrian and vehicle entries from the street for parents, children and visitors
8. Pedestrian paths that enable two prams to pass each other
9. Delivery, loading and vehicle turnaround areas located away from the main pedestrian access to the building and in clearly designated, separate facilities
10. Minimise the number of locations where pedestrians and vehicles cross each other
11. Vehicles can enter and leave the site in a forward direction
12. Clear sightlines are maintained for drivers to child pedestrians, particularly at crossing locations.
13. Bicycle parking should be provided suitable for the context and user needs of the centre.

Outdoor Play Space



Source: NSW Department of Education Urban School Guidelines

The provision of open space should not simply be an open oval for children to freely run around. Children require equipment or informal prompts to spark their imagination and learning through play. Supervision is important for children's safety just as much as it is important to give them the freedom of play. Below are objectives for open spaces.

- Open space should be categorised into different zones of play to create spaces that facilitate diverse modes of play and learning through play.
- Play spaces must be able to be supervised by one teacher, have clear sight lines to students and avoid corners and nooks which inhibit supervision.
- Play space shared with the community needs to be assessed on a case by case basis with regards to the security required to ensure student safety.
- Pre-K and infant primary play spaces should be completely separated. Separate dedicated spaces for secondary and primary should be provided, however, spaces that encourage mix inter-generational play can be provided but should not be the primary open space.
- Should ball play be located above ground, ensure that proper barriers are installed so that balls do not fall below.
- Should have natural gradients and avoid stairs for accessibility

Below are area requirements for outdoor play space.

	Ratio
Greenfield Sites	10m² per child
Brownfield Sites	6m² per child + 4m² per child at nearby field maximum 5 minutes contiguous walk.

Outdoor play space excludes any of the following:
- Minimum 2.1m circulation pathway or thoroughfare
- Waiting areas to lifts, toilets and stairs
- Hedge or dense planting
- Other space that is not suitable for children

Below are requirements for dedicated areas.

	Primary	High School
Cola	• 4m floor to floor height minimum. • Adjacent to basketball courts • Combined area of cola and basketball courts to be 805m².	• 7m floor to floor height to accommodate competition level basketball court in cola.
Basketball Courts	• 1x full sized basketball court at 28 by 15 metres. • Adjacent to cola. • Combined area of cola and basketball courts to be 805m².	• Minimum 3 x full sized basketball courts at 28 by 15 metres (or 6 x half courts) located on-site. • Or, minimum 3 x full sized basketball courts at 28 by 15 metres (or 6 x half courts) located off-site within a 5 minute contiguous walk.
Games Field	• 1x games field with minimum dimension of 67m x 95m. • Consideration will be given to a smaller games field if it is demonstrated that representative and • Organised sport can be accessed within a walkable distance and the 6m2 of play	

Solar Access and Sun Protection

Controlled exposure to daylight for limited periods is essential as sunlight provides vitamin D which promotes healthy muscles, bones and overall wellbeing. However, exposure to ultraviolet radiation in childhood significantly increases the chances of getting skin cancer later in life.

Outdoor play areas should be provided with controlled solar access throughout the year, including protecting children and staff from ultraviolet radiation from the sun and play equipment from becoming hot. Well-designed play spaces provide comfortable and safe areas for children to engage in activities for improved health and well-being.

Outdoor play areas should:
- Have a minimum of 2 hours of solar access between 8.00am and 4.00pm during winter months, for at least 30% (or 3m2) of the 10m² of outdoor space per child required.
- Adequate shade for outdoor play areas is to be provided in the form of natural shade such as trees or built shade structures with a minimum height of 2.1m giving protection from ultraviolet radiation to at least 30 per cent of the outdoor play area.
- Have evenly distributed shade structures over different activity spaces.

Public Open Space

Public open space, where provided, is responsive to the existing pattern and uses of the context, and also consider future plans and changes in demographic and uses. Objectives for public open space are as outlined below.

- The public open space should be well connected with public streets along at least one edge
- The public open space should be connected with nearby parks and other landscape elements
- Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid
- Solar access should be provided year round along with protection from strong winds
- Opportunities for a range of recreational activities should be provided for people of all ages
- A positive address and active frontages should be provided adjacent to public open space
- Boundaries should be clearly defined between public open space and private areas

Deep Soil Zone

Deep soil zones are areas of soil not covered by buildings or structures within a development. They exclude basement car parks, services, swimming pools, tennis courts and impervious surfaces including car parks, driveways and roof areas.

Deep soil zones have important environmental benefits, such as allowing infiltration of rain water to the water table and reducing stormwater runoff, promoting healthy growth of large trees with large canopies and protecting existing mature trees which assist with temperature reduction in urban environments. Deep soil zones may be constrained by the size of the lot or the location of the school. To provide shade and amenity for residents they can be co-located with outdoor play space.

Site Area	Minimum Dimensions	Deep Soil Zone (% of site area)
Less than 650m²	-	7%
650m² - 1500m²	3m	10%
Greater than 1500m²	6m	15%

Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure. Below are suggested soil volumes on site with sand, clay, alluvial, transition and disturbed soils.

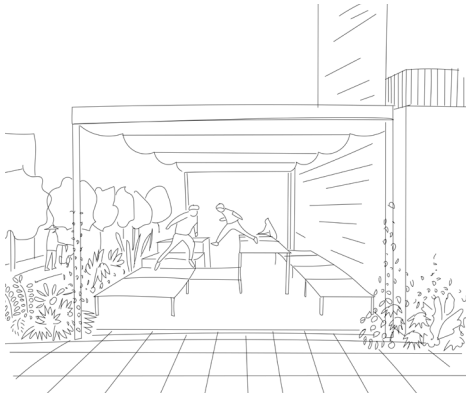
Tree Size	Height	Spread	Soil Volume
Large Trees	13 - 18m	16m	80m³
Medium Trees	9 - 12m	8m	35m³
Small Trees	6 - 8m	4m	15m³

3G Outdoor Environments for Play

Outdoor play promotes physical activity, motor skills, and coordination, and enhances cognitive abilities, problem-solving, and critical thinking. By engaging with natural environments, children develop a sense of wonder, curiosity, and creativity and they are provided with the opportunity to learn about the natural world, ecosystems, and sustainable practices.

Nature provides sensory stimulation, improving emotional well-being and mental health. Moreover, outdoor play fosters social skills, teamwork, and communication as children interact and collaborate with their peers. It creates a rich and meaningful learning experience that nurtures a lifelong connection with the natural world.

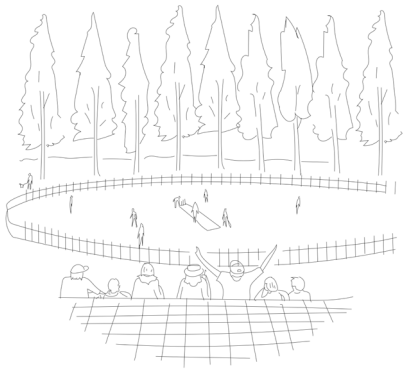
School design should consider multiple outdoor environments for play to cater for diverse needs and interests, fostering holistic development and promoting varied forms of play.



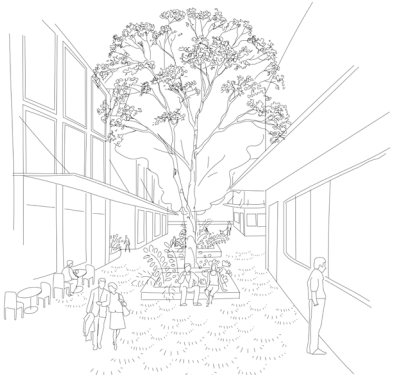
Covered Outdoor Play

Bushland Walkways

Education Through Ecology

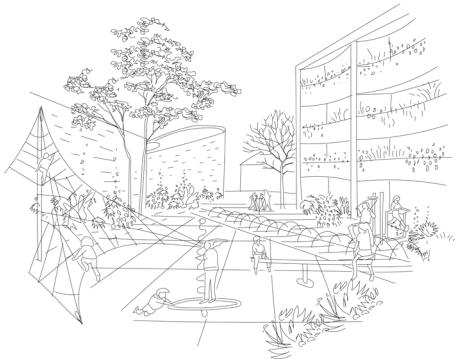


Sports Oval

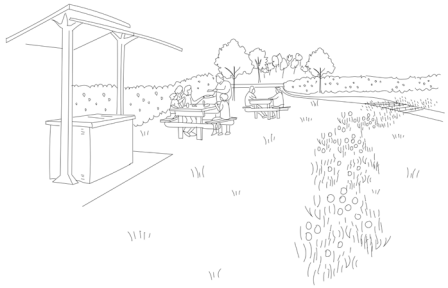


Pedestrian Boulevard

Swale Paths



Multi-Generational Play



Public Open Space

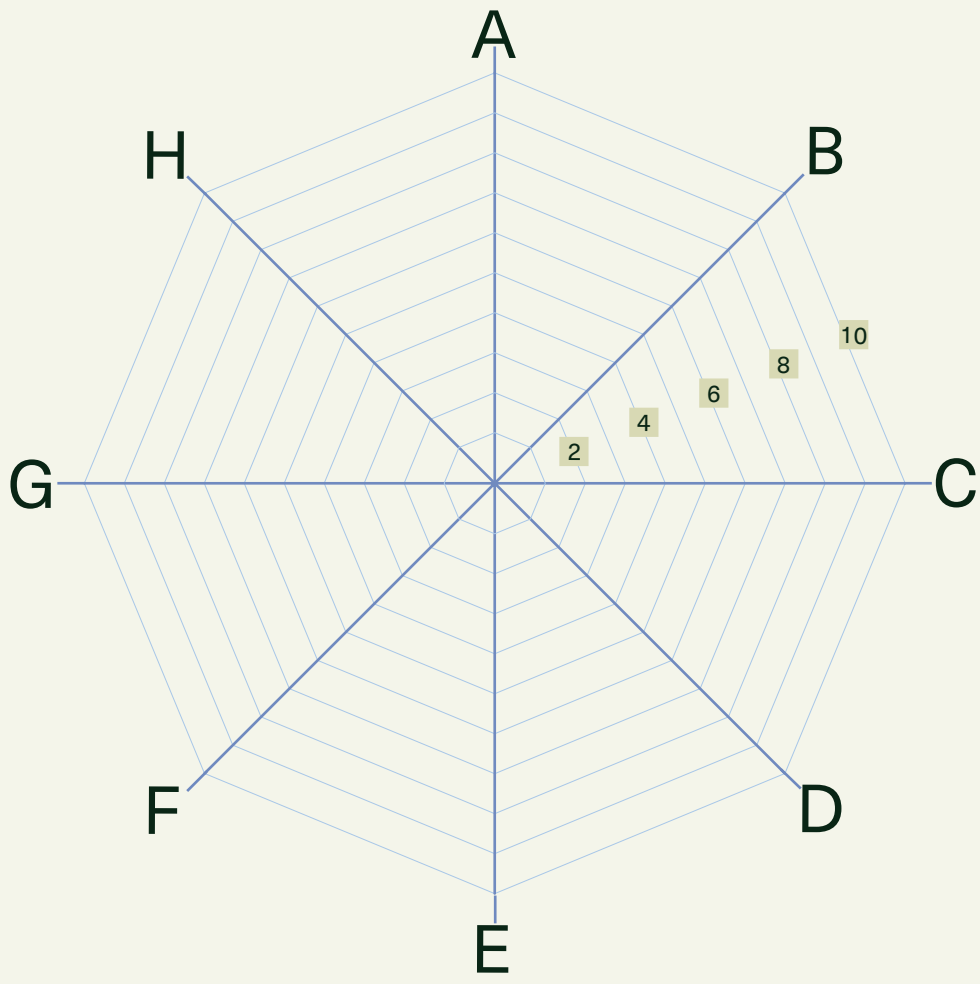
Children's' Toybox

Wetland Discovery

Metric
Designing Shared Community Spaces

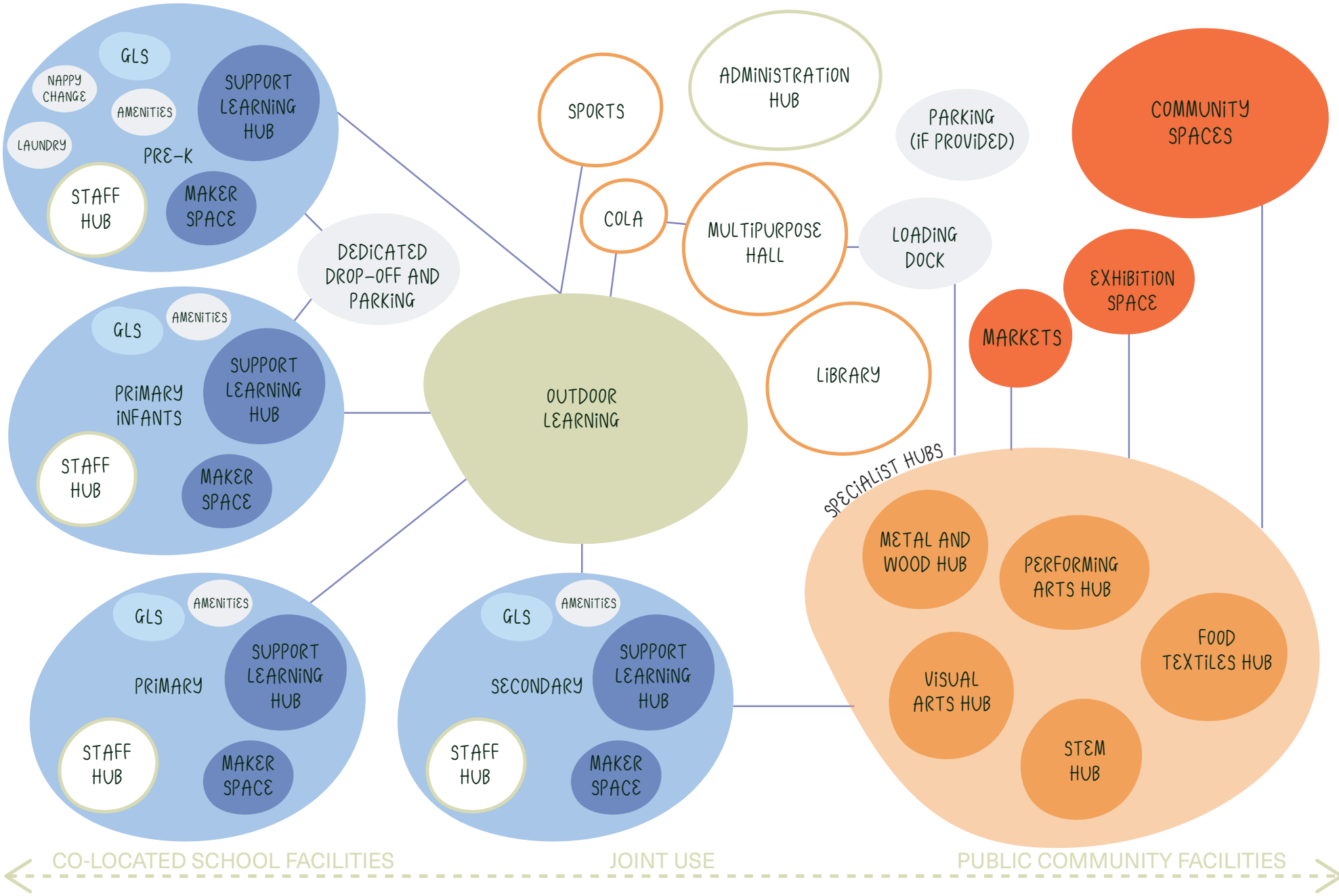
How to network schools with community within the immediate neighbourhood (ie. all the exterior and shared community spaces). Each site is unique to its surround context, these metric aid in maintaining a manageable level of engagement and integration between school users and public users.

Allocated Letter	Metric	Unit of Measure-ment	Ideal Outcome
A	Average walking distance between one school and one public community owned spaces.	km	2.5 to 4 km
B	How often are the Specialised Hubs only used by Public?	Days In the Term	10 School Days for each Hub
C	How often are students utilising public community owned Buildings ?	Days In the Term	10 School Days
D	How often are students utilising public community owned fields?	Days In the Term	10 School Days
E	How much of the school is open during holidays for public use?	Percentage	Over 65 %
F	How integrated is the curriculum of the school and the public function curriculum?	Percentage	50 %
G	Which design spaces can accommodate collab-orative initiatives and activities to strengthen the relationship between schools and the neigh-bourhood, such as large workshops, functions or exhibitions ?	Percentage	Over 40 %
H	Number of spaces open after typical school hours (8-4) to accommodate more frequent smaller scale activities and initiatives e.g. language classes, additional tutoring and family support.	Percentage	Over 80 %



04
Designing Optimal Learning Settings

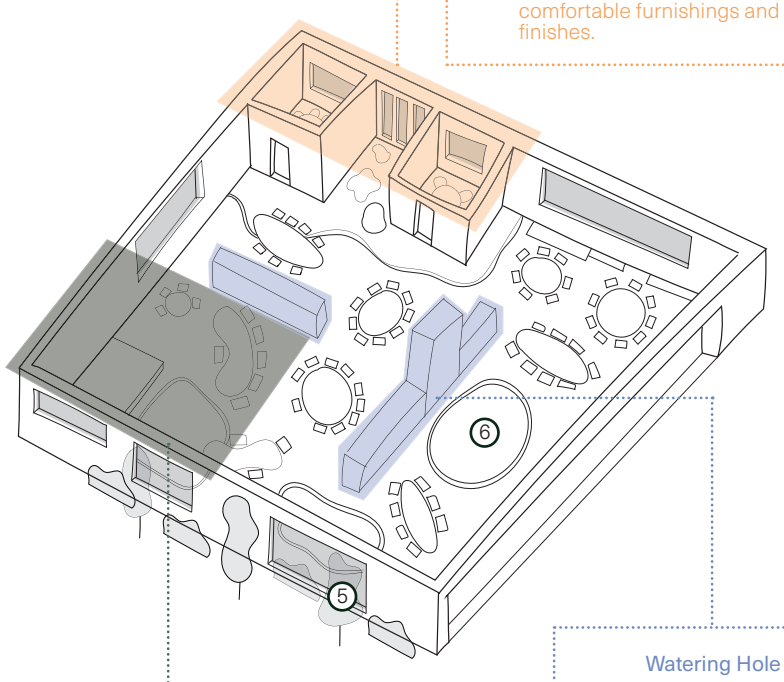
4A School Commons Adjacency Diagram



4B General Learning Space

Cave

- Spaces for focused learning.
- Changing size of occupancy from individual to group.
- Spaces to be acoustically isolated.
- Ability for light to be controlled through operable openings or artificial lighting.
- Provision of ergonomic and comfortable furnishings and finishes.



Campfire

- Spaces for collaborative learning, where discussions, collaboration, feedback and reflection, guided, explicit, and demonstration settings could occur.
- Access to presentation equipment.
- Seating to face single aspect i.e. presenter/ teacher.
- Consideration of controlling acoustics and noise pollution from this area to open space.

Watering Hole

- Centralised location equipped with essentials shared by students.
- Organisation of objects and strategic heights to establish objects that require teacher guidance and others that are free for students of any age to use.

Description

General Learning Spaces are the internal spaces in which formal teaching and learning occur. These spaces are typically repeated throughout the school commons, however, should be tailored to its user needs and context. GLS should particularly facilitate diverse learning settings (NSW DoE, 2023) including:

- Collaboration
- Discussion
- Feedback and Reflection
- Guided
- Explicit
- Demonstration
- Experiential
- Independent

Objectives

1. Provide diverse learning settings through cave, campfire, and watering hole typologies.
2. Achieve a minimum of 2 hours of solar access between 8am and 4pm during winter months for at least 70% of GLSs.
3. At least 60% of GLSs are cross ventilated.
4. Any mechanical heating and cooling, artificial lighting, etc. control switches to be accessible within the GLS at a central and convenient location, installed at a height reachable by primary and secondary students.
5. Provide a balance of evergreen and deciduous trees to give shade in summer and sunlight in winter.
6. Zone open plan spaces through visual and material cues.
7. Loose furniture to be at appropriate heights for respective stages, refer to user metrics.
8. Colour palette is ideally neutral and light, using colour intentionally to accentuate information. Avoid loud and angry colours.
9. Facilitate collaboration while optimising comfortability through diverse selection of loose or integrated furnishings.
10. Integration of technology with allowance to upgrade.
11. Optimise acoustics through material insulation, zoning, and breaking down open spaces through integrated joinery.
12. Provision of sink for messy play and to encourage hygiene.
13. Centralised storage to exhibit available equipment to students in an organised manner.
14. Lighting should provide required maintained illuminance over learning spaces; adequate wall and ceiling luminances for comfortabe seeing conditions, including accommodating potentially high sky luminances; and the recommended illuminances on vertical information boards. To facilitate the use of visual aid it is necessary to be able to control the lighting, including the entry of daylight, by suitable switching and the use of curtains and blinds.

Size Requirements

Stage	Area	Teacher to Student Ratio
Pre-K	210m^2	4:60
Primary Infants	157.5m^2	3:45
Primary	105m^2	2:30
Secondary	52.5m^2	1:15

Storage Requirements

Storage areas are not to be included in the calculation of the total area of the GLS.

Stage	Student Personal Storage Volume	GLS Storage Volume	Information
Pre-K	0.2m³	12m³	Pre-K and Infant students typically stay in a GLS for the duration of the learning day or for long periods of time, therefore each student requires personal storage space in the GLS. As Pre-K and infant students are less autonomous and mobile, provision of equipment storage in each GLS is required. Personal student storage should be at a reachable height, refer to Pre-K and Infant user metrics.
Primary Infants	0.2m³	9m³ - 50% to be located in a centralised location for shared equipment use.	
Primary	0.2m³ (only for support GLS)	6m³ - 100% to be located in a centralised location for shared equipment use.	Primary and secondary student typically carry belongings via backpack around the school commons. Temporary locker space should be provided within centralised storage areas at a rate of 0.1m³ per 5 students should students want to leave their unattended bags secured. Storage should be accessible and should consider appropriate heights for support learning students.
Secondary	0.2m³ (only for support GLS)	3m³ - 100% to be located in a centralised location for shared equipment use.	

Optimal Ceiling Height

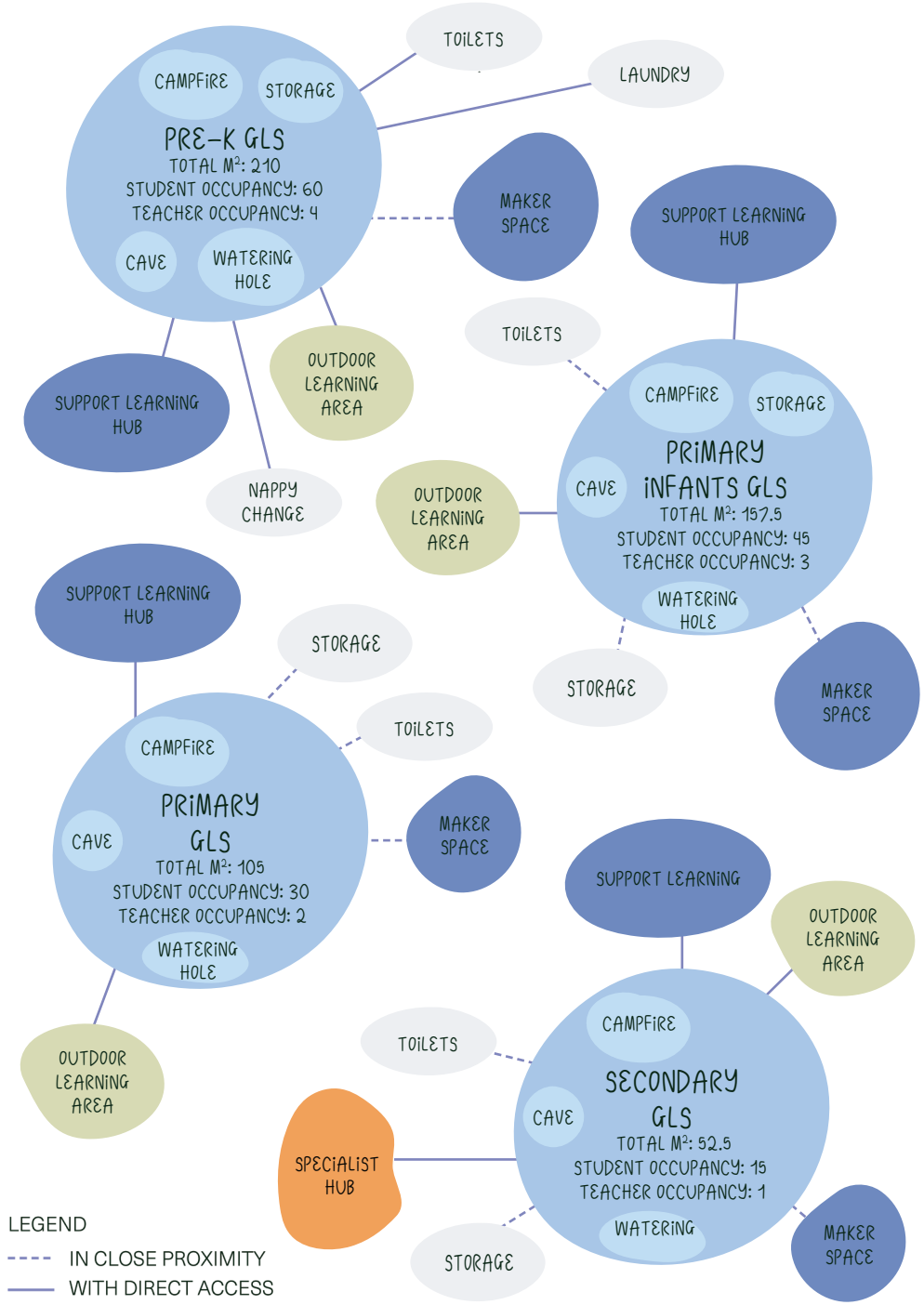
Stage	Ideal Ceiling Height
Pre-K, Infants and Primary	2.4m
Secondary	2.7m

Optimal Acoustics

	Recommended Design Sound Level		Recommended Reverberation Time (T)
	Satisfactory	Maximum	
Pre-K + Primary Open Plan	40 dB(A)	45 dB(A)	0.4 to 0.5
Secondary Open Plan	40 dB(A)	45 dB(A)	0.5 to 0.6
Single Cell	35 dB(A)	40 dB(A)	0.6 to 0.7

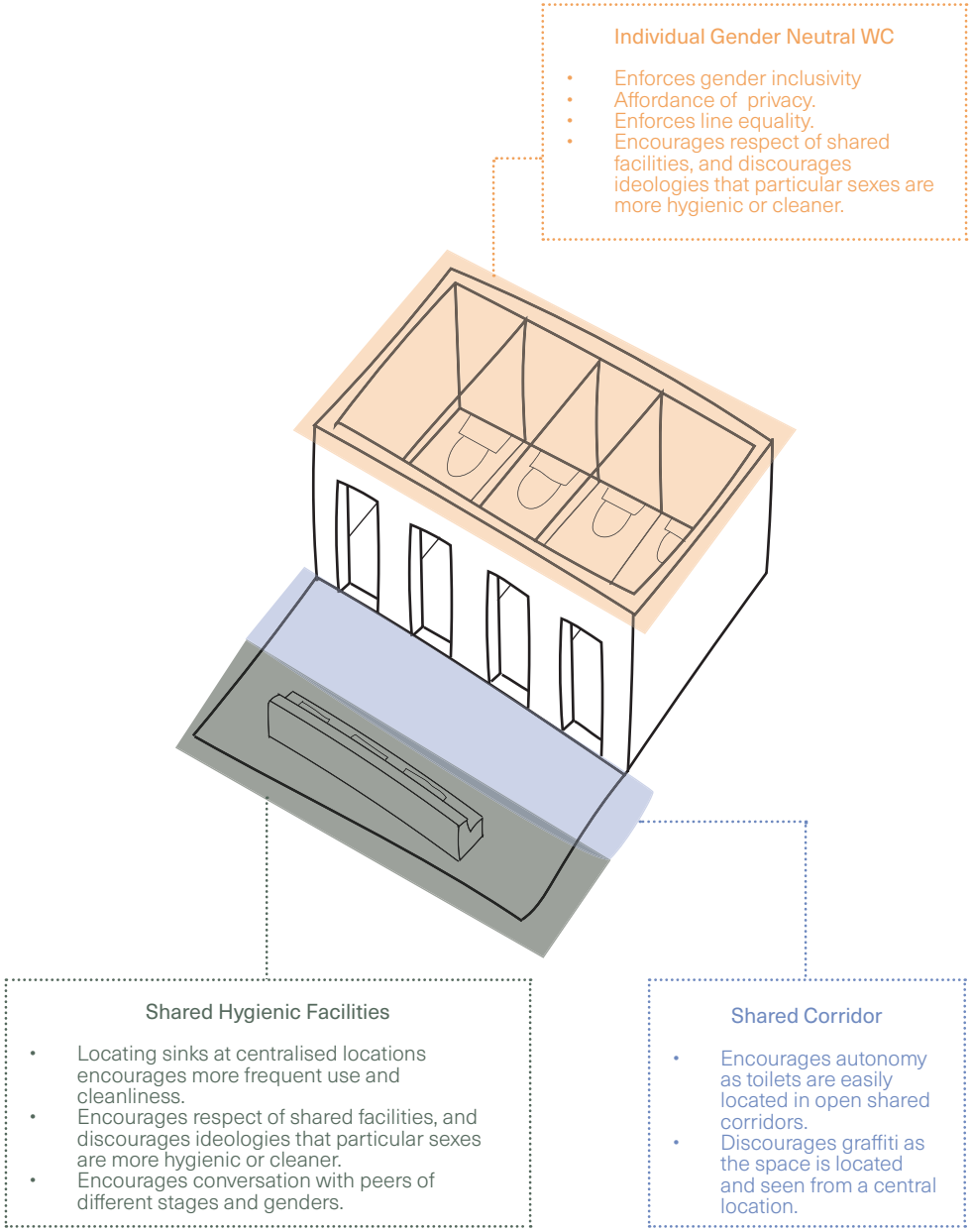
Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
GLS	240	Warm, Intermediate	19
Storage	80	Warm, Intermediate	-



GLS Adjacency Diagram

4C Amenities



Description

Toilet facilities are spaces in which individuals are afforded privacy to release waste matter from their bodies. These spaces are typically repeated throughout the school commons, however, should be tailored to its user needs and metrics. Toilet facilities vary depending on its users. These spaces should particularly facilitate learning of:

- Hygiene
- Healthy Toilet Habits
- Respect of Shared Facilities

Objectives

1. Pre-K Toilets
   - Toilet and sink heights to be appropriate to user metrics.
   - Feature low height cubicle style facilities equipped with nappy change stations.
   - Designed in a way that facilitates supervision of children at all times, having regard to the need to maintain the rights and dignity of children.
2. Infants, Primary and Secondary Toilets
   - Toilet and sink heights to be appropriate to user metrics.
   - Gender neutral individual full height cubicles.
   - Located at centralised locations for ease of access and navigation.
   - Accessible and ambulant toilets are to be provided.
3. Staff Toilets
   - Toilet and sink heights to be appropriate to user metrics.
   - Gender neutral individual full height cubicles.
   - Accessible and ambulant toilets are to be provided.
   - Accessible from staff areas and shared with visitors and community.
4. Toilets opening to shared corridors be well-ventilated and installed with automatic closing doors.
5. Promote hygiene, healthy toilet habits, and respect of shared facilities.

Other Amenities

- Drinking facilities to provide safe drinking water for the amenity of students.
- Nappy changing facilities directly accessible from Pre-K areas which
  - Is within 1m of separate adult hand washing facilities and bench type baby bath,
  - Must not be less than 0.9m^2 in area and at a height of not less than 850mm, but not more than 900mm above the finished floor level,
  - Must have a space not less than 900mm high, 500mm wide, and 800mm deep for the storage of steps, and
  - Is positioned to permit a staff member changing a nappy to have visibility of the play area at all times.
- Laundry facilities directly accessible from Pre-K areas and Support Learning Hub comprising
  - A washtub and washing machine
  - Storage for soiled clothing, nappies, and linen prior to their disposal or laundering.

Toilet Accommodation Requirements

Stage	Standard	Accessible	Ambulant	Distance to Toilet
Pre-K and Primary Infants	1 toilet and wash basin per 15 students.	1 accessible toilet and wash basin per 50 students	1 ambulant toilet and wash basin per 50 students	Pre-K directly accessible from GLS and outdoor spaces. Infants: 100m max. distance to toilet from student spaces, and accessible from indoor and outdoor areas.
Primary and Secondary	1 toilet per 50 students. 1 wash basin per 75 students.	1 accessible toilet and wash basin per 50 students	1 ambulant toilet and wash basin per 50 students	100m max. distance to toilet from student spaces and accessible from indoor and outdoor areas.
Support	-	2 accessible toilet and wash basin per support hub with 1 room to be equipped with accessible showers	2 ambulant toilet and wash basin per support hub.	25m max. distance from support GLSs
Staff	1 toilet per 15 staff. 1 wash basin per 30 staff.	1 accessible toilet and wash basin per staff hub.	1 ambulant toilet and wash basin per staff hub.	100m max. distance to toilet from staff spaces.

Fixture Heights

Stage	Seat Pan Height	Wash Basin Height
Preschool	325 - 470mm	600mm
Primary Infants	345 - 510mm	690 - 780mm
Primary	425 - 590mm	800 - 810mm
Secondary	440 - 595mm	790 - 850mm
Staff	440 - 595mm	850 - 900mm

Optimal Ceiling Height and Acoustic

	Recommended Ceiling Height	Recommended Design Sound Level
Toilet/Change/Showers	2.1m	<55 dB(A)

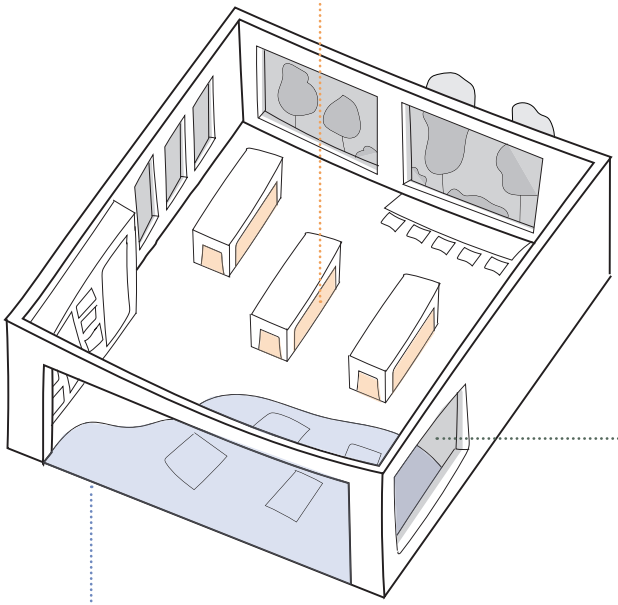
Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Toilet	80	Warm, Intermediate	2

4D Maker Space

Storage and Workbenches

- Provision of low storage for bulky and heavy items.
- Storage units should be divided into sections to reduce visual overstimulation.
- Storage should be organised and exhibited to students to allow them to be aware of what equipment is available.
- Hooks and low storage for bags and personal belongings.
- 4 students per table at 900mm x 2000mm.



Transition to Space and Exhibition

- To be openly accessible by students at all times.
- Explore material transitions to create soft transition to maker spaces from circulation and shared spaces.
- Exhibition spaces toward front of space to display work.

Glazing

- Operable panel on front of space so that space can be closed down if need be.
- Internal window for alternative view point onto exhibition space

Example Layout of Maker Space

Description

Maker spaces are spaces equipped with tools and technology for creative and hands on learning. Important to note that equipment provided are general essentials and provides only a taste of what is provided in the specialised hub, allowing students to explore specialised subjects to discover their interests. These spaces are typically repeated throughout the school commons, however, should be tailored to its user needs and metrics. Maker spaces can be consolidated with centralised storage required for primary and secondary GLS and a possible range of activities (but not limited to) include:

- Prototyping
- Woodworking
- Digital Fabrication
- Textiles and Sewing
- Arts and Crafts

Objectives

1. Workbench and storage heights to be appropriate to user metrics. Workbenches should have 1m clear space surrounding.
2. Centrally located so it is accessible to all students and visible for the exhibition of works.
3. Organised tools and equipment for easy navigation and display for students.
4. Provide a wide range of tools and equipment for a diverse range of activities.
5. Connected to outdoor work areas to allow for larger and messier projects.
6. Provision of sink for hygiene.
7. Ventilated and well-lit to ensure safe working environment.

Work Bench Height Requirements

Stage	Recommended Workbench Height
Pre-K	700mm
Primary Infants	850mm
Primary	850mm
Secondary	1200mm

Size Requirements

Stage	Area	Teacher to Student Ratio
Maker Space	52.5m^2 unencumbered space	1:15

Optimal Acoustic

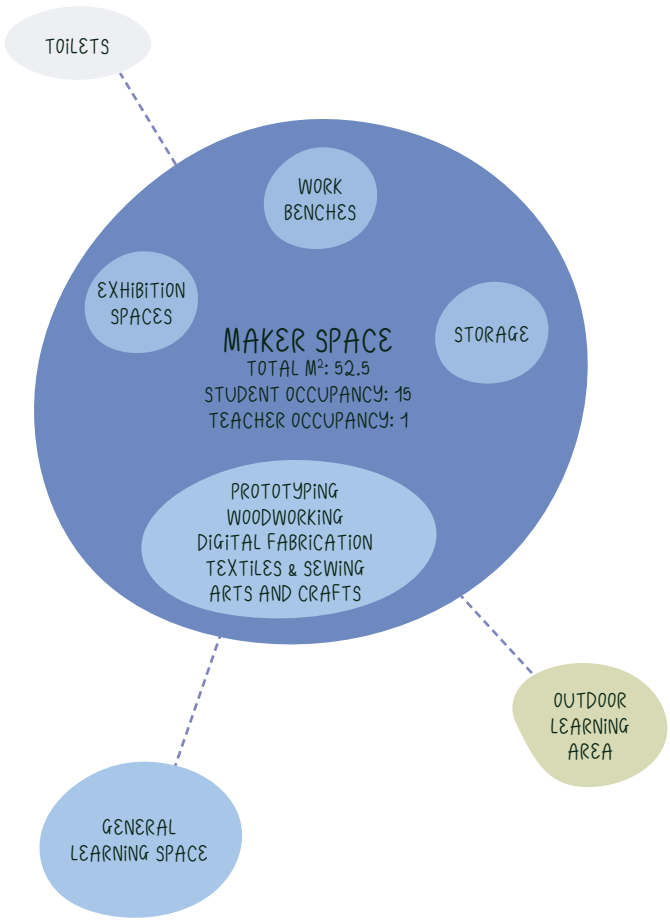
	Recommended Design Sound Level	Recommended Reverberation Time (T)
Maker Space	<45 dB(A)	<0.8

Requirements for Activities

Activity	Requirements	Recommended Ceiling Height
Prototyping	• Storage for bulky and loose materials • Storage for projects • Essential set of tools • Large bin for waste • Sink	2.4m
Woodworking	• Storage for bulky and loose materials • Storage for projects • Dust exhaust (7m²) • Essential set of woodworking tools • Connected outdoor covered workshop • Printer • Sink	3.05 - 3.5m
Digital Fabrication	• Computers • Laser Cutter • 3D Printer • Storage for bulky and loose materials • Storage for projects • Exhaust/Ventilation	3.05 - 3.5m
Textiles and Sewing	• Sewing machines • Storage for bulky and loose materials • Essential set of textiles and sewing tools • Storage for projects	2.4m
Arts and Crafts	• Printer • Sink • Essential set of arts and crafts supplies for particular mediums • Kiln • Storage for bulky and loose materials • Storage for projects • Dark Room	2.4m

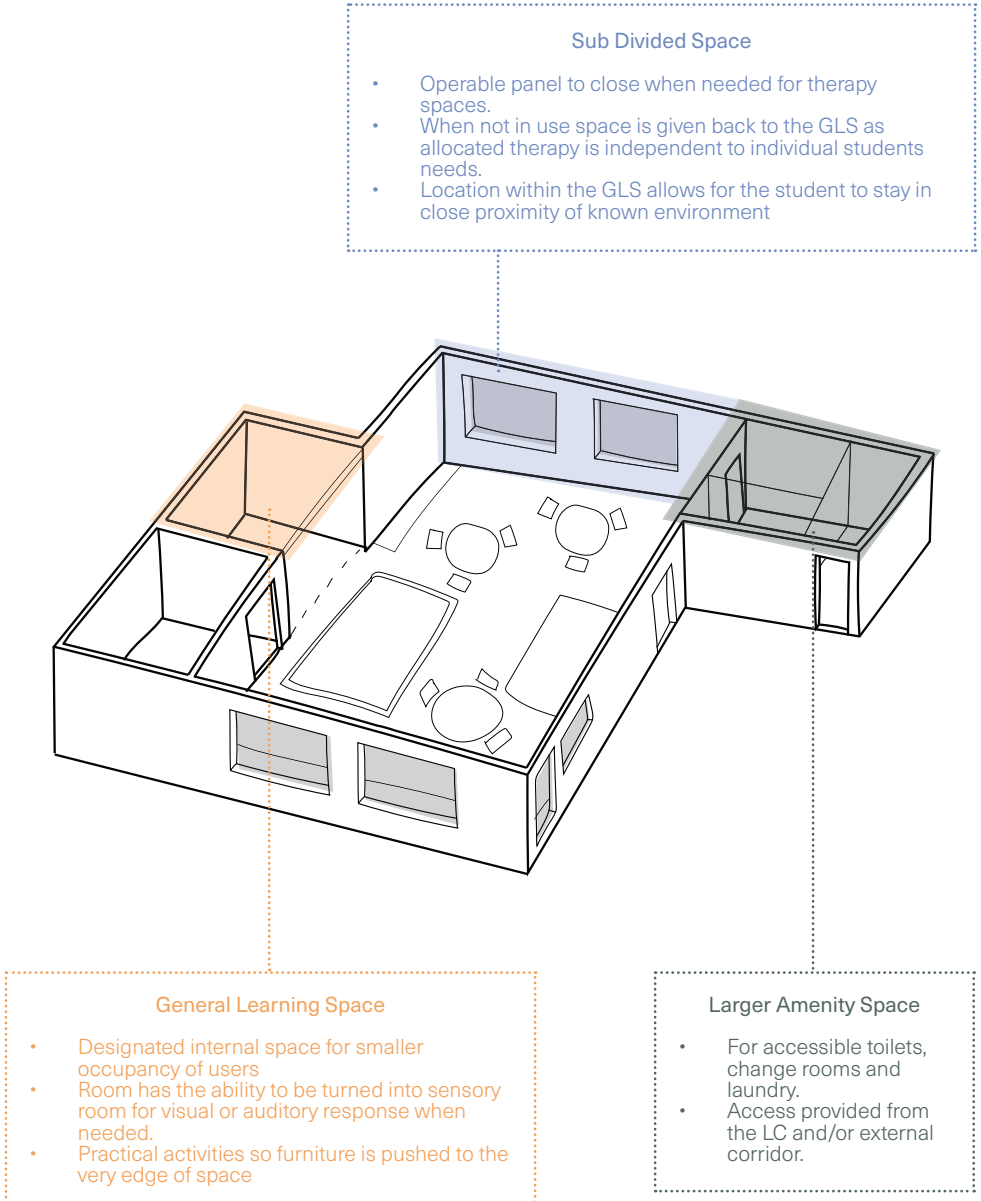
Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Prototyping	240	Warm, Intermediate	22
Woodworking	400	Warm, Intermediate	19
Digital Fabrication	400	Warm, Intermediate	19
Textiles and Sewing	General 320 Task Area 800 (local lighting recommended)	Warm, Intermediate	19
Arts and Crafts	400	Warm, Intermediate	19



Maker Space Adjacency Diagram

4E Support Learning Hub



Example Layout of Support Learning Hub

Description

Support Learning Hubs are tailored for students with disability and/or require additional learning and support. The requirements of every support class will be different depending on the student profile and varying needs of the students who enrol at the school. For this reason, it is important that the standard design for support learning areas is a flexible as possible, and customised by way of zones (including furniture, fit out and equipment (FF&E) to suit the needs of the students attending the school.

Objectives

1. Located at ground level in close proximity to support kiss and drop, with little to no variation in levels, and if so provision of accessible ramps.
2. Windows to face calm view corridors and aimed away from major circulation to lower risk of overstimulation.
3. GLSs should facilitate diverse learning settings (NSW DoE, 2023) including collaboration, discussion, feedback and reflection, guided, explicit, demonstration, experiential, and independent.
4. Encourage autonomy through the provision of large amenity spaces to provide enough area for students to comfortably maneouvre independently.
5. Avoid hard/sharp edges on furniture fixtures to minimise physical risk.
6. Colour selection to be strategic to enable visual and verbal cues between students and educators.
7. Refer to 5C Amenities, for sanitary amenity requirements. Sanitary amenities should have direct access from the shared circulation area with line of sight from 2 GLSs to allow students to independently use sanitary facilities whilst maintaining passive supervision from staff.
8. Provision of adult change facility to provide students with high support needs and students who might require additional space.
9. Provision of school learning support officer (SLSO) office at 22m^2 for administrative tasks relevant to support learning.
10. Provision of accessible door and maneuvering clearances of 1540 x 2070mm and for entry to all spaces directly accessed from support hub and entry to support hub.
11. GLS for vision impaired students require higher illuminances than normal, although some impairments require lower than normal illuminances. Lighting requirements are a case by case basis. Very good glare control and supplementary lighting of vertical tasks is required.
12. GLS for hearing impaired students require lighting that provide sufficient modelling for the movements of the lips and other facial features to be easily perceived.

Optimal Acoustic

	Recommended Design Sound Level	Recommended Reverberation Time (T)
GLS	See 5B General Learning Space	See 5B General Learning Space
Amenities	See 5C Amenities	See 5C Amenities
SLSO Office	35 - 40 dB(A)	0.6 to 0.8

Optimal Ceiling Height

	Ideal Ceiling Height
GLS	See 5B General Learning Space
Amenities	See 5C Amenities
SLSO Office	2.7m

Storage Requirements

Storage areas are not to be included in the calculation of the total area of the GLS.

Stage	Student Personal Storage Volume	GLS Storage Volume/Area
GLS	Refer to 5B General Learning Space	Refer to 5B General Learning Space
Support Learning Hub	-	8m² storage for bulky mobility devices and medical equipment

Table Height Requirements

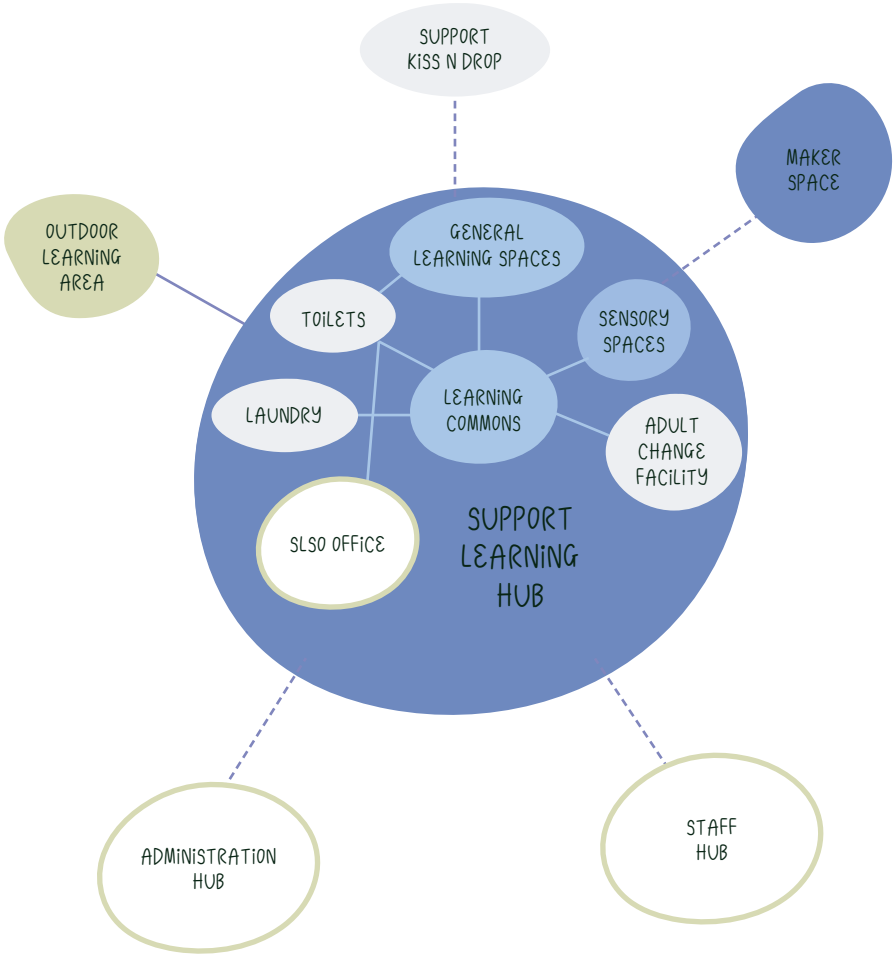
Adjustable height seating within the range shown below is recommended.

Stage	Ambulant students with physical disabilities who use sticks, crutches or walking frames to assist mobility	Students who use wheelchairs
Preschool	600mm ideal, adjustable 565 - 660mm	680mm ideal, adjustable 625 - 770mm
Primary Infants	635mm ideal, adjustable 595 - 700mm	700mm ideal, adjustable 690 - 780mm
Primary	720mm ideal, adjustable 655 - 770mm	730mm ideal, adjustable 710 - 840mm
Secondary	750mm ideal, adjustable 700 - 780mm	770mm ideal, adjustable 700 - 870mm

Seat Height Requirements

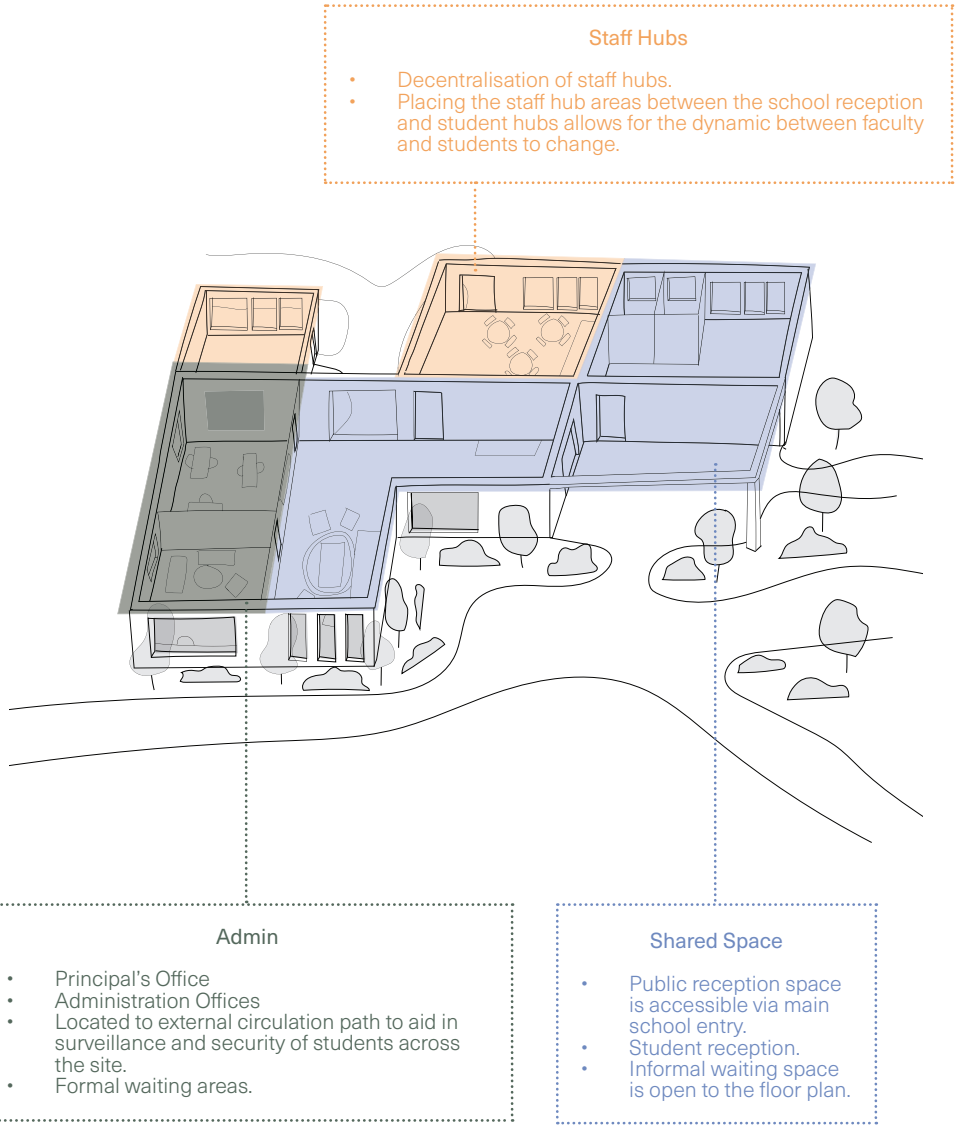
Adjustable height work benches within the range shown below is recommended.

Stage	Ambulant students with physical disabilities who use sticks, crutches or walking frames to assist mobility	Students who use wheelchairs
Preschool	300mm ideal, adjustable 250 - 350mm	410mm ideal, adjustable 335 - 460mm
Primary Infants	320mm ideal, adjustable 270 - 395mm	510mm ideal, adjustable 435 - 560mm
Primary	410mm ideal, adjustable 350 - 460mm	590mm ideal, adjustable 515 - 640mm
Secondary	435mm ideal, adjustable 360 - 485mm	595mm ideal, adjustable 520 - 645mm



Support Learning Hub Adjacency Diagram

4F Administration and Staff Hubs



Example Layout of Administration

Description

Administration is a centralised hub designated for spaces required to undertake the day to day administrative tasks of the school, sign in any visitors, and for teacher parent meetings, and is located at the entry of the school. Staff spaces are designated spaces for staff to undertake preparation for classes and lunch breaks, and are dispersed throughout their respective stages in order to remove hierarchies and welcome students to staff areas. These spaces facilitate:

- Student support
- Surveillance of students
- Controlled visitor and community access to school commons

Objectives

- Administration
  - Passive security in visual observation by places admin toward circulation pathways as well as to the rest of school and public spaces.
  - Establish clearly defined zones to indicate areas accessible to public within the administration hub, and creates a secure zone for staff and students.
  - Establish prominent characteristics from rest of school to help be distinguished for students and the public.
  - Entry vestibule area is to be accessible to general public, with direct access from the main entry. It needs to include direct access to clerical/printing/workroom space and direct access to minimum one dual access interview rooms.
  - Student access to the admin block in the vicinity of the clerical area and sick bay.
  - Sick bay to be located in close proximity to the accessible student toilet.
- Staff
  - Staff spaces such as staff lounge, kitchen and amenities are to be dispersed throughout stages for student surveillance and easier access for students.
  - Staff spaces should be welcoming to students to encourage healthy relationship between student and mentor.

Size Requirements for Staff Areas

	Area	**Information**
Staff Lounge	1m² unencumbered space per staff	Calculation should be free from furniture, fittings or obstructions.
Staff Kitchen	25m²	
Staff Interview	13m²	
Staff Prep/Printing	35m²	
Staff WC	Refer to 5C Amenities	Refer to 5C Amenities
Staff Study	10m² per staff	

Optimal Ceiling Height

	Minimum Ceiling Height
Administration/Staff	2.7m

Size Requirements for Administration Areas

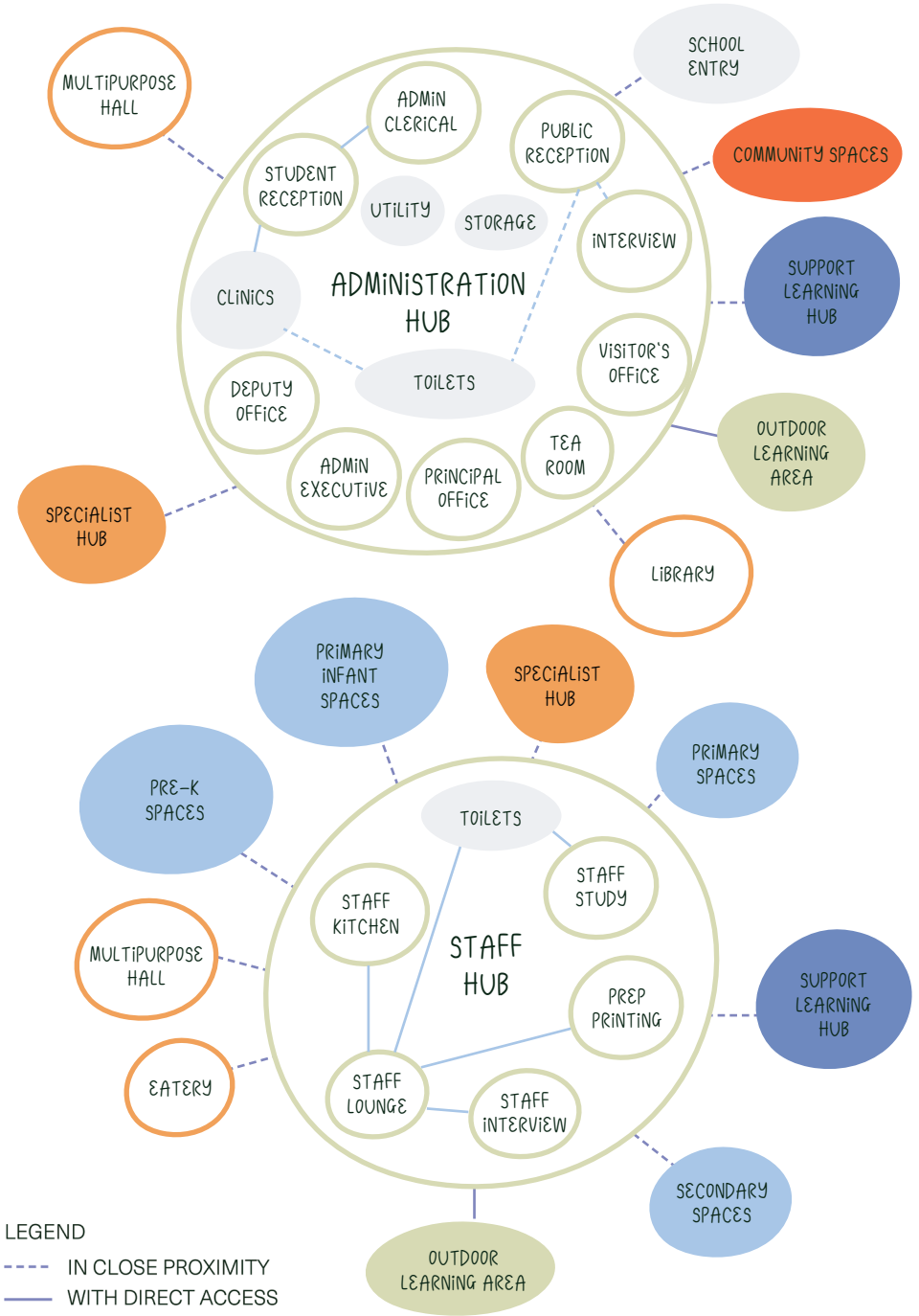
	Area (per space)	Information
Public Reception	12 - 21m²	To be located away from student reception.
Student Reception	22m²	To be located away from public reception.
Clinic - Girls	13.5m²	Located adjacent to student reception and in close proximity to student accessible toilet. Requires line of sight from administration/clerical areas.
Clinic - Boys	13.5m²	
Interview	13.5m²	<1000 students = 5 interview rooms >1000 students = 7 interview rooms
Admin/Clerical	39 - 78m²	Dependant on school size.
Admin Executive	19 - 33m²	Dependant on school size.
Deputy Office	14m²	<1000 students = 3 deputy offices >1000 students = 2 interview rooms
Principal Office	20m²	
Staff WC	12m²	Shared with visitors.
Accessible WC	7m²	Shared with visitors.
Tea Room	4m²	
Storage	15 - 20m²	
Visitor's Office	15.5m²	
Utility	15m²	

Optimal Acoustic

	Recommended Design Sound Level	Recommended Reverberation Time (T)
Administration/Staff	40 - 45 dB(A)	<0.6

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Administration/ Staff General	240	Warm, Intermediate	19
Staff Kitchen	160	Warm, Intermediate	
Amenities	80	Warm, Intermediate	

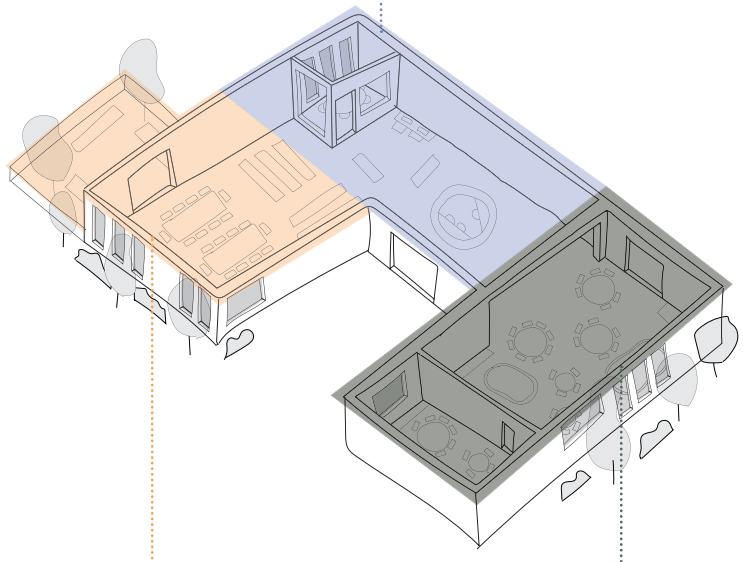


Administration and Staff Hubs Adjacency Diagram

4G Library

Shared Space

- Administration
- 90% book shelving units
- Smaller private study spaces
- System admin area with service desk for IT queries to have direct access from the main library space.
- Retreat spaces for all ages.



Public Space

- Opportunity to create outdoor learning area adjacent to the library
- Smaller study spaces separate to school space.
- Larger tables for working.

School Dedicated Spaces

- Separate entrance
- Operable panels to reduce size of public accessible area
- Separated 10% book shelving units with smaller shelving.
- Smaller working tables
- Retreat spaces for all ages

Example Layout of Library

Description

Library is a shared facility between the school and the community, designated for diverse study spaces, physical and digital information, and integrated technology facilities. These spaces facilitate:

- Shared use with community while maintaining security
- Learning through resources
- Connectivity to wider scale of mentors through technology
- Study of subject matter through diverse settings (such as collaborative and individual)
- Access to facilities such as printing and computers

Objectives

1. To be positioned on the ground floor for ease of access for both students and the community.
2. Integration of community spaces and provision of advanced material and resources. Community public library spaces (for use by public and can be booked by schools), joint use spaces (spaces concurrently used by both public and schools), and co located school facilities (spaces designated for school but is available to public out of school hours) to be clearly defined in plans.
3. Location of librarian loan/returns desk located near the main entry point with clear sight lines for efficient supervision of main library, entry/exit and bag storage.
4. Office area to have direct access to staff toilets.
5. Organisation of books to be are appropriate and corresponds to movement and capabilities of students with consideration of age and user metrics.
6. To provide extensive collection of resources relevant to the school's specialised hub.

Community Public Library Spaces

Community public library spaces could include but is not limited to:

- Cafe
- Exhibition/Gallery
- Reading, Research, Study
- Multipurpose Workshops
- VC and Meeting Rooms
- Tertiary Study Spaces
- Children's Activity Area
- Community Art Store
- Community Amenities

Size Requirements for Joint Use Spaces

	Area	Information
Administration	58 - 79.5m^2	<1000 students = 58m^2 >1000 students = 79.5m^2
Entry	25m^2	
Print Area	5.5m^2	
Systems Admin	12m^2	
Computer Storage	10m^2	
Computer Learning	67.5m^2	
Library Main Area	244 - 526m^2	<1000 students = minimum 244m^2 >1000 students = minimum 424m^2

Size Requirements for Co Located School Facilities

	Area	Information
Careers	13.5m²	<1000 students = 1 careers space >1000 students = 2 careers spaces
Seminar	13.5m²	<1000 students = 2 seminar spaces >1000 students = 4 seminar spaces
Senior Study	50 - 67.5m²	<1000 students = 50m² >1000 students = 67.5m²

Optimal Acoustic

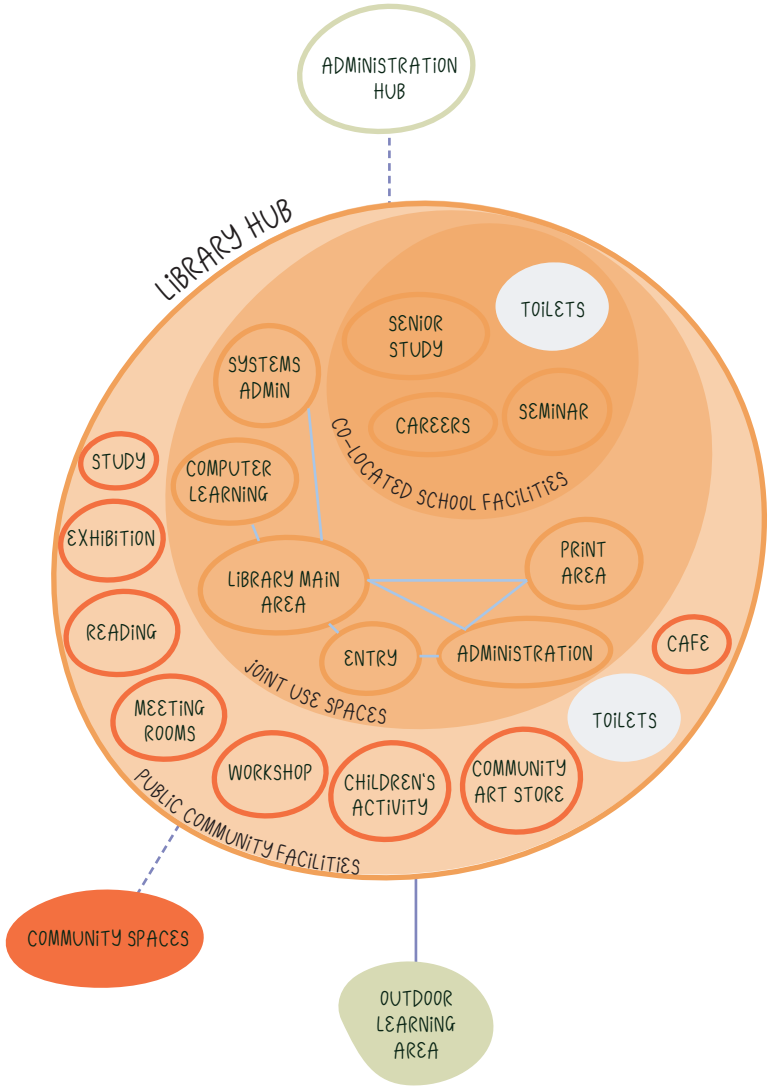
	Recommended Design Sound Level	Recommended Reverberation Time (T)
Administrative Office Spaces	40 - 45 dB(A)	0.6 to 0.8
Reading Areas	40 - 45 dB(A)	0.4 to 0.6
Stack Areas	45 - 50 dB(A)	0.6 to 0.8
Workshop Areas	45 - 55 dB(A)	0.4 to 0.6

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Audio Listening Areas	160	Warm, Intermediate	19
Audiovisual Areas	240	Warm, Intermediate	19
Book Repair and Binding	320	Warm, Intermediate	19
Book Stacks	240	Warm, Intermediate	19
Card Files	320	Warm, Intermediate	19
Individual Study Areas	320	Warm, Intermediate	-
Cataloguing	320	Warm, Intermediate	19
Circulation Desk	320	Warm, Intermediate	19

Optimal Ceiling Height

	Recommended Ceiling Height
Library Main Area	4.3 - 4.6m



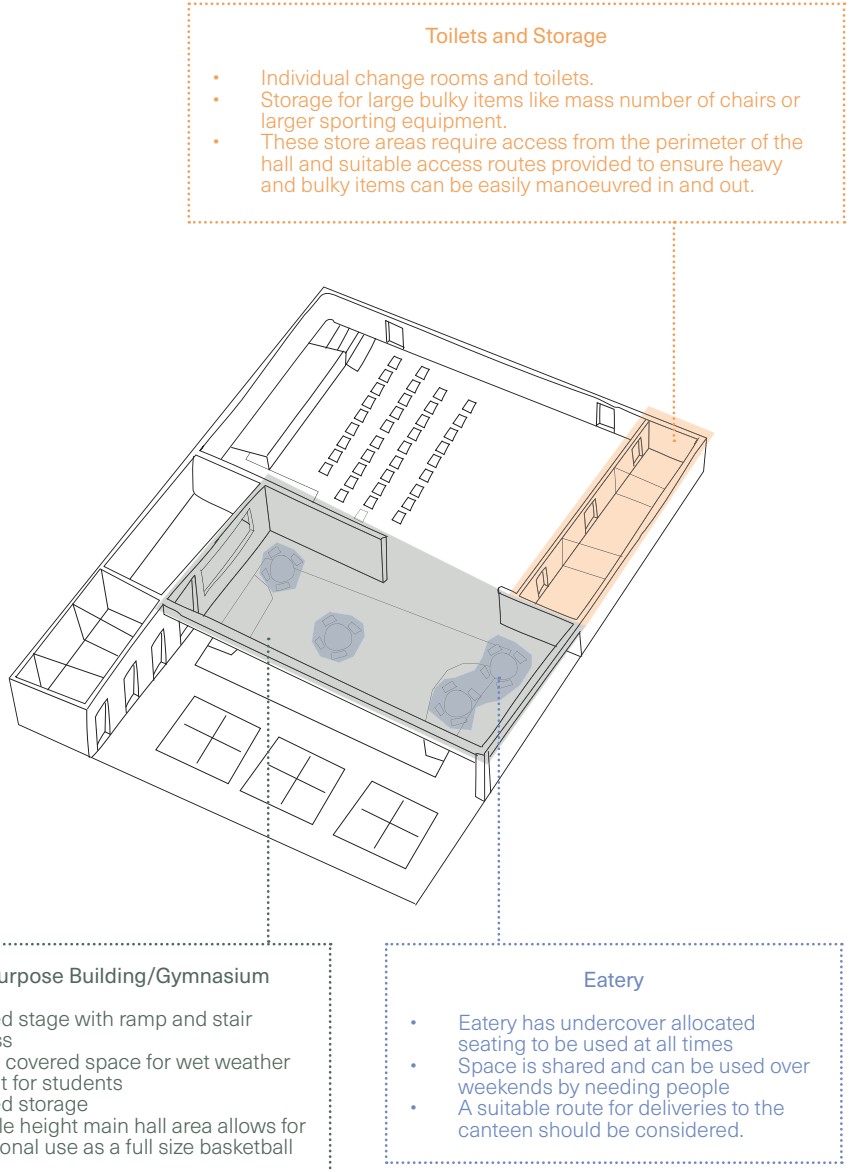
LEGEND

IN CLOSE PROXIMITY

WITH DIRECT ACCESS

Library Adjacency Diagram

4H Multipurpose Hall



Description

Core facilities include the multipurpose hall/gymnasium, eatery, and storage. These spaces facilitate:

- Encouragement of healthy eatings habits.
- Sports activities
- Out of school hours community use.

Objectives

1. Connected to Cola to provide opportunity to spill out during whole of school assemblies and other large events that are held in the hall.
2. Provision of weather protected outdoor play area and covered area over eatery.
3. Multipurpose hall to have secure access outside of school hours from the school's main entry and/or car park to allow for secure community use.
4. The eatery kitchenette provides servery windows that open into the main hall area, as well as out into the covered outdoor space.
5. A suitable route for deliveries from the loading dock to the canteen should be considered.
6. Bulk garden and cleaning storage require access from perimeter of hall and suitable access routes provided to ensure heavy and bulky items can be easily maneuvered in and out.
7. Storage should be visible to students and in an organised manner to exhibit available equipment.

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Multipurpose Hall	300	Warm, Intermediate	40
Changing Rooms	80	Warm, Intermediate	-
Storage	80	Warm, Intermediate	-
Control Room	240	Warm, Intermediate	-
First Aid	320	Warm, Intermediate	19
Eatery Kitchenette	240	Warm, Intermediate	22
Eatery Office	160	Warm, Intermediate	22

Optimal Acoustic

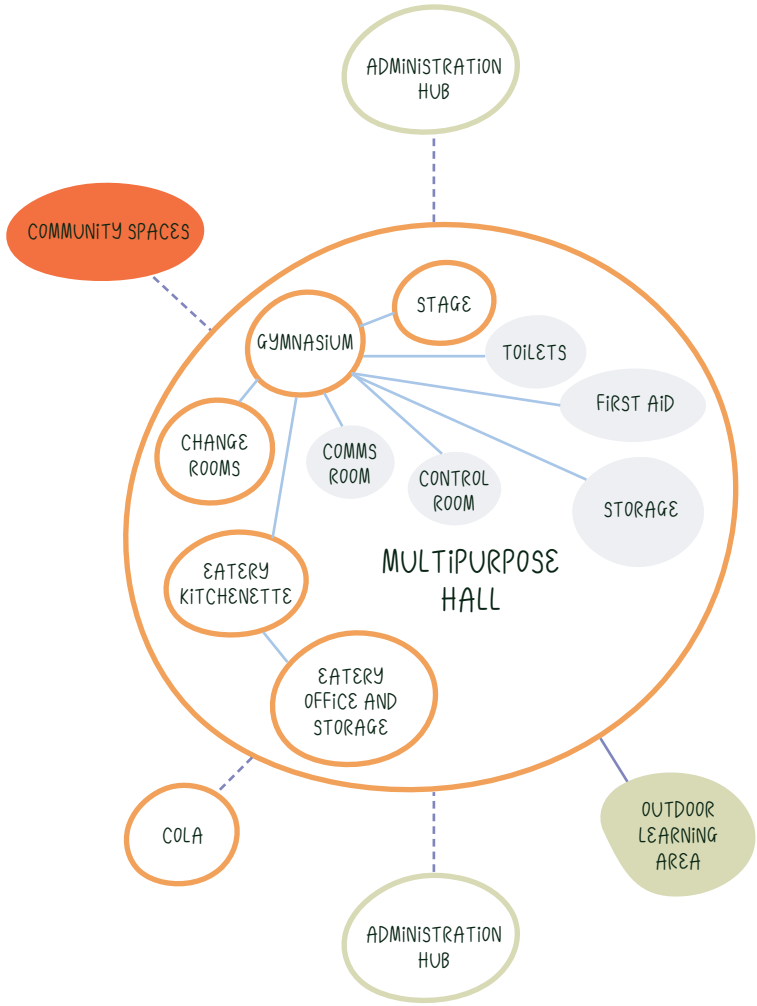
	Recommended Design Sound Level	Recommended Reverberation Time (T)
Multipurpose Hall	< 45 dB(A)	<1.6
Control Room	40 - 50 dB(A)	0.4 to 0.6
First Aid	40 - 45 dB(A)	0.6 to 0.8
Eatery Kitchenette	40 - 50 dB(A)	-

Size Requirements for Multipurpose Hall

	Area	Information
Gymnasium/ Multipurpose Hall	Varies	<500 students = Mini Basketball Court 26m x 14m with 2m clear around perimeter of court 500-1500 students = Basketball Court 28m x 15m with 2m clear around perimeter of court >1500 students = Netball Court 30.5m x 15.5m with 3m clear around perimeter of court
First Aid Room	15m²	
Outdoor Equipment Storage	Min. 20m2	
Control Room	10m²	
Comms Room	10m²	
Chair Storage	20 - 45m²	<1000 students = minimum 20m² >1000 students = minimum 45m²
Large Equipment Storage	Min. 25m²	
Bulk Storage	15m²	
Garden Storage	15m²	
Cleaning Storage	7.5m	
Sports Equipment Storage	Min. 25m²	
Stage	100m²	
Change/Shower	Minimum 30 change rooms, 30 showers, and 30 lockers.	Accessible from bicycle parking and designed as end of trip facilities for students. Change room and shower facilities are unisex full height cubicles. Provision of at least 1 accessible shower and change room cubicle.
Eatery Office and Storage	15m²	
Eatery Kitchenette		Opens to eatery servery/cola

Optimal Ceiling Height

	Recommended Ceiling Height
Multipurpose Hall	4 - 7m (depending on sports courts)
Changing Rooms	2.4m



LEGEND

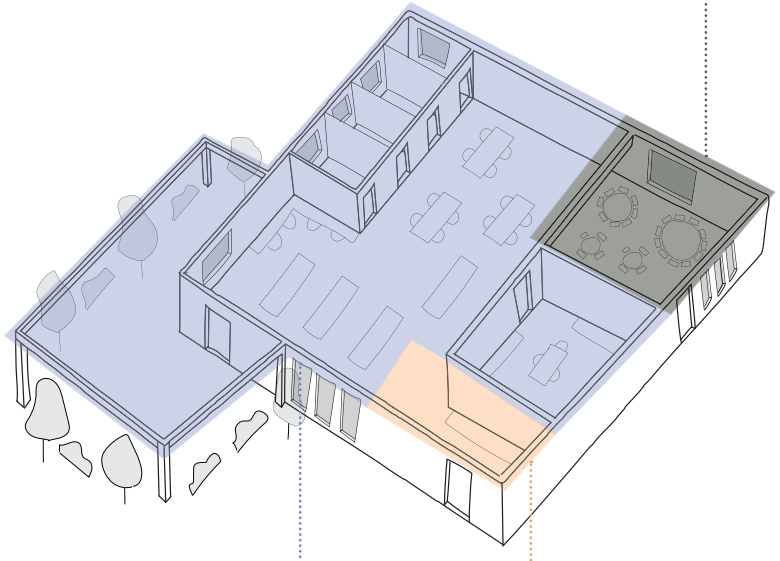
- IN CLOSE PROXIMITY
- WITH DIRECT ACCESS

Multipurpose Hall Adjacency Diagram

4l Specialised Hub: Metal & Woodwork

School Dedicated

- Separate entrance which opens to a GLS Space which can be closed off fully with operable walls
- Student to teacher ratio changes within work shop space. 1:15



Shared Space

- Larger open work bench space with ample movement through out
- Covered outdoor work space
- Storage
- Printing room
- Material storage and Project storage
- Welding bay to be located inside the metal workshop for functionality and supervision purposes.

Public Space

- Separate entrance
- Private storage lockers upon entrance

Example Layout of Metal and Woodwork Hub

Description

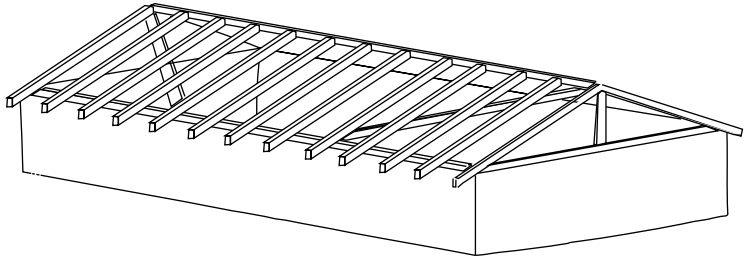
Metal and Wood Workshops are specialised facilities where students can create objects using tools and machinery, receive guided mentorship for their designs, and pursue an in-depth level of knowledge on the intricacies of metal and woodwork. These spaces facilitate activities such as:

- Woodworking
- Metalworking
- Digital Fabrication
- Carpentry
- Welding
- Machining
- Restoration
- Theory

Objectives

1. Facilitate secure concurrent use of spaces between the community and the school through strategic zoning. Should there be provisions for shared spaces between the community and the school, constant supervision is to be ensured.
2. Provide a safe and functional workspace for working with wood and metal materials and tools across different age groups and capabilities through zoning of machinery and tools and provision of clearances.
3. Facilitate supervision, visibility, and connectivity between GLS and Workshops.
4. Support educational and vocational training programs that teach woodworking and metalworking skills.
5. Promote sustainability by encouraging the use of reclaimed and recycled materials.
6. Support entrepreneurship and small business development in the woodworking and metalworking industries.
7. Provide spaces for diverse learning settings; such as, collaborative, individual, or guided.
8. Provide spaces for the exhibition of works.
9. Provide ample storage of works, separated for community and school use.
10. Provide accessible use of space for individuals with disabilities.
11. To be accessible from loading dock.

Architectural Identity of Specialised Hub



Exposed structures can demonstrate the construction techniques and detailing of the school, which is highly relevant to the practical nature of the metal and wood hub. It offers an opportunity for students to examine the edifices in their vicinity and learn from the architecture itself. Each metal and wood hub should employ this architectural identity to create continuity through the network of schools.

Requirements for Wood Workshops

	Requirements
Total Wood Workshop Unencumbered Bench Zone	• 52.5m² unencumbered area for a ratio of 1:15 students per workshop space located attached to a single GLS. • Provision of 5 x height adjustable woodwork benches at 2000 x 900 to fit 3 individuals per bench.1.55m clearance to be provided around the perimeter of each bench and at the perimeter of the zone. • Sink installed within workshop. • Provision of tools storage area at 10m² with a 1.55m clearance facing any vertical storage.
General Learning Space	52.5m² unencumbered area for a ratio of 1:15 students per GLS, attached to a wood workshop bench zone, with reference to 4B GLS for objectives.
Wood Workshop Machinery Zone	Woodwork machinery zones can be accessible from multiple wood workshop bench zones, with consideration of acoustic isolation of machinery to ensure instruction and discussion can occur at a comfortable level as per acoustic requirements in wood workshop bench zones. To be supervised at all times. Provision of the following machinery as per indicative dimensions (length x depth) with min. 500mm clearance on either side of the machine and min. 2m clearance in front and behind of the machine: • Band Saw (600mm x 500mm) • Miter Saw (700mm x 600mm) • Jointer (1,200mm x 450mm) • Planer (1,200mm x 400mm) • Router Table (800mm x 600mm) • Drill Press (500mm x 350mm) • Mortiser (500mm x 350mm) • Lathe (1,200mm x 500mm) • Spindle Sander (600mm x 500mm) • Drum Sander (900mm x 500mm) • Scroll Saw (300mm x 300mm) • Hollow Chisel Mortiser (400mm x 300mm) • Sliding compound miter saw (900mm x 700mm) • Shaper (1,200mm x 500mm) Provision of the following machinery as per indicative dimensions (length x depth) with min. 1m clearance on either side of the machine and min. 2m clearance in front and behind of the machine. • Table Saw (1,000mm x 800mm) • Panel Saw (3,200mm x 3,200mm) • Radial Arm Saw (1,000mm x 700mm) Provision of the following machinery as per indicative dimensions (length x depth) with min. 2m clearance around the machine. • Dust collection system (1,000mm x 700mm) • CNC Router (2,500mm x 1,500mm) • Edgebander (2,500mm x 900mm)
Project Storage	A centralised project storage with wide doors on each level is to be provided at a ratio of 30m² of storage per GLS provided on the respective level.
Material Storage	A centralised material storage with wide doors on each level is to be provided at a ratio of 15m² of storage per GLS provided on the respective level.

Requirements for Metal Workshops

	Requirements
Total Metal Workshop Unencumbered Bench Zone	• 52.5m² unencumbered area for a ratio of 1:15 students per workshop space located attached to a single GLS. • Provision of 5 x height adjustable metalwork benches at 2000 x 900 to fit 3 individuals per bench. 1.55m clearance to be provided around the perimeter of each bench and at the perimeter of the zone. • Sink installed within workshop. • Provision of tools storage area at 10m² with a 1.55m clearance facing any vertical storage.
General Learning Space	52.5m² unencumbered area for a ratio of 1:15 students per GLS, attached to a wood workshop bench zone, with reference to 4B GLS for objectives.
Metal Workshop Machinery Zone	Metalwork machinery zones can be accessible from multiple metal workshop bench zones, with consideration of acoustic isolation of machinery to ensure instruction and discussion can occur at a comfortable level as per acoustic requirements in metal workshop bench zones. To be supervised at all times. Provision of the following machinery as per indicative dimensions (length x depth) with min. 900mm clearance around the machine: • Drill Press (750mm x 600mm) • Bench Grinder (300mm x 300mm) • Belt Sander (500mm x 350mm) • Metal Lathe (1500mm x 700mm) • Metal Milling Machine (1500mm x 700mm) • Metal Cutting Bandsaw (1200mm x 600mm) • Metal Shear (1200mm x 600mm) • Abrasive Blasting Cabinet (1200mm x 800mm) • Powder Coating System (1200mm x 800mm) Provision of the following machinery of the indicative dimensions (length x depth) with min. 1.5m clearance around the machine: • MIG Welder (500mm x 400mm) • TIG Welder (500mm x 400mm) • Plasma Cutter (700mm x 500mm) Provision of additional equipment should ensure proper clearance is provided as per regulations.
Project Storage	A centralised project storage on each level is to be provided at a ratio of 30m² of storage per GLS provided on the respective level.
Material Storage	A centralised material storage on each level is to be provided at a ratio of 15m² of storage per GLS provided on the respective level.

Requirements for Digital Fabrication Workshops

Well-ventilated centralised workshop equipped with constant supervision and fire safety measures, and the following equipment as per indicative dimensions (length x depth):

- 3D Printers (FDM 1000mm x 1000m, SLA 380mm x 380mm), SLS (400mm x 400mm) with 900mm clearance around the machine.
- Laser Cutter (1300mm x 900mm) with 2m clearance around the machine.
- UV Printer (1300mm x 2400mm) with 900mm clearance around the machine.

- Vinyl Cutter (1200mm x 1200mm) with 900mm clearance around the machine.
- Plotter Cutter (1800mm x 1200mm) with 900mm clearance around the machine.
- Computer equipment and central bench

Additional Requirements

- Provision of exhibition spaces.
- Provision of space where markets can be held.
- Provision of amenities as per 4C Amenities.
- Outdoor covered workshop with direct access to workshop spaces, storage, and loading dock

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Workshop Spaces	800 + supplementary local lighting if necessary	Warm, Intermediate, Cool	19
GLS	Refer to 4B GLS	Refer to 4B GLS	Refer to 4B GLS
Storage	80	Warm, Intermediate	-

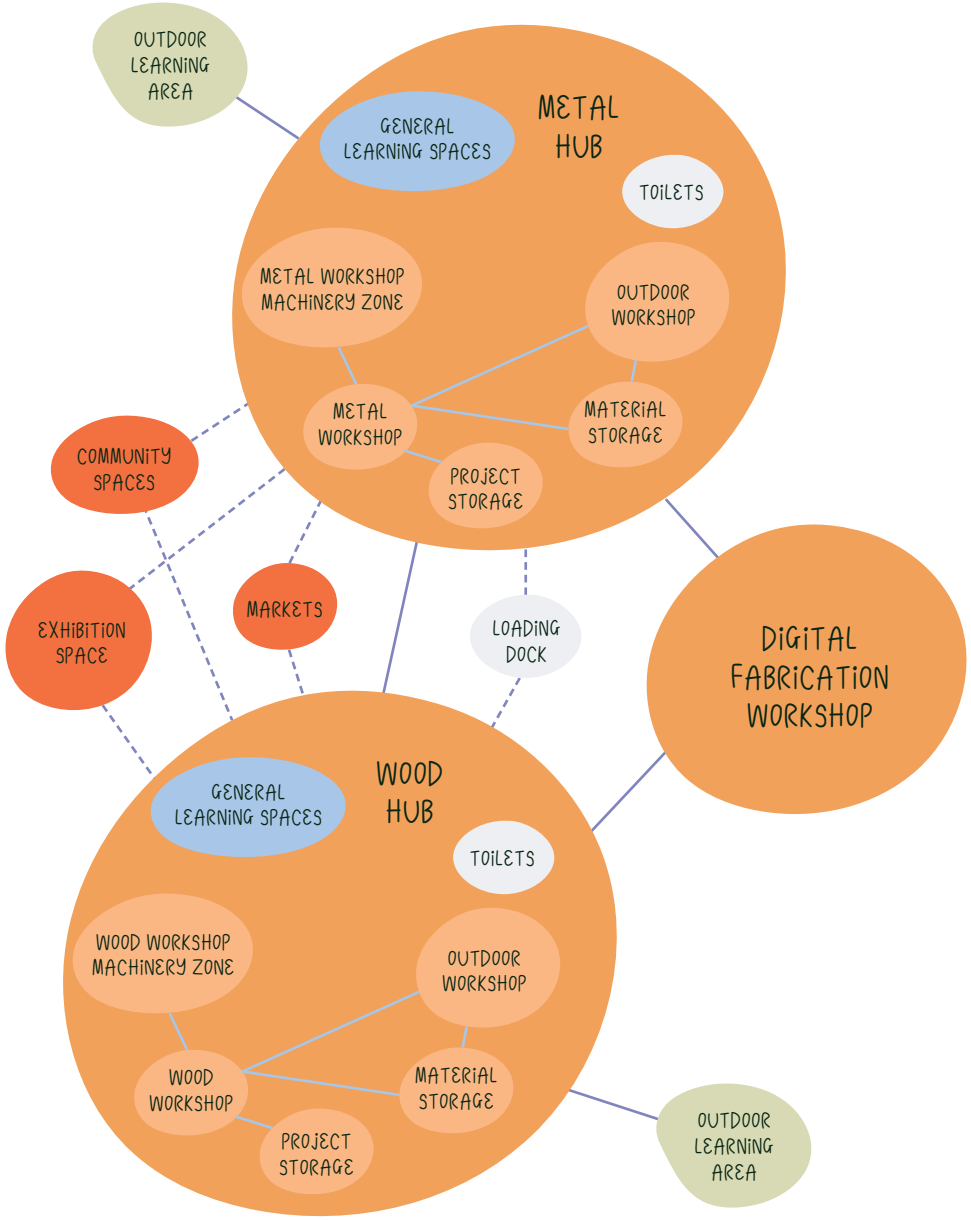
Optimal Acoustic

Acoustic design input required for floors, walls, windows, outdoor workshop and dust extraction.

	Recommended Design Sound Level	Recommended Reverberation Time (T)
Workshop Machinery Zone	<60 dB(A)	Should be minimised for noise control.
Workshop Bench Zone	<45 dB(A)	Should be minimised for noise control.
GLS	Refer to 4B GLS	Refer to 4B GLS

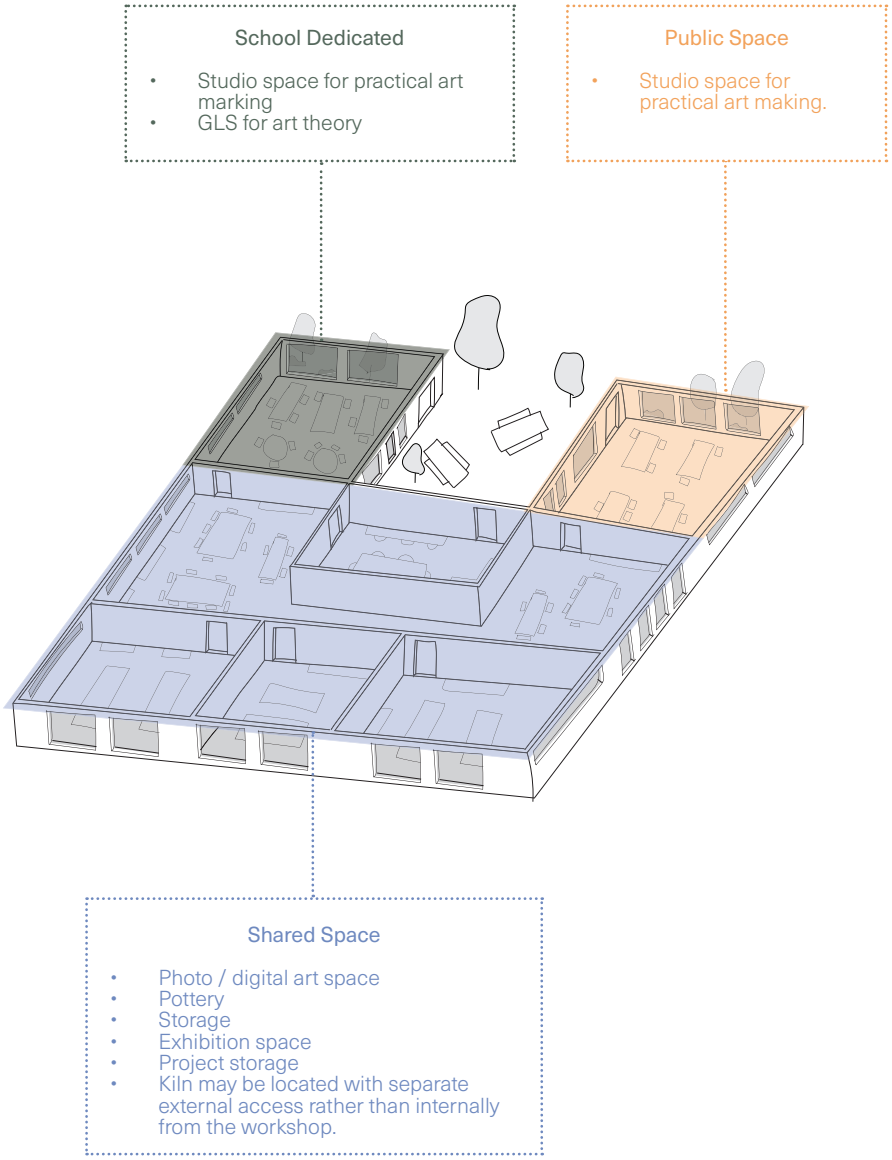
Optimal Ceiling Height

	Recommended Ceiling Height
Workshop Spaces	3.05 - 3.5m
GLS	Refer to 4B GLS
Storage	2.4m



Metal and Wood Hub Adjacency Diagram

4J Specialised Hub: Visual Arts



Example Layout of Visual Arts Hub

Description

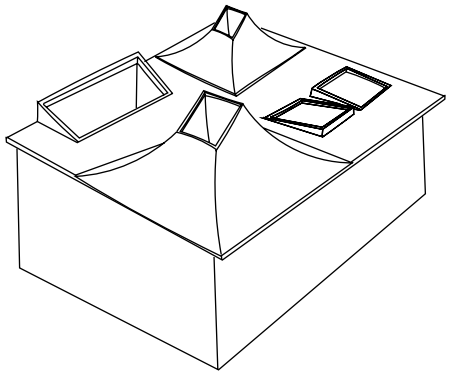
A visual arts hub is a centralised space that fosters creativity, collaboration, and engagement with diverse mediums of art. These spaces facilitate mediums of art such as:

- Painting
- Drawing
- Sculpture
- Printmaking
- Photography
- Digital Art
- Installation Art
- Performance Art

Objectives

1. Facilitate opportunities for students, local artists, and the community to connect, collaborate, and engage through provision of exhibition/gallery spaces, markets, and networking event spaces.
2. Facilitate secure concurrent use of spaces between the community and the school through strategic zoning. Should there be provisions for shared spaces between the community and the school, constant supervision is to be ensured.
3. Provide accessible art spaces and resources through provision of well-equipped studios and workshops.
4. Support emerging and established artists through provision of residency work spaces.
5. Contribute to community development and school network by engaging with local communities and performing arts schools through provision of spaces for public art and performances, outreach programs, and community events that promote inclusivity, diversity, and social cohesion.

Architectural Identity of Specialised Hub



Skylights can provide a sculptural element to the space while providing ample light needed to view works of art. It offers an artistic quality to the space which could be a source of inspiration for students and the community. Each visual arts hub should employ this architectural identity to create continuity through the network of schools.

Spaces for Visual Arts Hub

	Requirements
Studio Workshop	• 52.5m² unencumbered area for a ratio of 1:15 students per workshop space located attached to a maximum of two GLSs. • Provision of 5 x height adjustable work benches at 2000 x 900 to fit 3 individuals per bench.1.55m clearance to be provided around the perimeter of each bench and at the perimeter of the zone. • Cleaning zone provided within workshop that is inclusive of a sink and counter space. • Installed with a dust collection system (1000mm x 700mm) • At least 1 studio workshop is to be reserved for artist residency.
General Learning Space	52.5m² unencumbered area for a ratio of 1:15 students per GLS, attached to a studio workshop, with reference to 4B GLS for objectives.
Machinery Workshop	Provision of the following machinery as per indicative dimensions (length x depth) with min. 500mm clearance on either side of the machine and min. 2m clearance in front and behind of the machine: • Band Saw (600mm x 500mm) • Miter Saw (700mm x 600mm) • Router Table (800mm x 600mm) • Spindle Sander (600mm x 500mm) • Drum Sander (900mm x 500mm) • Scroll Saw (300mm x 300mm) Provision of the following machinery as per indicative dimensions (length x depth) with min. 900mm clearance around the machine: • Bench Grinder (300mm x 300mm) • Belt Sander (500mm x 350mm) • Metal Lathe (1500mm x 700mm) • Metal Cutting Bandsaw (1200mm x 600mm) • Metal Shear (1200mm x 600mm) Provision of the following machinery of the indicative dimensions (length x depth) with min. 1.5m clearance around the machine: • MIG Welder (500mm x 400mm) • TIG Welder (500mm x 400mm) • Dust collection system (1,000mm x 700mm)
Project Storage/ Drying Area	A centralised project storage with wide doors on each level is to be provided at a ratio of 30m² of storage per GLS provided on the respective level. This can be divided by medium. Should be temperature and humidity controlled.
Material Storage	A centralised material storage with wide doors on each level is to be provided at a ratio of 15m² of storage per workshop provided on the respective level. This can be divided by medium.
Equipment Storage	A centralised material storage with wide doors on each level is to be provided at a ratio of 15m² of storage per workshop provided on the respective level. This can be divided by medium.
Chemical Storage	Proper storage facilities for hazardous chemicals and solvents used in printmaking processes.
Kiln	10m² per kiln provided and can be integrated in studio workshops or located in a centralised internal or external location. Can only be gas or electric.

Spaces for Visual Arts Hub cont.

	Requirements
Screen Exposure and Washout Area	• A separate area equipped with a light table, exposure unit, and washout station for preparing and processing screens used in screen printing. • Screen Exposure Area: 1.2m x 1.2m with 900mm clearance around its perimeter. • Washout Area: 1.2m x 1.8m with 900mm clearance around its perimeter.
Computer Labs	52.5m² for a ratio of 1:15 student per computer lab space with provisions for: • 15 computers and desk space • Printing Area
Darkroom	3m x 3.6m darkroom with provision of: • Enlarger station 1.2m x 0.9m • Processing Area • Storage and Drying • Ventilation and air circulation • Safelights and light seals • Separate wet and dry spaces.
Exhibition/ Gallery Space	Provision of: • Hanging and mounting systems • Ability to install audiovisual equipment, projectors, speakers and interactive displays. • Lighting systems
Makeup and Dressing Area	Centralised makeup and dressing areas with provision of mirrors, lockers and changing rooms.
Laundry	10m²

Additional Requirements

•
- Provision of market spaces for students/community to sell works.
- Provision of amenities as per 4C Amenities.
- Provision of internal and external space for hosting events.
- Outdoor covered workshop with direct access to workshop spaces.

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Machinery Workshop	800 + supplementary local lighting if necessary	Warm, Intermediate, Cool	19
Studio Workshops	600 + supplementary local lighting if necessary	Warm, Intermediate	19
GLS	Refer to 4B GLS	Refer to 4B GLS	Refer to 4B GLS
Storage	80	Warm, Intermediate	-
Printing Room	240	Cool	19
Computer Room	320	Warm, Intermediate	22

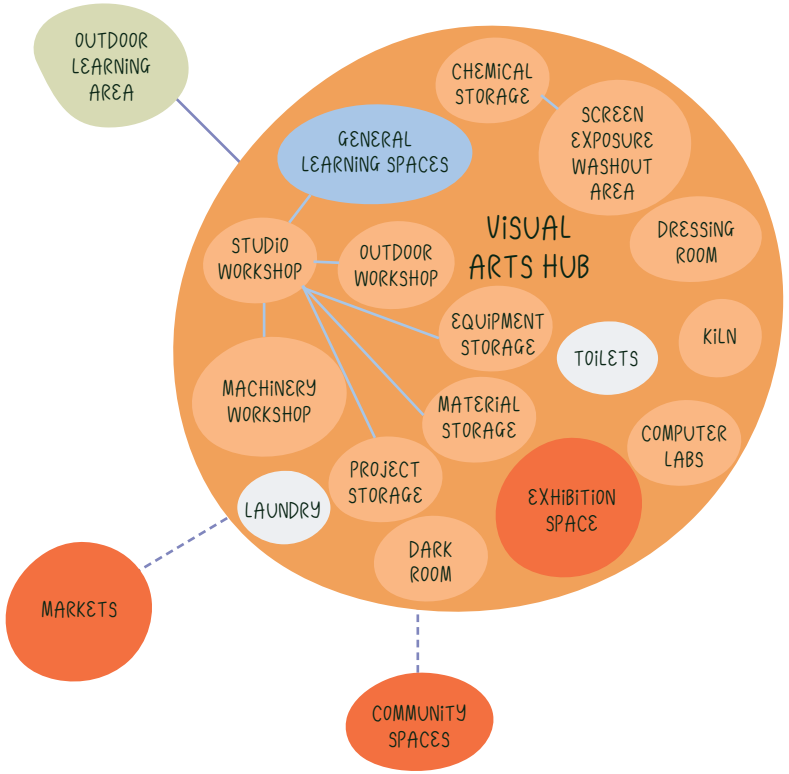
Optimal Acoustic

Acoustic design input required for floors, walls, windows, outdoor workshop and dust extraction.

	Recommended Design Sound Level	Recommended Reverberation Time (T)
Machinery Workshop	<60 dB(A)	Should be minimised for noise control.
Studio Workshop	<45 dB(A)	Should be minimised for noise control.
GLS	Refer to 4B GLS	Refer to 4B GLS
Exhibition/Gallery	40 - 45 dB(A)	Should be minimised for noise control.

Optimal Ceiling Height

	Recommended Ceiling Height
Workshop Spaces	3.05 - 3.5m
GLS	Refer to 4B GLS
Storage	2.4m



LEGEND

IN CLOSE PROXIMITY

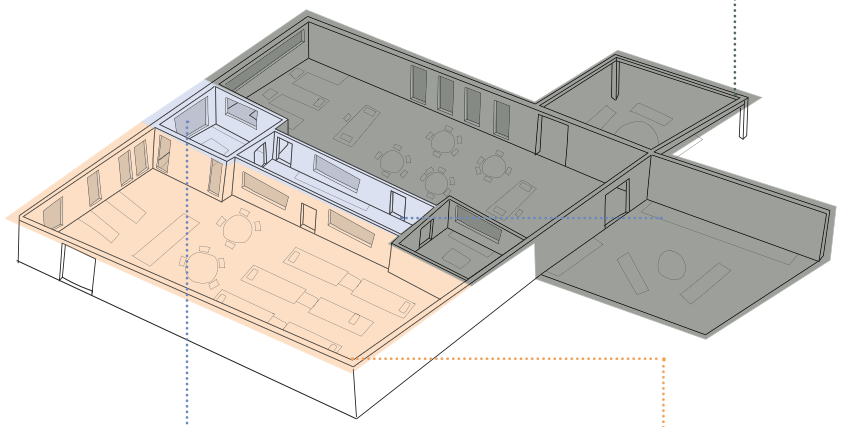
WITH DIRECT ACCESS

Visual Arts Hub Adjacency Diagram

4K Specialised Hub: STEM

School Dedicated

- Separate entrance
- External storage space for all students. (No belonging allowed inside for safety
- Chemical storage only for staff
- 2 larger demonstration tables with sinks and gas taps at 1100mm for teachers and senior students.
- Other work bench height at 850mm with only sink on tables.
- Access to covered outside space
- 'Labs' places with higher windows sills



Public Space

- General supply storage
- Botany space
- Preparation space
- Apparatus

Shared Space

- Personal storage units
- Unobstructed visibility throughout space
- Larger tables with sinks and gas taps at 1100mm

Example Layout of STEM Hub

Description

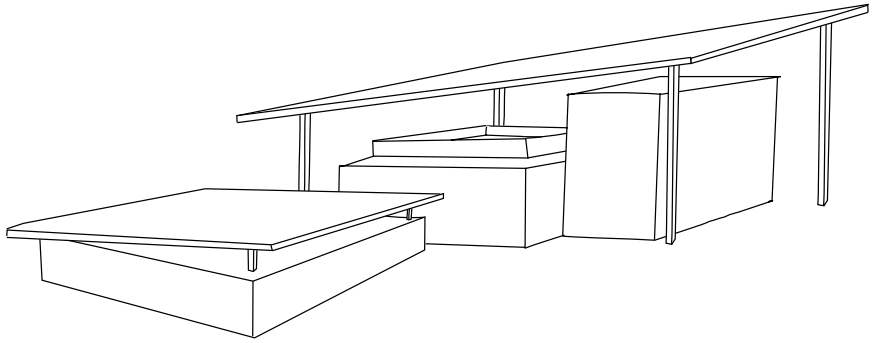
The STEM hub is an interactive learning environment that focuses on science, technology, engineering, and mathematics. It provides hands-on experiences and activities that promote critical thinking, problem-solving, and creativity. Participants engage in experiments, projects, and collaborative tasks to explore STEM concepts and develop skills for the future. These spaces facilitate subjects including:

- Science: Physics, chemistry and biology
- Technology: Computer programming, robotics, digital tools, and information technology.
- Engineering: Applied sciences
- Mathematics

Objectives

1. Facilitate secure concurrent use of spaces between the community and the school through strategic zoning. Should there be provisions for shared spaces between the community and the school, constant supervision is to be ensured.
2. Facilitate practical learning and experimentation through provision of safe and functional workspaces.
3. Focuses on developing participants' critical thinking, problem-solving, and analytical skills by presenting them with real-world challenges that require creative and innovative solutions.
4. Facilitate supervision, visibility, and connectivity between GLS and Laboratory Spaces.
5. Provide spaces that foster collaboration, teamwork, and encourage participants to work together, share ideas, and effectively communicate their findings and solutions to their peers.
6. Provide facilities that allow them to receive mentorship from external mentors and industry professionals.
7. Use of surfaces that are easy to clean and water durable.
8. Promote inclusivity through accessibility of spaces.

Architectural Identity of Specialised Hub



Detached Roofs can provide a sculptural element to the form while providing ample light to internal spaces. It offers an innovative and dynamic quality to the form which could be a source of inspiration for students and the community. Each STEM hub should employ this architectural identity to create continuity through the network of schools.

Spaces for STEM hub

	Requirements
Laboratories	• 52.5m² unencumbered area for a ratio of 1:15 students per laboratory space. • Provision of 5 x height adjustable work benches at 2000 x 900 to fit 3 individuals per bench.1.55m clearance to be provided around the perimeter of each bench and at the perimeter of the zone. Benches to be equipped with gas outlets, a sink, electrical connections, and storage space. • Eye wash station • Interactive whiteboards. • Fume cupboard • Safety shower
General Learning Space	52.5m² unencumbered area for a ratio of 1:15 students per GLS, attached to a studio workshop, with reference to 4B GLS for objectives.
Maker Spaces	Provision of the following machinery as per indicative dimensions (length x depth) with min. 900mm clearance around the machine. • 3D Printers (FDM 1000mm x 1000m, SLA 380mm x 380mm), SLS (400mm x 400mm) with 900mm clearance around the machine. • UV Printer (1300mm x 2400mm) with 900mm clearance around the machine. • Computer equipment and central bench Provision of the following machinery as per indicative dimensions (length x depth) with min. 2m clearance around the machine. • Dust collection system (1,000mm x 700mm) • CNC Router (2,500mm x 1,500mm) • Laser Cutter (1300mm x 900mm) with 2m clearance around the machine. Provision of additional equipment should ensure proper clearance is provided as per regulations.
Computer Labs	52.5m² for a ratio of 1:15 student per computer lab space with provisions for: • 15 computers and desk space • Printing Area
Material Storage	A centralised material storage with wide doors on each level is to be provided at a ratio of 15m² of storage per GLS provided on the respective level.
Equipment Storage	A centralised material storage with wide doors on each level is to be provided at a ratio of 15m² of storage per GLS provided on the respective level. This can be divided by medium.
Chemical Storage	Proper storage facilities for hazardous chemicals and solvents used in printmaking processes.
Preparation and Apparatus Storage	• A centralised material storage with wide doors on each level is to be provided at a ratio of 15m² of storage per laboratory provided on the respective level. • To be directly accessible from all laboratories. • Fitted out with mobile steel shelving (compactus) for the storage of apparatus and equipment used within science labs. • Wet and dry benching should be provided for long term experiments.
Botany	Provision of botany at an area of 20m² to house plants and/or animal specimens. Sunlight access is desirable for plant growth.

Additional Requirements

-
- Provision of market spaces for students/community to sell works.
- Provision of amenities as per 4C Amenities.
- Provision of internal and external space for hosting events.

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Maker Space	800 + supplementary local lighting if necessary	Warm, Intermediate, Cool	19
Laboratories	320	Warm, Intermediate	19
GLS	Refer to 4B GLS	Refer to 4B GLS	Refer to 4B GLS
Storage	80	Warm, Intermediate	-
Printing Room	240	Cool	19
Computer Room	320	Warm, Intermediate	22

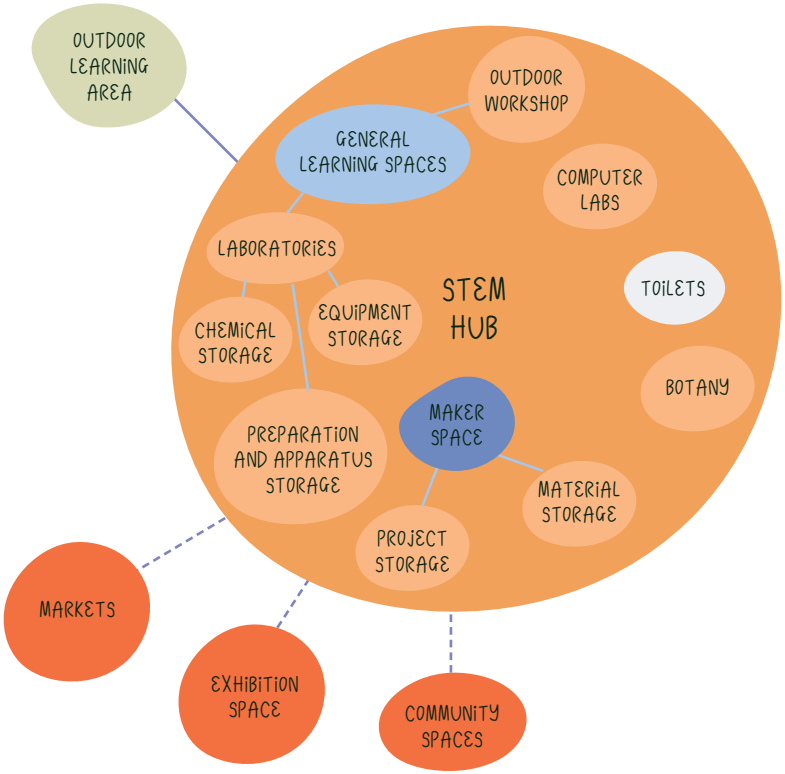
Optimal Acoustic

Acoustic design input required for floors, walls, windows, outdoor workshop and dust extraction.

	Recommended Design Sound Level	Recommended Reverberation Time (T)
Maker Space	<60 dB(A)	Should be minimised for noise control.
Laboratory Space	<45 dB(A)	Should be minimised for noise control.
GLS	Refer to 4B GLS	Refer to 4B GLS

Optimal Ceiling Height

	Recommended Ceiling Height
Laboratory	>3m
Maker Space	3.05 - 3.5m
GLS	Refer to 4B GLS
Storage	2.4m



LEGEND

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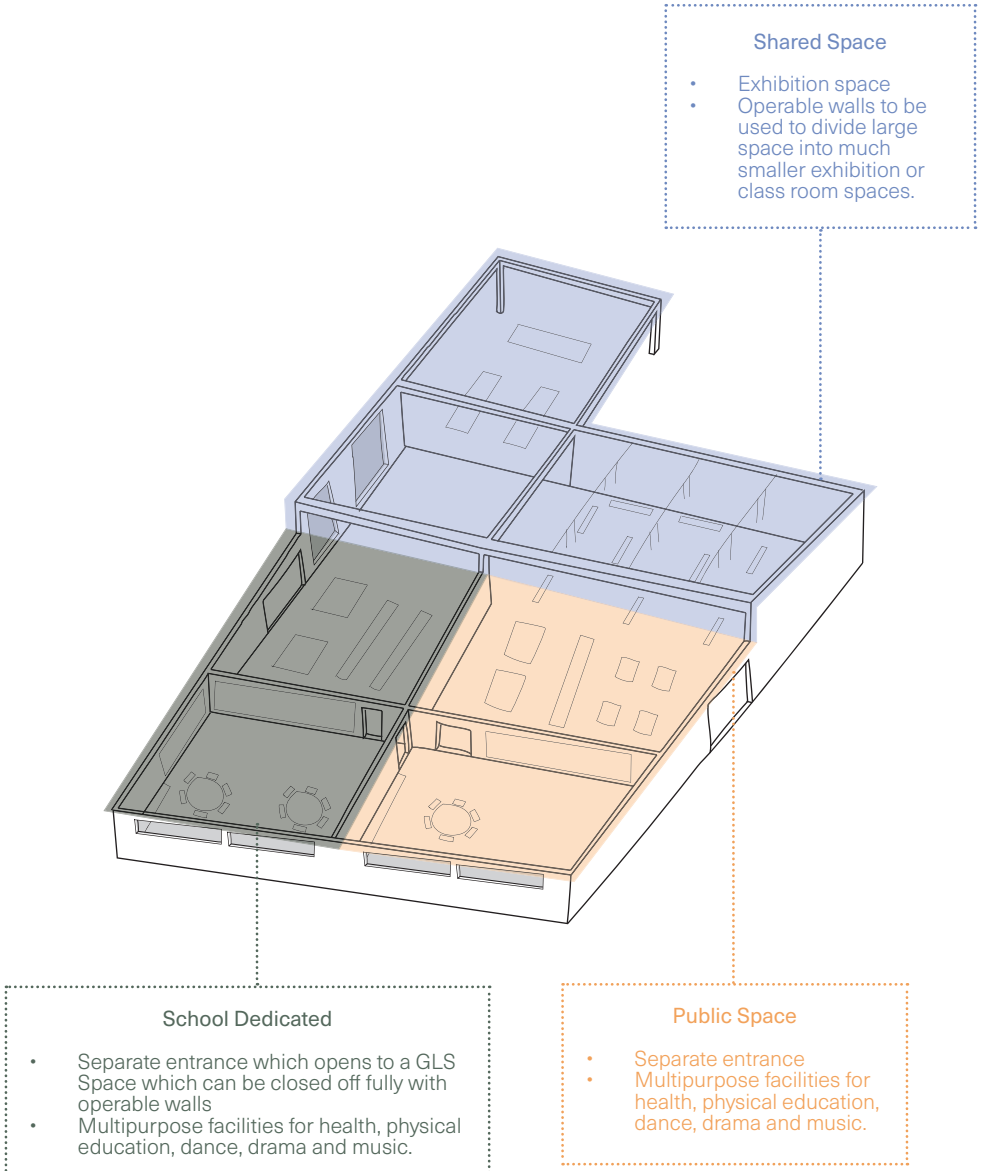
Visual Arts Hub Adjacency Diagram

4L Specialised Hub: Performing Arts



Description

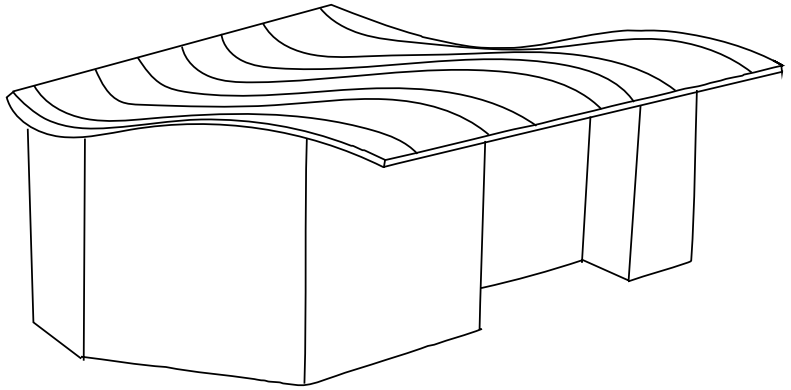
The Performing Arts hub is a dedicated space that provides facilities for rehearsals, performances, workshops and collaborative activities, fostering creativity, artistic expression, and community engagement in the performing arts. These spaces facilitate disciplines including:

- Music
- Dance
- Theatre

Objectives

1. Facilitate opportunities for students, local performers, and the community to connect, collaborate, and engage through provision of formal and informal performance spaces and event spaces.
2. Facilitate secure concurrent use of spaces between the community and the school through strategic zoning. Should there be provisions for shared spaces between the community and the school, constant supervision is to be ensured.
3. Provide accessible spaces for skill development through provision of well-equipped studios that inspire and foster creativity.
4. Support emerging and established performers through provision of dedicated studios.
5. Contribute to community development and school network by engaging with local communities and visual arts schools through provision of spaces for public art and performances, outreach programs, and community events that promote inclusivity, diversity, and social cohesion.

Architectural Identity of Specialised Hub



Sculptural Roof/Ceiling can provide a sculptural element to the space while providing ample light that could provide opportunities atmospheric qualities to internal spaces. It offers an dramatic quality to the space which could be a source of inspiration for students and the community. Each Performing Arts hub should employ this architectural identity to create continuity through the network of schools.

Spaces for Performing Arts Hub

	Requirements
Performance Spaces	Provision of performing arts auditorium varying in size depending on site scale with: • 200-500 seating capacity • Stage 9m x 6m • Backstage area Other performance areas are to be provided, such as the school multipurpose hall, and informal indoor and outdoor performance spaces.
Performing Arts Studios	135m^2 per performing arts studios • Can have direct access from multiple GLS • Require mirrored wall • Ballet Barre • Lighting Bar at high level • Capacity for performance lighting and sound control system • Sprung Timber Floor Finish Individual soundproof booths are to be provided at a minimum of 5m^2 to facilitate students who wish to practice individually with sound isolation. At least 1 workshop is to be allocated for public use.
GLS	52.5m^2 unencumbered area for a ratio of 1:15 students per GLS, with reference to 4B GLS for objectives. • Direct access and visual connection between the GLSs (theory) and the workshop and seminar spaces (practical) is required. • Internal glazing may be appropriate to allow visual surveillance across the hub, as small groups break out to rehearse in different areas. • In this learning unit – theory and practice are integrated activities and use of the GLS, workshop and seminar is continuous. • GLS to have soundproofing measures and materials to minimise noise leakage. At least 3 GLS is to be allocated for public use.
Changing Rooms	Provision of 30 change rooms, 30 showers, and 30 lockers with direct access to performance spaces.
Recording Studios	Provision of: • Control room with sufficient space for sound mixing consoles, equipment racks and monitors. • Recording booth for vocal or instrument recording with acoustic treatment
Equipment Storage	44m^2 storage per studio.
Laundry	10m^2

Additional Requirements

- Provision of market spaces for students/community to sell works.
- Provision of amenities as per 4C Amenities.
- Provision of internal and external space for hosting events.

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Performance Spaces - Auditorium	To be designed with specialist lighting consultant		
GLS	Refer to 4B GLS	Refer to 4B GLS	Refer to 4B GLS
Storage	80	Warm, Intermediate	-
Music Room	320	Warm, Intermediate	19

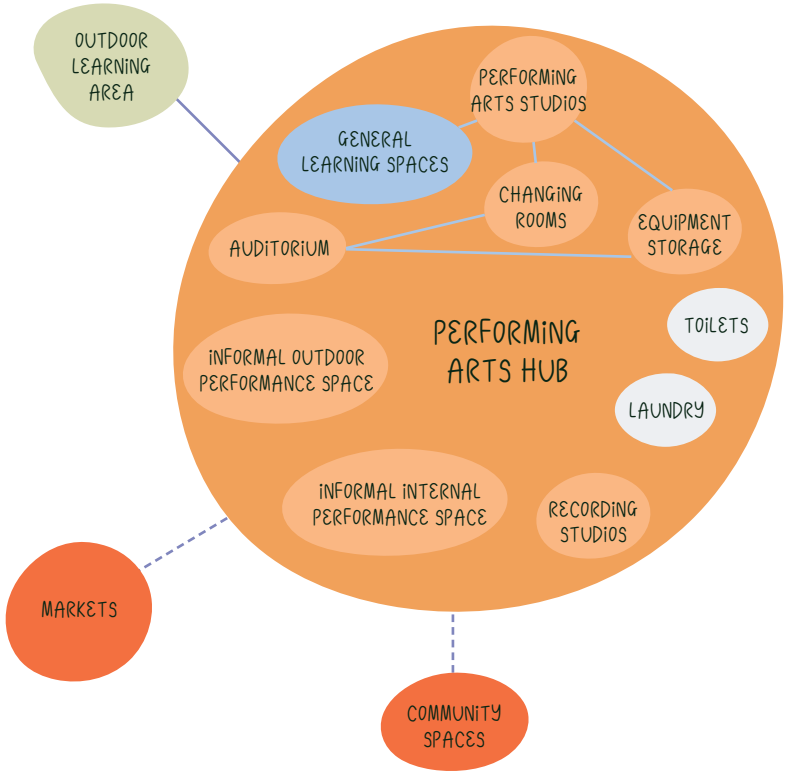
Optimal Acoustic

Acoustic design input required for floors, walls, windows, outdoor workshop and dust extraction.

	Recommended Design Sound Level	Recommended Reverberation Time (T)
Drama studios	20 - 30 dB(A)	
Music Recording Studios	20 - 23 dB(A)	
GLS	Refer to 4B GLS	Refer to 4B GLS
Sounds Stages	20 - 23 dB(A)	Specialist Consultant to Provide

Optimal Ceiling Height

	Recommended Ceiling Height
Performance Spaces	4.5 - 5m, consideration of rigging systems.
Performing Arts Workshops	3 - 4m Should aerial arts be provided, optimal ceiling height is 4.5 - 6m
GLS	Refer to 4B GLS
Storage	2.4m
Recording Studios	2.4 - 3m



LEGEND

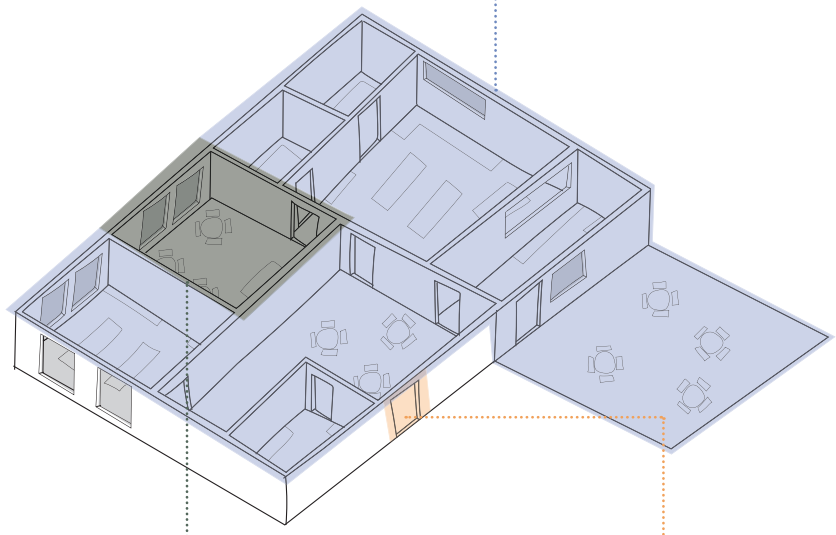
- - - - IN CLOSE PROXIMITY

——— WITH DIRECT ACCESS

4M Specialised Hub: Food and Textiles

Shared Space

- Kitchen
- Connection to student run shop interchangeable to clothing, food, pottery / art.
- The Laundry is a support space with fixtures and equipment to support the cleaning of clothes and linen. The space should be equipped with a laundry tub, washing machine and dryer.
- The Seminar Room is a multipurpose room with desks and chairs for individual to medium sized groups.



School Dedicated

- Separate GLS
- Demonstration bench

Public Space

- Separate entrance
- Access to student run shop fronts at all times and can be used privately outside of school hours.

Description

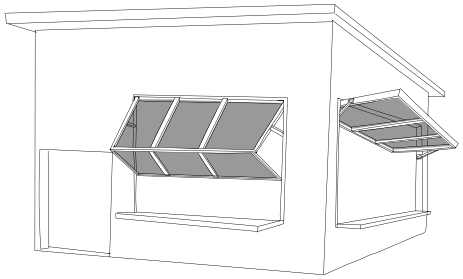
The Food and Textiles hub is a dedicated space that provides facilities for culinary and textile arts, fostering creativity, skill development, and community engagement. These spaces facilitate spaces for learning, experimentation and innovating through subjects including:

- Culinary Arts
- Food Science
- Nutrition
- Textile Design
- Fashion Design
- Sewing and Garment Construction
- Textiles Technology
- Pattern-Making
- Fabric Arts

Objectives

1. Facilitate opportunities for students, local performers, and the community to connect, collaborate, and engage through provision of formal and informal performance spaces and event spaces.
2. Facilitate secure concurrent use of spaces between the community and the school through strategic zoning. Should there be provisions for shared spaces between the community and the school, constant supervision is to be ensured.
3. Provide accessible spaces for skill development through provision of well-equipped studios that inspire and foster creativity.
4. Support emerging and established chefs and fashion designers through provision of dedicated workshop spaces.
5. Contribute to community development and school network by engaging with local communities and visual arts schools through provision of spaces for public art and performances, outreach programs, and community events that promote inclusivity, diversity, and social cohesion.
6. Promote sustainability by encouraging the use of reclaimed and recycled materials.

Architectural Identity of Specialised Hub



Operable Windows can create interactive moments between inside and outside spaces. It also offers atmospheric layers to adjacent spaces through scents, temperature and noise. It creates moments in which students can interact with each other as well as the community from different zones. Each Food and Textiles hub should employ this architectural identity to create continuity through the network of schools.

Spaces for Food and Textiles Hub

	Requirements
Kitchen Workshops	• 52.5m² unencumbered area for a ratio of 1:15 students per workshop space located attached to a single GLS. • Provision of 5 x height adjustable sanitary surface bench at 2000 x 900 to fit 3 individuals per bench.1.55m clearance to be provided around the perimeter of each bench and at the perimeter of the zone. Each bench should be installed with a sink, stovetop/oven and microwave. • Can have direct access from multiple GLS • To have direct access to pantry, preparation, and kitchen storage. • A bistro/learning commons directly accessible from the food technology spaces provides for a variety of learning settings, experimentation and an appropriate area to consume food prepared in class. At least 1 workshop is to be allocated for public use.
Textiles Workshop	• 52.5m² unencumbered area for a ratio of 1:15 students per workshop space located attached to a single GLS. • Provision of 5 x height adjustable bench to fit 3 individuals per bench.1.55m clearance to be provided around the perimeter of each bench and at the perimeter of the zone. Each bench should be installed with 3x sewing machines. • A centralised area should provide equipment including serger, cutting table, ironing station, and embroidery machine. At least 1 workshop is to be allocated for public use.
GLS	52.5m² unencumbered area for a ratio of 1:15 students per GLS, with reference to 4B GLS for objectives. • The Food Technology and Textile Technology GLS spaces accommodate a demonstration bench within a wet area with overhead mirror or camera and display, an extension table and sufficient student desks and chairs to enable a class group to be seated. At least 3 GLS is to be allocated for public use.
Changing Rooms	Provision of 30 change rooms, 30 showers, and 30 lockers .
Equipment Storage	44m² storage per workshop.
Pantry	32.5m² pantry to be shared between 4 kitchen workshops.
Preparation	45m² preparation to be shared between 4 kitchen workshops.
Kitchen Storage	22.5m² kitchen storage to be shared between 4 kitchen workshops.
Laundry	10m² laundry to be shared between 4 kitchen workshops. 10m² laundry to be shared between 4 textiles workshops. To be equipped with laundry tub, washing machine and dryer.

Additional Requirements

- Provision of market spaces for students/community to sell works.
- Provision of amenities as per 4C Amenities.
- Provision of internal and external space for hosting events.

Optimal Lighting

	Maintained Illuminance 1x	Lamp Colour Appearance	Maximum Glare Index
Textiles Workshop	800 with local lighting	Warm, Intermediate	-
GLS	Refer to 4B GLS	Refer to 4B GLS	Refer to 4B GLS
Storage	80	Warm, Intermediate	-
Kitchen	240	Warm, Intermediate	22
Laundry	80		

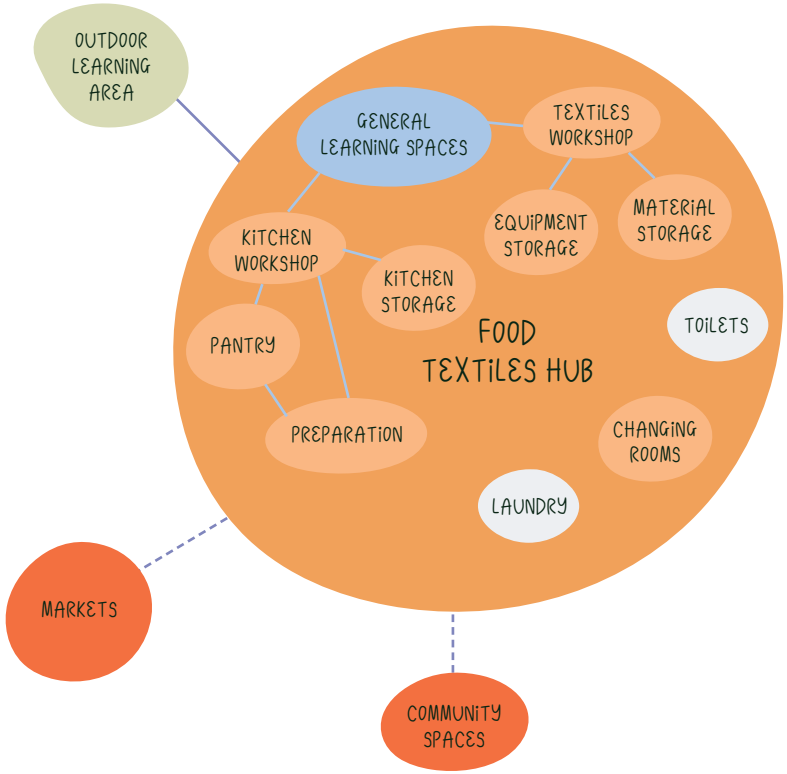
Optimal Acoustic

Acoustic design input required for floors, walls, windows, outdoor workshop and dust extraction.

	Recommended Design Sound Level	Recommended Reverberation Time (T)
Textile Workshop	<45 dB(A)	<0.8
Kitchen	<55 dB(A)	-
GLS	Refer to 4B GLS	Refer to 4B GLS

Optimal Ceiling Height

	Recommended Ceiling Height
Kitchen	2.7 - 3m with consideration of ventilation, equipment, and hanging exhaust hoods.
Textiles Workshop	3 - 3.6m.
GLS	Refer to 4B GLS
Storage	2.4m



LEGEND

- - - - IN CLOSE PROXIMITY

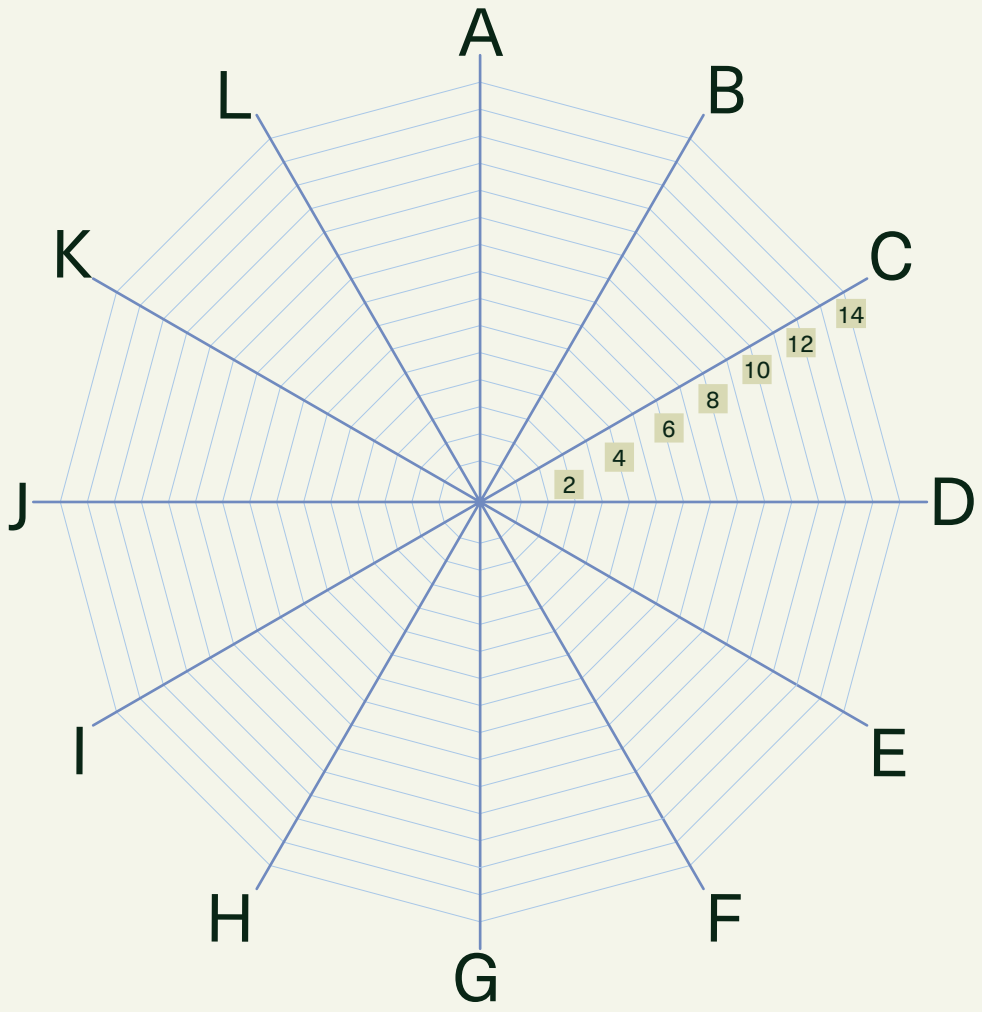
——— WITH DIRECT ACCESS

Food and Textiles Hub Adjacency Diagram

Metric
Designing Optimal Learning Settings

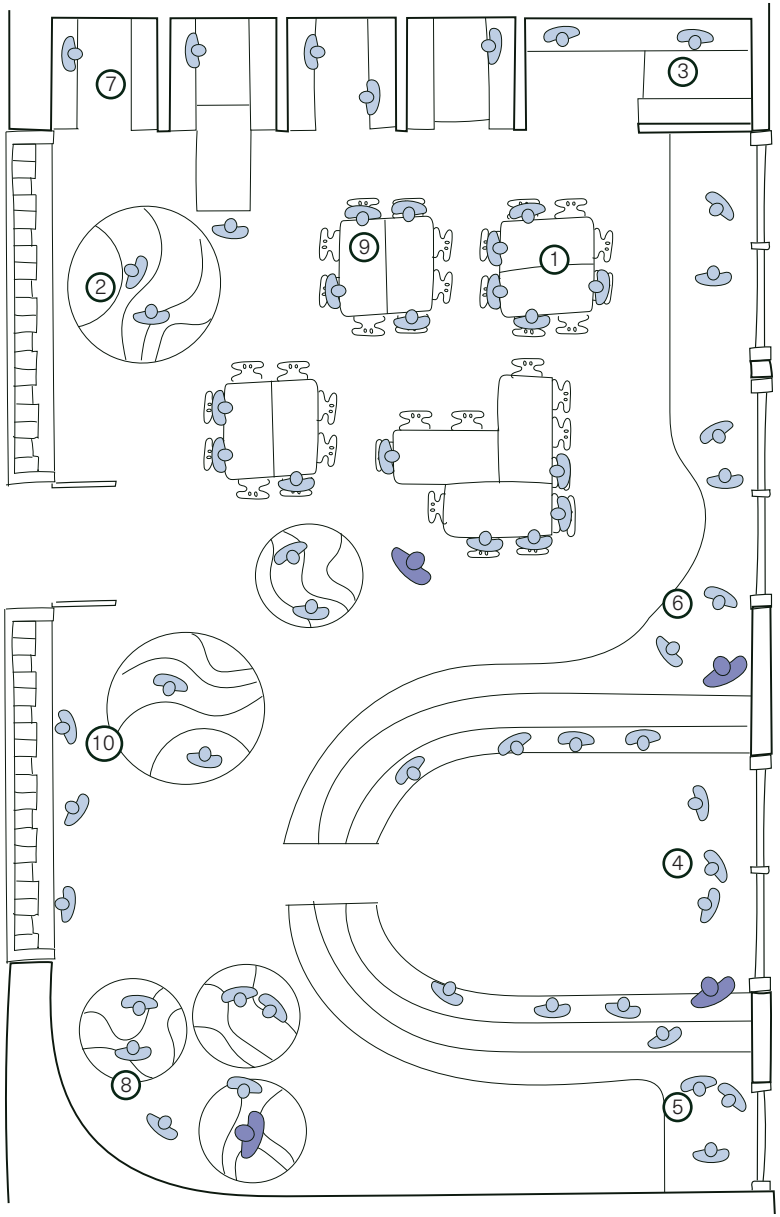
How to design the interior learning spaces. Cross checking with key objectives specific to each function, that the design area reaches a high level of performance qualities.

Allocated Letter	How many objects are met for each Kit Of Parts Design Space?	Number of Objectives	Ideal Number Met
A	General Learning Space	14	<11
B	Amenities	5	<4
C	Make-A-Space	7	<5
D	Support Learning Hub	12	<10
E	Administration and Staff	8	<5
F	Library	5	<3
G	Core Facilities	7	<5
H	Trade Specialised Hub - Metal and Wood Work	11	<9
I	Performing Arts Specialised Hub	5	<3
J	Visual Arts Specialised Hub	5	<4
K	STEM Specialised Hub	8	<6
L	Food and Textiles Specialised Hub	6	<4



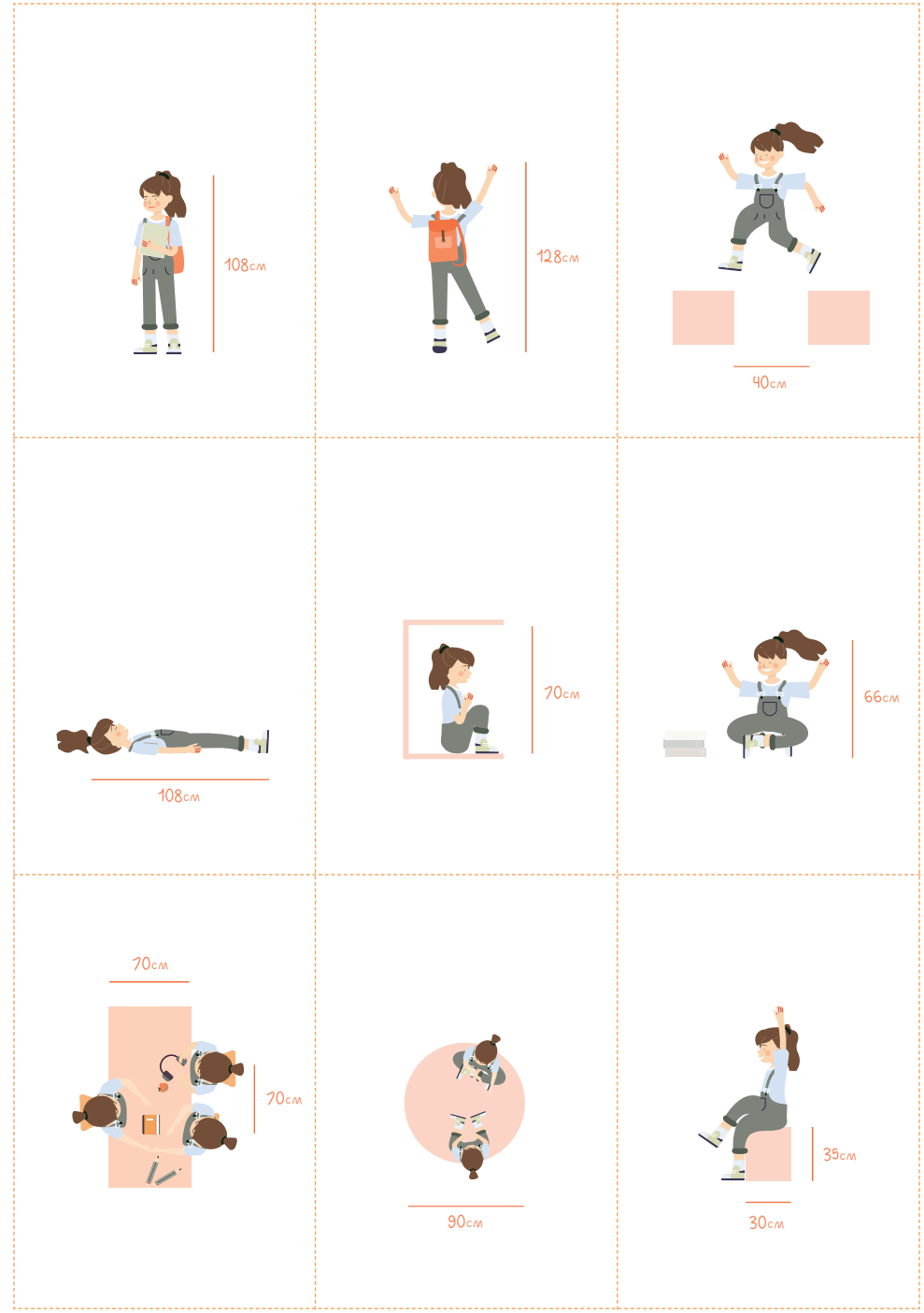
05 Designing Affordances for People

5A Pre-K Metrics

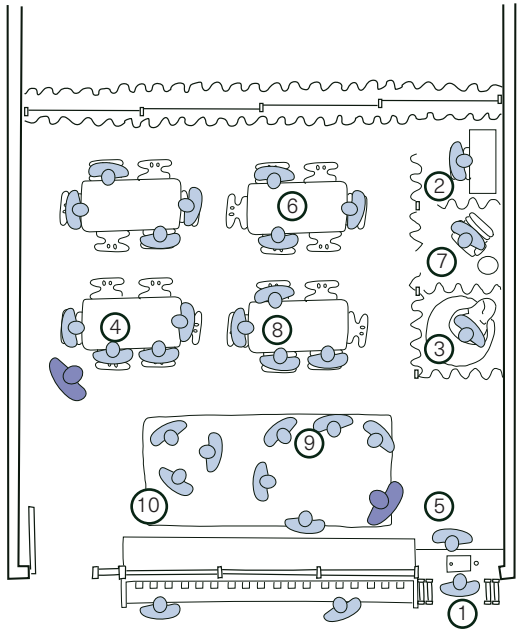


Legend

1. Inquires
2. Knowledgeable
3. Thinkers
4. Communicators
5. Risk-Takers
6. Balanced
7. Reflective
8. Principled
9. Open-Minded
10. Caring



5B Primary Metrics



Legend
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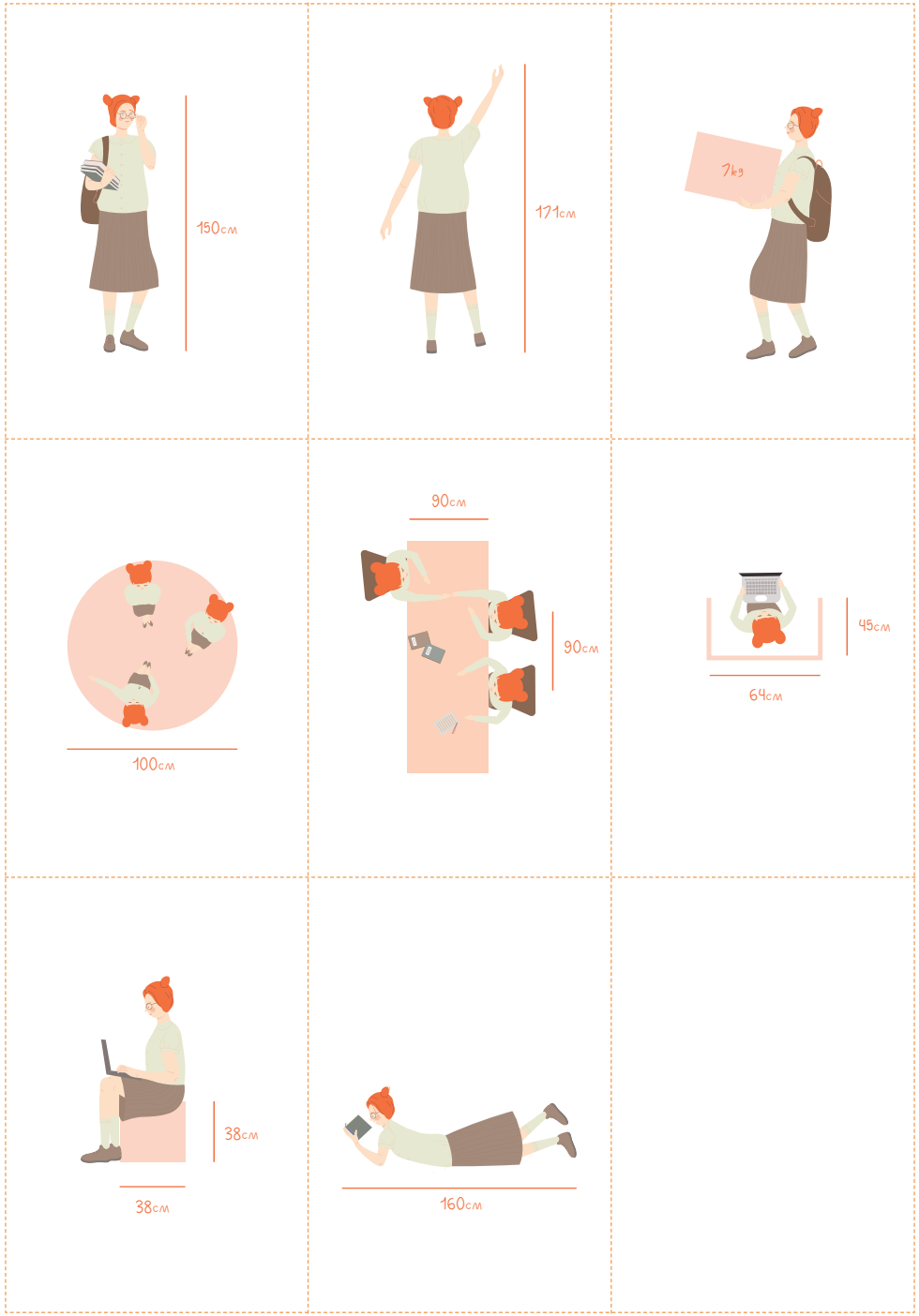
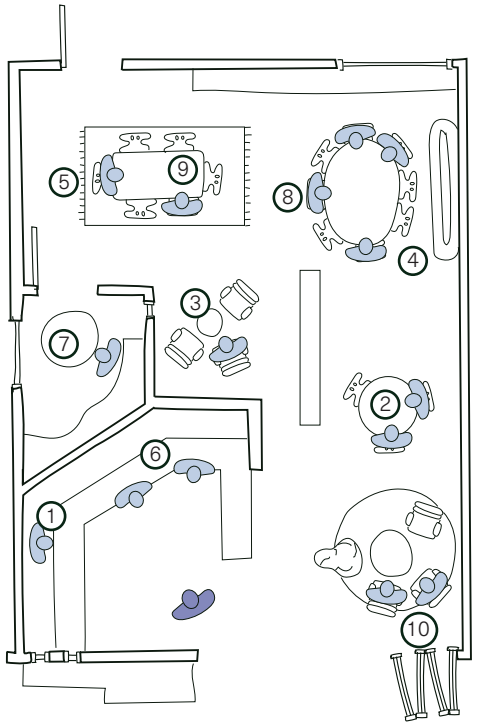


5C Secondary Metrics



Legend
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2. Knowledgeable
3. Thinkers
4. Communicators
5. Risk-Takers
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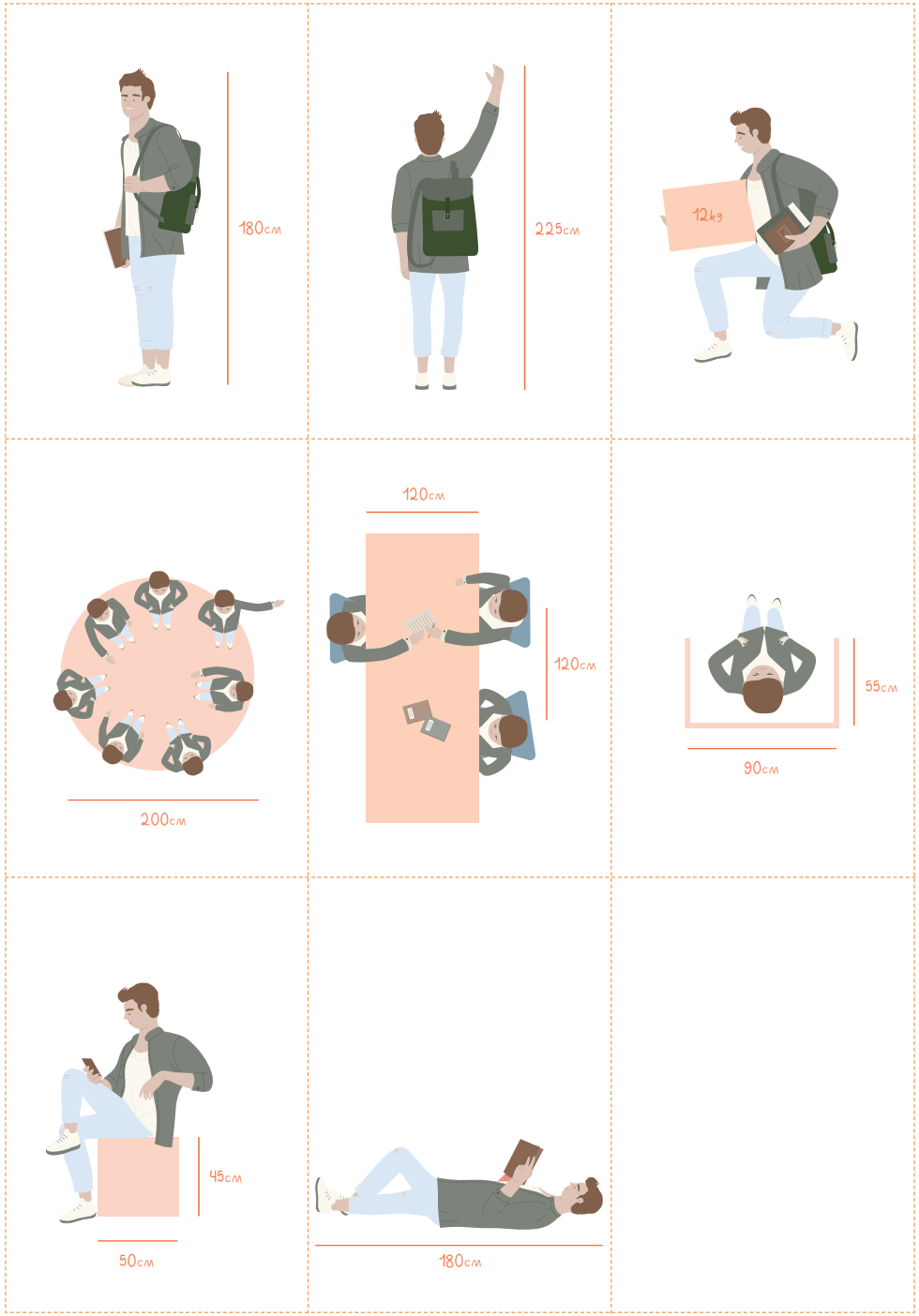
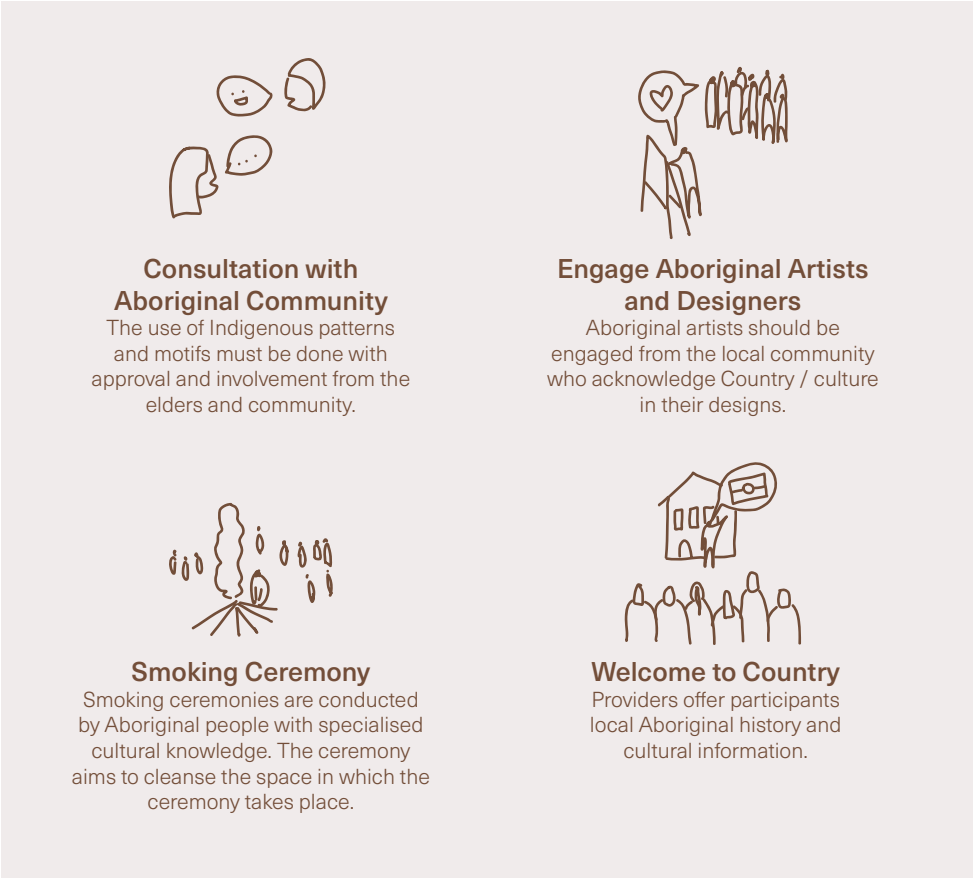
10. Caring



5D Designing Affordances for Country



Hromek, 2022

Further Indigenous Participation

For a comprehensive understanding of history and significance, designers should engage in consultations with the traditional owners and custodians of the respective sites. Without ongoing and initial dialogue, designers are left to make assumptions. By fostering dialogue between users, designers, and traditional custodians, valuable learning discussions can occur to discover how to better design affordances for Country.

Metric
Designing Affordances for People

During the Stage 2 Consultation with Students and Teachers, qualitative data was gathered to measure the effectiveness of the design guide part related to the details of the rooms/school to suit different school stages. This data focused on user occupancy and aimed to understand how well the current design supported the needs and preferences of the students and teachers. The feedback received during this meeting provided valuable insights into the zoning of the current layout and its alignment with the desired outcomes.

By analyzing the quality data, it was evident that the design received positive responses from the stakeholders, indicating that it successfully supported the development of a supportive and enjoyable environment for active student engagement with their education. This feedback demonstrated the effectiveness of the design principles and form in incorporating user needs and pedagogies, establishing a continuous loop of information to ensure the design remains responsive to the evolving requirements of the educational community.

Question Number	Question For Students
1	Which area will you use most of the time during class?
2	Which area will you use most of the time during brakes?
3	Which area will you use most of the time when it's raining?
4	Can you see a space where you can make it your own?
5	Where will you spend the most time outside and why?
6	Which furniture piece do you want more of?

Question Number	Question For Teacher
9	Do you see any safety issues with the current classroom layout ?
10	Do the classrooms have the ability to accommodate independent learning?
11	How many learning opportunities can a classroom facilitate?
12	Which area will you spend the most time in ?
13	Where will you spend the most time outside and why?
14	Does the learning environment allow you to teach in an effective way?
15	Are there enough spaces to support the type of thinkers?
A	Inquires
B	Knowledgeable
C	Thinkers
D	Communicators
E	Principled
F	Open-minded
G	Caring
H	Risk-takers
I	Balanced
J	Reflective

Postscript

Postscript

The new guideline for school design is a product of extensive research and analysis of projected statistics and current ideals in education. The guideline is designed to provide designers with a comprehensive framework for quality and long lasting design.

The guideline is still in its early stages and will require further testing and refinement as the project progresses.

As more data is collected and analyzed, adjustments will need to be made to ensure that the guideline is evidence-based and aligned with best practices in the field.

Ultimately, the goal is to create a robust and reliable resource that empowers designers to meet the diverse needs of the users and facilitate meaningful learning experiences.

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