



SSD Application

NEWCASTLE GRAMMAR SCHOOL DESIGN REPORT

REVISION E

SITE

Parkway Avenue, Cooks Hill NSW

CLIENT

Newcastle Grammar School

DATE

14.10.21

PROJECT NO.

4293



SHAC

| No. | Drawing | Rev | No. | Drawing | Rev |
|--------|---|-----|--------|--|-----|
| DR1.01 | School Background & Project Drivers | H | DR2.15 | Photographic Analysis - Streetscape Parkway Avenue | F |
| DR1.02 | Educational Vision | F | DR2.16 | Photographic Analysis - Streetscape Union Street | F |
| DR1.03 | Educational Approach | F | DR2.17 | Photographic Analysis - Buildings | F |
| DR1.04 | Educational Model | F | DR2.18 | Photographic Analysis - Landscape | F |
| DR1.05 | Pedagogy & Space | F | DR3.01 | Masterplan Objectives | E |
| DR1.06 | Explicit / Instructional Learning | F | DR3.02 | Masterplan Options | E |
| DR1.07 | STEM / Inquiry Learning | F | DR3.03 | Masterplan Design Diagrams | E |
| DR1.08 | Key Spatial Requirements 01 | F | DR3.04 | Site Plan Development | F |
| DR1.09 | Key Spatial Requirements 02 | F | DR3.05 | Outdoor Play Analysis | E |
| DR1.10 | Key Spatial Requirements 03 | F | DR3.06 | CPTED | E |
| DR1.11 | Key Spatial Requirements 04 | G | DR3.07 | Union Street Planning Diagrams | E |
| DR1.12 | Functional Adjacencies of Learning Spaces | F | DR3.08 | Union Street Planning Development | E |
| DR1.13 | Minimum Spatial Requirements | F | DR3.09 | Built Form - Scale | E |
| DR1.14 | SHAC Design Principles | F | DR3.10 | Site Shadow Diagrams | E |
| DR1.15 | SHAC Design Principles | F | DR3.11 | Facade Exploration | E |
| DR1.16 | SHAC Design Principles | F | DR3.12 | Facade Motif | E |
| DR2.01 | Location Plan | F | DR3.13 | Geometric Exploration | E |
| DR2.02 | Newcastle Context Analysis | F | DR3.14 | Exterior Material Palette | F |
| DR2.03 | Site Context Analysis | G | DR3.15 | Eastern Feature Stair | F |
| DR2.04 | Site History - Original Custodians | E | DR3.16 | Sustainability | E |
| DR2.05 | Site History - Late 19th Century | E | DR3.17 | Connecting with Country | E |
| DR2.06 | Site History - Late 19th Century | E | DR3.18 | Connecting with Country - Awabakal | D |
| DR2.07 | Site History - Late 19th Century | E | DR4.01 | Better Placed | E |
| DR2.08 | Site History - Early 20th Century | E | DR4.02 | Design Response | E |
| DR2.09 | Surrounding Heritage Conservation Areas | F | DR4.03 | Design Response | E |
| DR2.10 | Statutory Planning Principles | F | DR4.04 | Design Response | E |
| DR2.11 | Site Analysis Plan | H | DR4.05 | Design Response | E |
| DR2.12 | Existing Site Plan | H | | | |
| DR2.13 | Opportunities and Constraints | H | | | |
| DR2.14 | Developable Areas | G | | | |

Quality Assurance

Summary of Revisions

| No | Drn | Chk | Date | Content |
|----|-----|---------|----------|-----------|
| A | JL | JH / EB | 27.09.21 | SSD Draft |
| B | JL | JH / EB | 07.10.21 | SSD |
| C | JL | JH / EB | 12.10.21 | SSD |
| D | JL | JH / EB | 14.10.21 | SSD |
| E | JL | JH / EB | 14.10.21 | SSD |

SHAC

A 224 Maitland Road, Islington NSW 2296
T (02) 4961 5888
W shac.com.au

Checked By: JH / EB
Author: JL

"SHAC"
Nominated Architect Justin Hamilton (6160)

Ref: 4293.515.05 NGS Park Campus Stage 1
MASTERPLAN FILE ONLY.pln

All rights reserved; these materials are copyright.
No part may be reproduced or copied in any way,
for or by any means without permission.

© SHAC 2021



SHAC



SOURCE: Newcastle Grammar School

Brief Development



SHAC

DR1.01 Brief Development

School Background & Project Drivers

Newcastle Grammar School Background

Newcastle Grammar is one of Newcastle's most historically significant schools. The beginnings of Newcastle Grammar School traces back to 1859 when the Anglican Church established Newcastle Boys' Grammar on the present Hill Campus, where it operated until 1902. In 1918 the Newcastle Church of England Girls' Grammar was officially open on the site which marked the official birth of Newcastle Grammar School, with boys being once again enrolled in 1978.

In 1976 the Anglican Diocese of Newcastle gave the control & administration of the School to The Pittwater House Schools until 1991, & from 1992 the schools administration has been governed by Newcastle Grammar School Limited.

Today Newcastle Grammar Schools is an outstanding independent education institution in the centre of Newcastle. Their modern co-educational model provides a forward thinking & engaging education that celebrates their past & prepares students for a rapidly changing world.

NGS is a recognised partner school of:

- The Visible Wellbeing program
- The University of Sydney - STEM Teacher Enrichment Academy

Park Campus

Newcastle Grammar is currently split into two campuses, Park Campus (K-4), & Hill Campus (5-12). The Park Campus environment aims to provide the structure & discipline required for young children to develop both socially & academically. As well as an emphasis on the traditional areas of literacy & numeracy, Park Campus employs the Inquiry Based approach to promote independent & rich learning in Science, History & Geography. Specialist art, music, & language teachers enrich the mainstream curriculum. Students have the opportunity to join lunchtime clubs & participate in co-curricular activities. If required students also have access to specialist learning support including occupational therapy & counselling services.

Project Drivers

- Park Campus is currently at capacity, with years 5 & 6 located on the Hill Campus
- Relocate years 5 & 6 onto the Park Campus, to allow future growth on the Hill Campus
- Facilitate the growth of the Park Campus from a 2-stream K-4 to a 3-stream K-6
- Respond to the closing of the onsite preschool
- Remove end of life assets
- Provide a contemporary learning environment that facilitates STEM & Inquiry Based Learning
- Create a welcoming & interesting landscape that compliments learning & encourages discovery
- Ameliorate the existing traffic issues related to the school
- Allow for future capacity of school to meet 4-stream requirements

Park Campus' Projected Growth

Park Campus is currently at capacity but will also continue to experience enrolment growth. Furthermore, NGS want to relocate years 5 & 6 from the Hill to the Park Campus to consolidate the primary years. The projected growth up to 2024 for the Park Campus is outlined in the table below:

| | CURRENT | | 2021 | | 2022 | | 2023 | | 2024* | |
|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | STREAM | STUDENTS | STREAM | STUDENTS | STREAM | STUDENTS | STREAM | STUDENTS | STREAM | STUDENTS |
| Kindergarten | 2 | 23 | 3 | 44 | 2 | 38 | 3 | 40 | 3 | 40 |
| Year 1 | 2 | 42 | 2 | 24 | 3 | 45 | 2 | 39 | 2 | 41 |
| Year 2 | 2 | 46 | 2 | 43 | 2 | 28 | 2 | 48 | 2 | 42 |
| Year 3 | 3 | 42 | 3 | 53 | 2 | 43 | 2 | 28 | 3 | 48 |
| Year 4 | 3 | 61 | 2 | 42 | 3 | 58 | 3 | 46 | 2 | 34 |
| Year 5 | | | | | | | | | 3 | 51 |
| Year 6 | | | | | | | | | 3 | 71 |
| TOTAL | 12 | 214 | 12 | 206 | 12 | 212 | 12 | 201 | 18 | 327 |

Source: Frazer, David Email received 29.10.20

As per the EIS, at the completion of Stage 1 the School will cater for 3-stream K-6 with up to 480 students and 45 staff, & at the completion of Stage 2 the school will cater for a full 4-stream K-6 school with up to 640 students & 60 staff.

At NGS we have a strong desire to help each student reach their potential in order to lead lives of purpose & success



DR1.02 Brief Development

Educational Vision

NSW Department of Education

VISION

To be Australia's best education system and one of the finest in the world.

PURPOSE

To prepare young people for rewarding lives as engaged citizens in a complex and dynamic society.

GOALS

1. All children make a strong start in life and learning and make a successful transition to school.
2. Every student is known, valued, and cared for in our schools.
3. Every student, every teacher, every leader, and every school improves every year.
4. Every student is engaged and challenged to continue to learn.
5. All young people have a strong foundation in literacy and numeracy; deep content knowledge; and confidence in their ability to learn, adapt and be responsible citizens.
6. All young people finish school well prepared for higher education, training, and work.
7. Education is a great place to work and our workforce is of the highest calibre.
8. Our school infrastructure meets the needs of a growing population and enables future-focused learning and teaching.
9. Community confidence in public education is high.
10. Our education system reduces the impact of disadvantage

Newcastle Grammar School

VISION & STRATEGIC AIMS

- Capture the individualism of NGS and project its uniqueness to the community.
- Develop a conceptual layout to guide development for 15 years, clarifying development opportunities.
- Reinforce NGS's reputation as a leader of education.
- Meet the needs of students in the 21st Century.
- Enhance the current and future pedagogical teaching and learning strategies.
- Shift from discreet subject silos to regarding disciplines as lenses through which issues are approached and problems are solved.
- Improve aging physical spaces.
- Address spatial limitations.
- Use a masterplan to provoke communication with students, parents, and the wider community.

Our
educational
rationale is
that we don't
dictate space



DR1.03 Brief Development Educational Approach

Positive Education & Visible Wellbeing

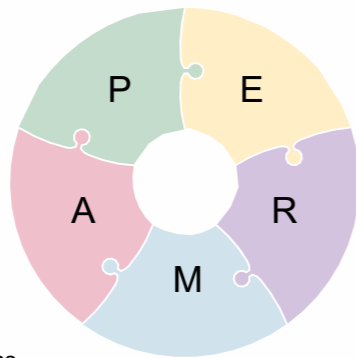
NGS places wellbeing at the heart of everything they do. They combine the best practice teaching & learning models to ensure learners not only develop the skills, but also the mindsets required to flourish.

NGS practices various empirically validated approaches from positive psychology which are delivered through interventions, programs & practices to promote the wellbeing of the students, staff & wider community.

As well as focusing on the positive psychology principles of Growth Mindset, gratitude, resilience, grit, deliberate practice, flow & mindfulness they also believe in the importance of wellbeing literacy as a general capability.

The language of strengths permeates the entire school community as they acknowledge that Character Strengths are the Pathway to the PERMA model of wellbeing & resilience.

- P** - Positive Emotions, *feeling good*
- E** - Engagement, *finding flow*
- R** - Relationships, *authentic connections*
- M** - Meaning, *purposeful existence*
- A** - Accomplishments, *a sense of accomplishment*



NGS WELLBEING PROGRAMME

- Creates a sense of belonging
- Facilitates peer support programmes
- Develops specified positive education lessons
- Tracks individual student progress
- Celebrates students' achievements & contributions
- Provides counselling through school psychologists
- Develops skills & knowledge to prevent or address specific problems

STUDENT BENEFITS

- They are more likely to be active participants in their learning & to achieve better physical, emotional, social & educational outcomes
- Their learning outcomes are optimised when they feel connected to others & experience safe & trusting relationships

Growth Mindset

The Growth Mindset is an educational theory developed by Dr Carol Dweck, centred around the belief that intelligence, ability & performance are malleable & can be improved through teaching. The opposite approach of a fixed mindset refers to the belief that a students' talents are set in stone. Dweck's approach advocates that 'qualities can be cultivated, & that the growth mindset is a more effective & efficient model for helping students develop.

In the growth mindset, failure can be a painful experience, but it doesn't define you. Instead, it encourages students to face their problems, deal with them, & learn from them. The growth mindset gives students a path into the future.'

Dweck encourages us to 'praise wisely, not praising intelligence or talent, but praising the process that learners engage in: their strategies, their focus, their perseverance, their improvement. This process praise creates kids who are hardy & resilient.'

PRINCIPLES

- Intelligence can be developed
- Embrace challenges
- Persist in the face of obstacles
- See effort as the path to mastery
- Learn from criticism
- Find lessons & inspiration in the success of others
- Achieve a greater sense of free will

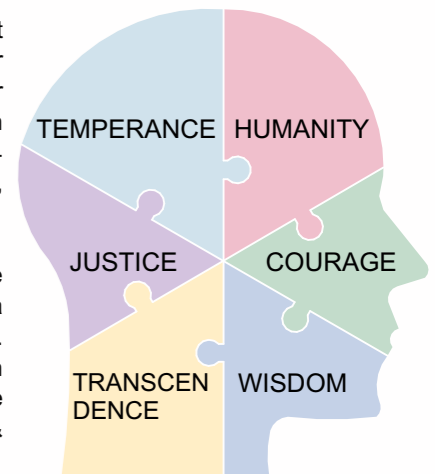
STUDENT BENEFITS

- They seek out better feedback & persist for longer
- They develop an ability to cope better with transitions & develop better self-regulation
- It reduces stress & aggression in students as well as increasing wellbeing & emotional functioning
- It improves their self-esteem, learning orientation & reduced helplessness
- It improves their grit & pro-social behaviours

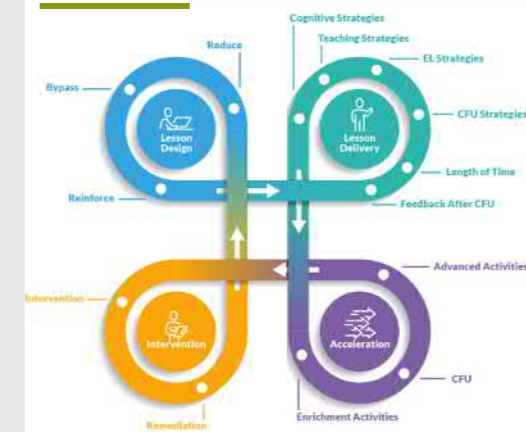
Character Strengths

Through the Positive Education programme at NGS, all students will be allowed to discover their signature strengths from the 24-character strengths developed by the Values in Action (VIA) institute. NGS has categorised the 24 strengths into 6 themes: temperance, humanity, courage, wisdom, transcendence, & justice.

NGS believes that knowing our signature strengths & skillfully applying them can have a significant positive impact on our lives. According to research signature strengths can help us buffer against, manage, & overcome challenges, improve our relationships & enhance our wellbeing.



Differentiation



NGS' teachers use differentiation to provide the right amount of support & challenge for each student to ensure learners at different starting points can receive the instruction they require to grow & succeed.

This involves adjusting & tailoring one or more of the following factors:

- the lesson content
- the lesson process
- the product expected from the students

SOURCES:
Newcastle Grammar School, Bringing Learning in Kindergarten to Life, from <https://www.youtube.com/watch?v=vmw4ZFg0QgM&t=57s>
Carol Dweck, 'A Summary of Growth and Fixed Mindsets,' from <https://fs.blog/2015/03/carol-dweck-mindset>
'How to Develop a Growth Mindset in Schools,' from <https://www.innerdrive.co.uk/how-to-develop-a-growth-mindset>

DR1.04 Brief Development Educational Model



Newcastle Grammar believe that an effective learning framework that prepares students for an unknown world is a balance between explicit learning & inquiry driven learning.

Explicit Instruction



Explicit instruction is a traditional method of teaching learners skills or concepts with direct structured instruction that includes; demonstrations, prompts & practice.

PRINCIPLES

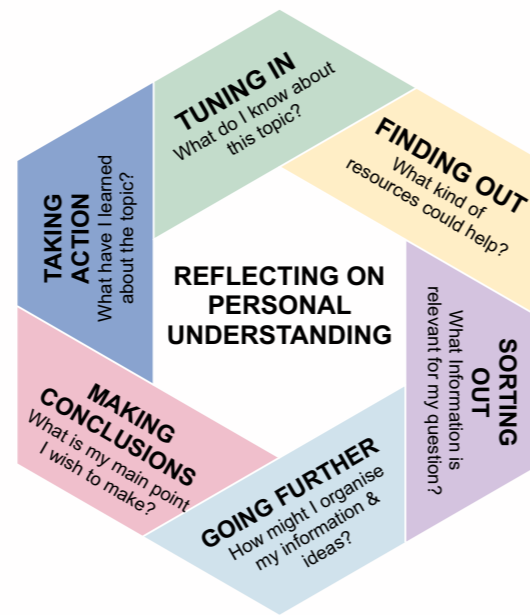
1. Explain or demonstrate the skill in the same way students will practice it
2. Verbalise the Thinking Process
3. Provide Opportunities to Practice
4. Give Feedback

STUDENT BENEFITS

- Makes higher-order thinking & inquiry-based learning easier
- Reduces the load on learners' working memory
- Assists learners with difficulty maintaining attention
- Helps to overcome language barriers by using consistent & clear language
- Accommodates learners of all abilities
- Allows for specific data collection & analysis

Inquiry Learning

Inquiry learning at NGS follows the Inquiry Cycle developed by Kath Murdoch.



Inquiry driven learning cultivates a creating learning environments of wonder & curiosity. This supports the School's aim of shaping young people who are confident, capable, & creative thinkers, collaborators, self-managers, communicators & researchers.

Fundamental to successful inquiry-driven learning is a shared set of beliefs or assumptions about learners, learning, the curriculum, the nature of knowledge, teaching & the purpose of the School.

BELIEFS THAT UNDERPIN INQUIRY

Children are capable, competent, resilient & curious about the world around them. When their agency is nurtured, they can positively influence their lives & take action to improve their world.

Schools are places in which communities of learners work together to develop the skills & dispositions for an increasingly volatile & complex world. The purpose of schooling is about learning to learn - about knowing what to do when you don't know while building a solid foundation in literacy & numeracy.

Learning is a complex process & works differently for each of us. Learning does not occur simply by being exposed to or receiving information. Learning is an act of meaning-making where individuals connect new experiences to existing schema and through reflecting process & construct understanding over time. Learning is driven by a sense of purpose, curiosity & ownership.

Teachers are learners. Their role is multifaceted & complex. Teaching is the art of supporting the learner to make connections and 'figure things out' for themselves. Teachers can't do learning 'to' students - it is the learner who does the learning.

Teaching is active and intentional. It requires a wide & sophisticated repertoire of strategies that includes listening, observing, questioning, explaining, demonstrating, challenging, modeling, giving feedback. In an inquiry setting teaching is highly intentional and responsive to the needs of learners across the day.

Curriculum (written) identifies some agreed knowledge and skills that learners 'uncover' rather than teachers cover. The curriculum can help a school design learning experiences to



ensure consistency, coherence, and continuity over time. Curriculum can help teachers plan ahead and back map. Learners needs and interests drive this planning - the curriculum itself is not the driver of plans

The physical environment has a powerful influence on learning itself. The physical environment should inspire curiosity and creativity, allow for ease of investigation, require self-management and invite self-direction. The environment can act as the 'third teacher' and be owned by all learners rather than seen as the teacher's domain.

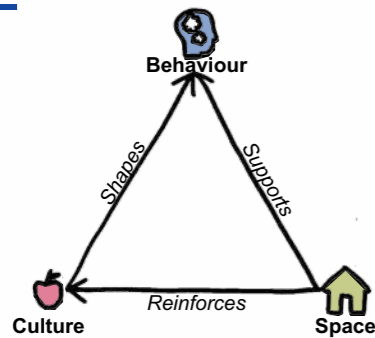
STUDENT BENEFITS

- Increased social interaction
- The encouragement of exploration
- Improved argumentation & reasoning skills
- Promotes a growth mindset & a positive attitude to failure

SOURCES:
Newcastle Grammar School, Bringing Learning in Kindergarten to Life, from <https://www.youtube.com/watch?v=vmw4ZFgOOgM&t=57s>
Kath Murdoch, The role of beliefs & assumptions in influencing pedagogy
'High impact teaching strategies in action: Differentiated teaching', from <https://www.education.vic.gov.au/school/teachers/classrooms/Pages/approacheshtsdifferentiation.aspx>

DR1.05 Brief Development Pedagogy & Space

Culture, Space & Learning



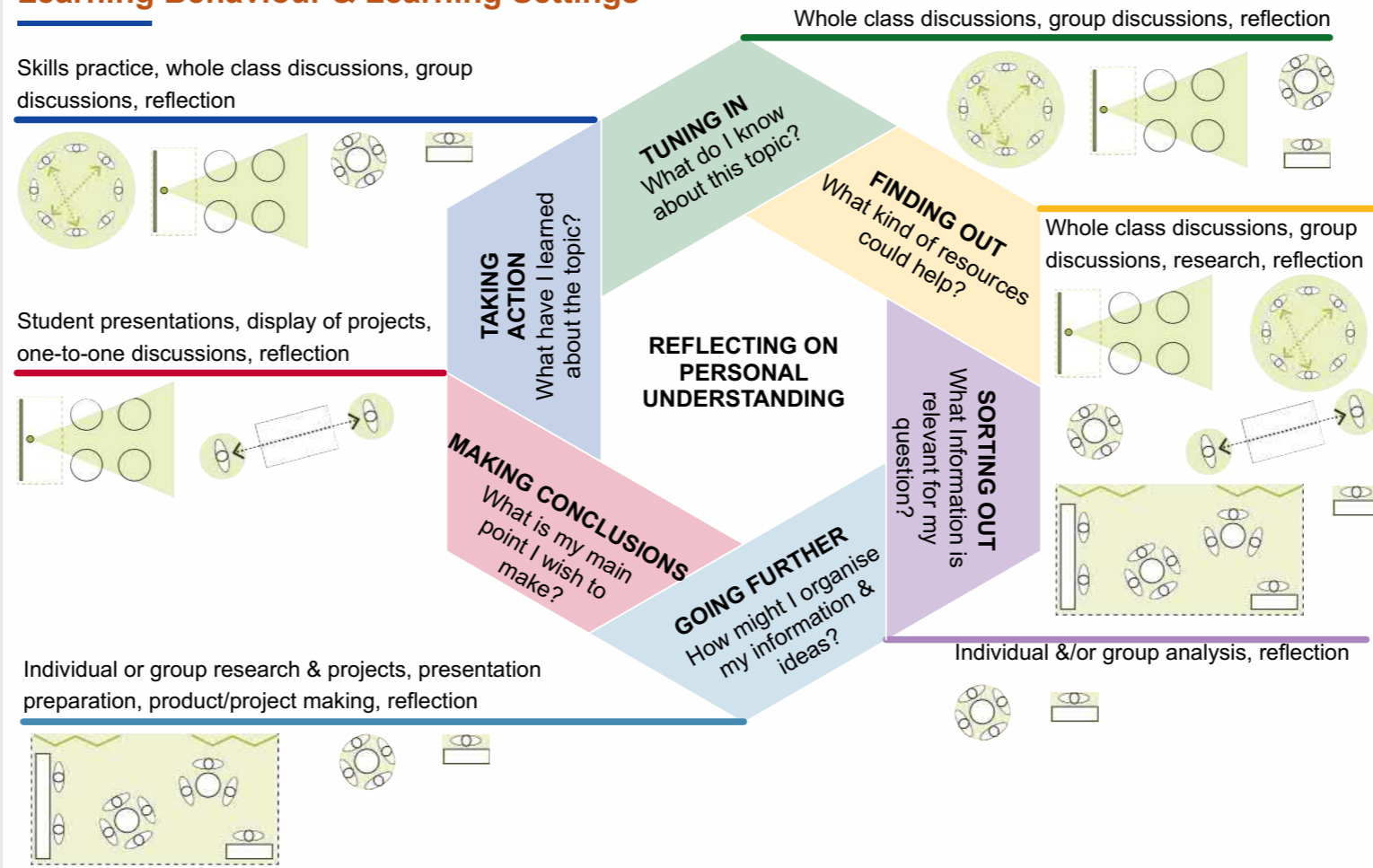
It is evident that the school's culture & approach to wellbeing, positive education & the focus on developing learners' character strengths & growth mindset determines their educational model. Their model includes using explicit & inquiry modes of teaching that are differentiated in various ways to ensure all students can succeed.

Therefore the physical spaces of the School needs to reinforce the School's culture by:

- Inspiring curiosity & creativity
- Acting as a third teacher that is owned by all learners rather than the teachers & staff
- Allowing for easy & safe investigation
- Requiring self management & inviting self direction
- Reflecting diversity in needs, cultures, personalities, & strengths

The physical space should also support the School's educational model by providing appropriate environments for the activities involved in explicit teaching & the inquiry cycle.

Learning Behaviour & Learning Settings



As evident from the diagram above a variety of learning settings is required for the various processes involved in the inquiry cycle.

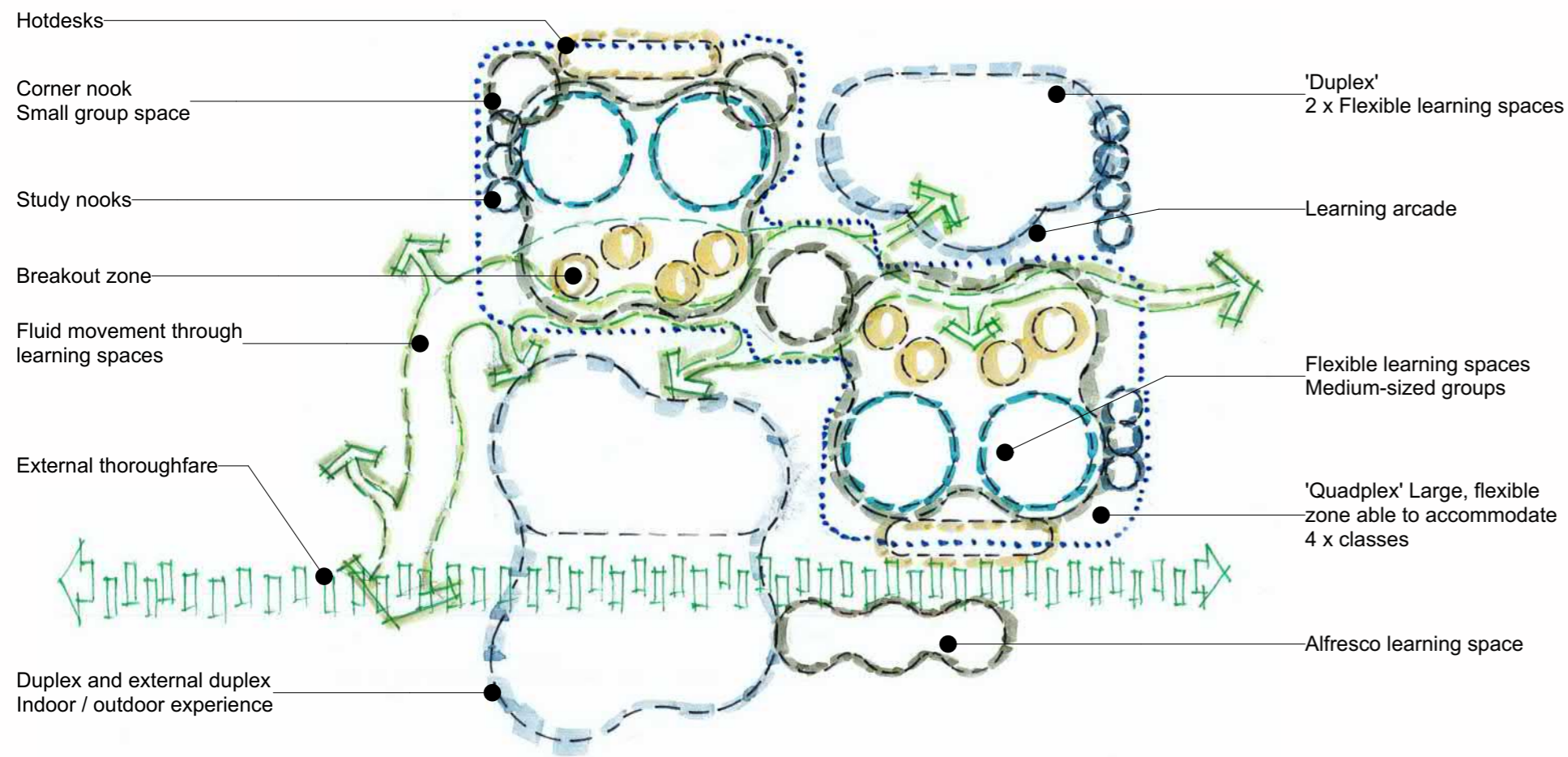
Learning Settings Summary

| Learning Setting | Learning Behaviours |
|------------------|--|
| | - Deliver Explicit Instruction - Deliver Demonstrations - Group Discussions - Share Information - Present Student Projects |
| | - One-on-one/few Demonstrations & Discussions - Skills Practice & Assessment - Reflection - Remediation / Acceleration |
| | - Research - Collaboration & Group Work - Making & Experimenting - Applying Knowledge & Skills |
| | - Group Discussions & Debates - Decision Making - Sharing Information |
| | - Research - Analysis - Small Group Discussions - Collaboration & Group Work - Reflection |

**We shape our buildings;
thereafter they shape us**
- Winston Churchill

DR1.06 Pedagogy & Architecture

Explicit / Instructional Learning



PHYSICAL MANIFESTATION OF PEDAGOGY

What we refer to as 'General Learning Space' or 'Home Base' by NSW standards, is the learning spaces that explore and branch from foundations of explicit instruction, which is a more structured, systematic methodology for the teaching & learning of academic skills. However, traditional standards are transformed through future focused learning methodologies, where students are provided with flexible and efficient use of space to guide students through the learning process of explanation, demonstration and practice in a range of modes, including small nooks, study spaces, larger learning spaces and breakout zones.

Outdoor learning & alfresco areas are also encouraged, allowing students to maintain connection to the surrounding landscape, fostering psychosocial and environmental benefits, active engagement in learning, as well as informal learning opportunities.

DR1.07 Pedagogy & Architecture

STEM / Inquiry Learning

Small group nooks with outlook

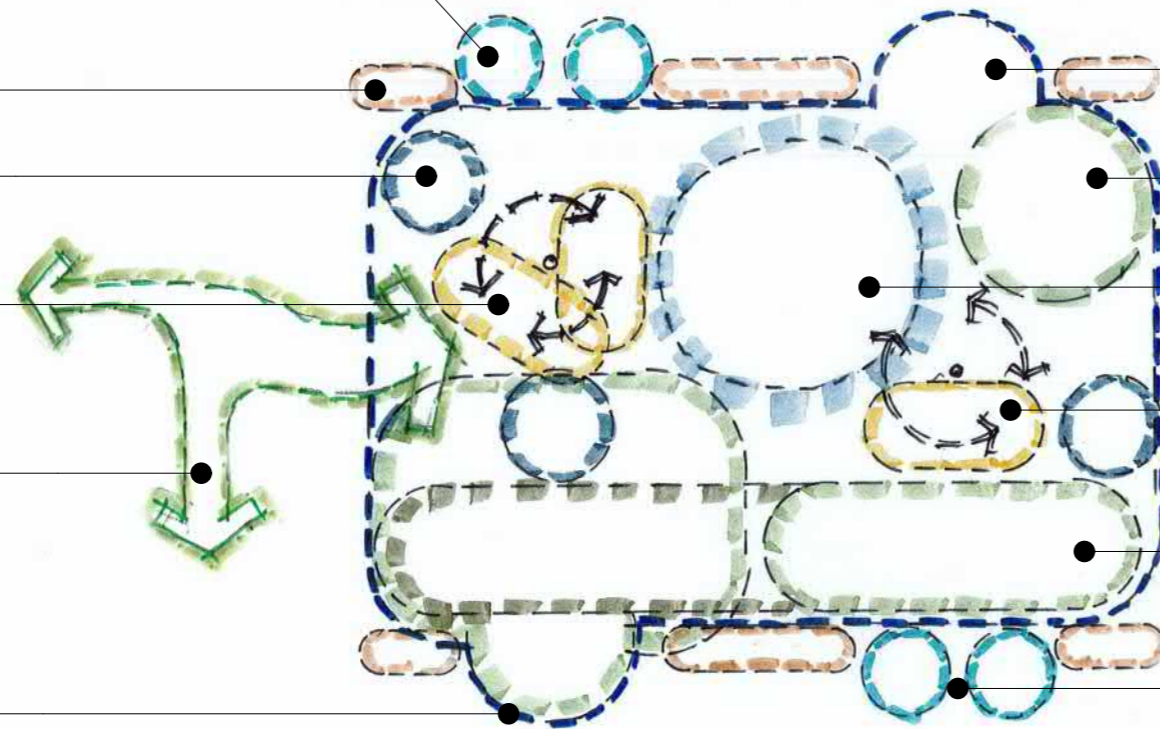
Hotdesks

Learner's nooks

Group think-tank, can rotate to create a range of convex spaces surrounding

Fluid movement through learning spaces & beyond

Large collaboration zone
Multiple class groups



Medium group collaboration

Study incubator

Main STEM space / workshop

Group think-tank collaboration

Large group collaboration

Small corner nooks with outlook

PHYSICAL MANIFESTATION OF PEDAGOGY

STEM labs, makerspaces, multipurpose workshops & hubs are adaptable, creative & sometimes self-directed learning spaces able to accommodate a range of collaborative learning opportunities.

STEM spaces promote learning through inquiry, participation, play, and collaboration. These spaces are designed as a place for students to explore the multifaceted world of new technologies they live in. With hands-on creative activities including craft, metal, wood, ceramics, electronics, robotics, and plastics, for example, students pool their skills, knowledge, and ideas to share in the tasks of teaching and learning, facilitating informal learning opportunities for both students and staff.

STEM education combines rigorous academic disciplines with the technical challenges of mastering skills in these learning areas. This deliberate grouping is essential for the development of critical thinking, creativity, design process, and problem-solving skills for primary school education. Teaching STEM to younger students reinforces a strong focus on curiosity, exploration, and wonder in the world.

Ideally, a STEM space would be a double-height zone, or contain some element of elevation, and have direct access to a multitude of small nooks, group spaces & think-tanks, medium to large collaboration zones, and incubators. An ability to break down, open up, divide & adapt these spaces are essential to providing a flexible & suitable space for a multitude of coursework & explorative exercises. Internal glazing, operable walls & pods are a great tool for operability, flexibility, and for maintaining visual connection.

Key Spatial Requirements 01



STUDENT HOME BASES

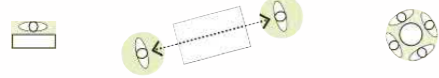
Description: 1-2 sqm per student

A consistent space, usually a desk at which to work & study. The consistency of this space provides learners with a sense of ownership & teaches them responsibility.

- Atmosphere:**
- Consistent yet flexible
 - Fun
 - Personalised

- Key Spatial Features:**
- Fun, playful colours & design features, learning expressed in the architecture
 - Robust, durable materials, flexible furniture
 - Domestic-feel
 - Access to resources

- Site Relationships:**
- Located with other students' home bases within their peer group
 - Adjacent to other common learning spaces
 - Easy access to outdoor learning & play space
 - In proximity to maker/STEM spaces & other resources



LEARNER'S NOOK

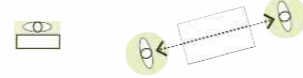
Description: 5-10 sqm per nook

A quiet space for individuals or small groups to work, study, reflect & rest.

- Atmosphere:**
- Quiet
 - Peaceful
 - Safe
 - Reflective

- Key Spatial Features:**
- Fun, playful colours & design features, learning expressed in the architecture
 - Robust, durable materials, flexible furniture
 - Domestic-feel
 - Acoustic treatment
 - Access to resources

- Site Relationships:**
- Adjacent to student home bases & other common learning spaces



COLLABORATIVE LEARNING

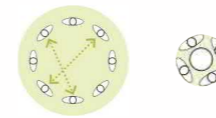
Description: 50- 100 sqm

Dedicated spaces that allow groups of learners to discuss, study & work on group projects. These spaces encourage social learning & creativity.

- Atmosphere:**
- Energetic & Noisy
 - Flexible & Diverse
 - Creative

- Key Spatial Features:**
- Fun, playful colours & design features, learning expressed in the architecture
 - Robust, durable materials, flexible furniture
 - Domestic-feel
 - Acoustic treatment
 - Access to resources

- Site Relationships:**
- Adjacent to student home bases & other common learning spaces



PRESENTATION SPACE

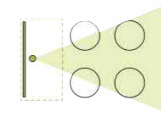
Description: 40-50 sqm

Space for individuals or teams to present ideas, demonstrate or perform, allowing students to practice, share acquired skills & knowledge with others & receive feedback.

- Atmosphere:**
- Focused
 - Calm

- Key Spatial Features:**
- AV
 - Display screens
 - Clear open space

- Site Relationships:**
- Adjacent to student home bases & other common learning spaces



NOTE: IMAGES PROVIDED ARE NOT OWNED BY SHAC PTY LTD UNLESS NOTED BUT READILY AVAILABLE OFF LICENSE FROM INTERNET SOURCES

DR1.09 Brief Development

Key Spatial Requirements 02



MAKERSPACE / PRACTICAL ACTIVITIES

Description: 25 sqm per 25 students

Dedicated spaces that allow groups of learners to make, experiment & work on individual or group projects. These spaces encourage curiosity, exploration, social interaction & creativity.

Atmosphere:

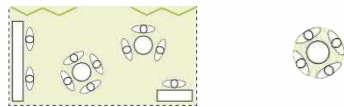
- Messy
- Fun
- Experimental
- Creative

Key Spatial Features:

- Fun, playful colours
- Art sink
- Wipeable surfaces
- Storage for easy access of materials
- Non-slip flooring
- Robust, durable materials, flexible furniture
- Acoustic treatment

Site Relationships:

- Adjacent to student home bases & other common learning spaces



DISPLAY SPACE

Description: 20 sqm per 25 students

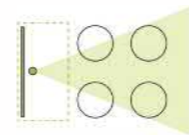
Whiteboards, pinboards, & shelves to showcase students' ideas, work-in-progress & completed projects.

Atmosphere:

- Visible
- Deliberate
- Colourful

Site Relationships:

- Adjacent to primary learning spaces
- Along circulation spines



STEM & COLLABORATION

Description: Approx. 200 sqm

STEM & collaboration spaces should reflect the School's vision; *Wonder & Curiosity*, & respond to the adventurous minds of children aged 5 - 10. The traditional definition of 'Library' is transformed into a technology-rich, resourceful & inspiring space for inquiry.

Atmosphere:

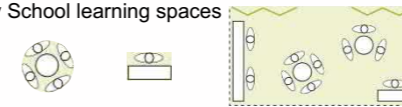
- Wonderful
- Creative
- Messy

Key Spatial Features:

- Natural daylighting & ventilation
- View lines to outdoor courtyards & vegetation
- Double-height zones
- Tiered learning, multipurpose stair
- Technology, display screens
- Small, medium & large group spaces

Site Relationships:

- Directly accessible from outdoor play spaces
- Adjacent Primary School learning spaces



OUTDOOR SPACES

Description: 10 sqm per student

Primary School students need to develop their sport and motor skill competencies through running, leaping, throwing & catching, & being involved in other physical activity. Promoting student involvement in physical activity helps maintain their involvement later in life.

Atmosphere:

- Playful
- Sporty
- Natural
- Explorative
- Risky (controlled)

Key Spatial Features:

- Mixture of nature play, open outdoor play, organised sport and passive play spaces
- Natural elements and materials
- Opportunity for learning incorporated into equipment

Site Relationships:

- Visual connection between indoor spaces & surrounding vegetation
- Access to shaded spaces and places to sit
- Access to the library

NOTE: IMAGES PROVIDED ARE NOT OWNED BY SHAC PTY LTD UNLESS NOTED BUT READILY AVAILABLE OFF LICENSE FROM INTERNET SOURCES

DR1.10 Brief Development

Key Spatial Requirements 03



ENTRY / WAITING AREA

Description: Approx. 50 sqm
Main entry point for staff, students, parents & visitors.

Atmosphere:

- Inviting & Welcoming
- Sense of identity & School's culture
- Emphasis on the School's culture & dedication to learning

Key Spatial Features:

- Secure entry point
- Reception desk with sign-in facilities
- Lockable medication cabinet
- Water station
- Waiting area with lounges & coffee table
- Signage
- Notice board/screen

Site Relationships:

- At main school entrance



OCCUPATIONAL THERAPY ROOM

Occupational Therapists: Approx. 50 sqm
School occupational therapists work one-on-one with students with disabilities to promote their well-being, participation & success in the daily occupations of school life. Occupational therapists work through a variety of physical activities to improve students' motor, movement, & sensory skills. Occupational therapists often work collaboratively with psychologists, teachers & parents to achieve the best possible outcomes for students.

Description:
A specialised room with adequate space & storage for the relevant physical activities.

Atmosphere

- Safe
- Fun
- Supportive & Encouraging

Key Spatial Features:

- Visual & acoustic privacy
- Views of nature to keep children calm
- Fun, but soft colour scheme,
- Storage for required equipment
- Open space
- Ability to hang hammocks & swings from the ceiling

Site Relationships:

- Adjacent to psychologist office



PSYCHOLOGY & LEARNING SUPPORT

School Psychologist: Approx. 20 sqm
The school psychologist provides counselling & educational development within the School for students experiencing psychological, intellectual, social, behavioural, or emotional difficulties. The psychologists often collaborate with occupational therapists, parents, & teachers to achieve the best possible outcomes for students.

Description:
A private room for intimate discussions about students' mental health & educational development.

Atmosphere:

- Safe
- Supportive & Encouraging
- Peaceful & Calm

Key Spatial Features:

- A range of comfortable, mobile seating options for the students to choose from
- Visual & acoustic privacy
- Views of nature to keep children calm
- Relaxing decor
- Storage for resources & tools
- Ability to meet with other members of the students' wellbeing team

Site Relationships:

- Adjacent to the occupational therapist's room



PRIVATE OFFICES

Description: Approx. 10 - 15 sqm
Private office for the Head of School & other staff to do individual work, & have private discussions with students, staff & parents.

Atmosphere

- Private
- Comfortable
- Motivating

Key Spatial Features:

- Professional fit out & aesthetic
- Acoustic treatment
- Storage

Site Relationships:

- In proximity to public entry of school
- In proximity to other staff & administration areas
- Adjacent to waiting area

NOTE: IMAGES PROVIDED ARE NOT OWNED BY SHAC PTY LTD UNLESS NOTED BUT READILY AVAILABLE OFF LICENSE FROM INTERNET SOURCES

DR1.11 Brief Development

Key Spatial Requirements 04



MEETING ROOMS

Description: Approx. 30 sqm
An enclosed room for internal school meetings, & meetings with visiting professionals.

Atmosphere:

- Private
- Focused
- Collaborative

Key Spatial Features:

- Large meeting table with meeting chairs
- AV & display screen
- Optional tea & coffee station
- Storage cupboard

Site Relationships:

- Adjacent to staff & administration areas
- In proximity to public entrance of the school



STAFF ROOM

Description: Approx. 125 sqm
Private space for staff that facilitates informal interaction & fosters knowledge exchange between staff.

Atmosphere:

- Collaborative
- Comfortable
- Motivating

Key Spatial Features:

- Hot desks for suitable for working & eating
- Lounge area
- Kitchenette facilities
- Privacy from outdoor play area

Site Relationships:

- Not directly accessible from outdoor play area to allow staff a proper break



COMMS, STORAGE & UTILITY

Description: Approx. 20 sqm
Support space with access to printing, copying, stationary & other resources.

Key Spatial Features:

- Space for copier machine
- Layoff bench for layout & collation
- Stationary storage
- Recycling bins
- Space for servers & control panels

Site Relationships:

- Adjacent to staff & administration spaces



BACK OF HOUSE, GENERAL ASSISTANT, & DELIVERIES

Description:
General allocation for support spaces with appropriate access, security & storage for school site.

Key Spatial Features:

- Robust
- Storage

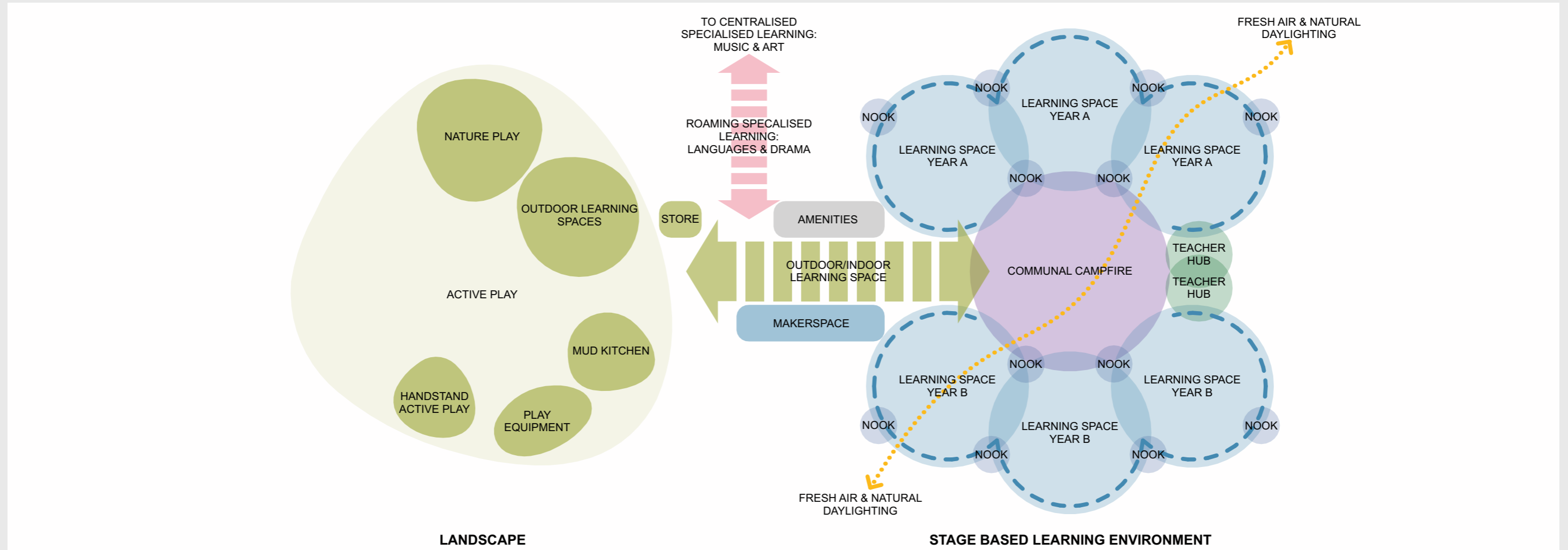
Site Relationships:

- Along the periphery of the site where it can be directly accessed by vehicles

NOTE: IMAGES PROVIDED ARE NOT OWNED BY SHAC PTY LTD UNLESS NOTED BUT READILY AVAILABLE OFF LICENSE FROM INTERNET SOURCES



Functional Adjacencies of Learning Spaces



DR1.13 Full Junior School - 3 Stream

Minimum Spatial Requirements

The following spatial requirements is based on the spatial allocation of a 3 stream Catholic School, with 30 students per stream. These figures should be considered the minimum spatial requirements for an independent school, with adjustments made to suit the School's vision & educational model.

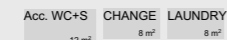
GENERAL LEARNING FACILITIES - 2,001m²



STUDENT AMENITIES - 193m²



DISABILITY (SWD) - 28m²



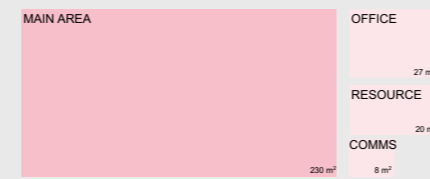
PHYSICAL ED. - 34m²



BUILDING SERVICES - 58m²



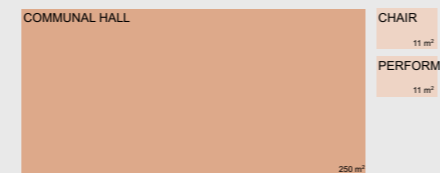
LIBRARY FACILITIES - 285m²



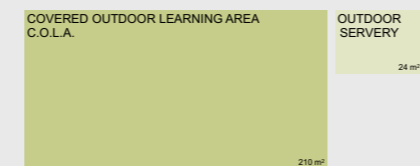
ISTEM WORKSHOP - 200m²



COMMUNAL HALL - 272m²



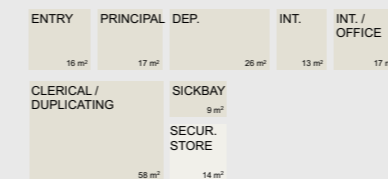
COVERED OUTDOOR LEARNING - 234m²



STAFF FACILITIES - 125m²



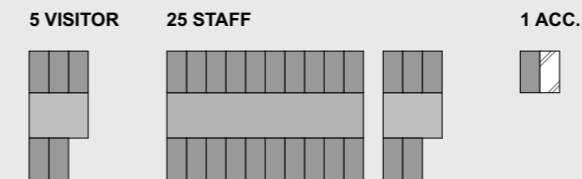
ADMINISTRATION - 170m²



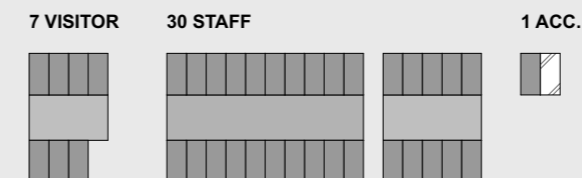
CARPARKING (NOT INCLUDED IN FUNCTIONAL AREA)

The below figures are based on the projected student & staff numbers, & the Traffic & Parking Assessment

STAGE 1 - 3 STREAM
480 STUDENTS MAXIMUM + 45 STAFF
7 VISITOR SPACES + 25 STAFF SPACES + 1 ACC. SPACE



STAGE 2 - 4 STREAM
640 STUDENTS MAXIMUM + 60 STAFF
7 VISITOR SPACES + 30 STAFF SPACES + 1 ACC. SPACE



AREA SUMMARY - PRIMARY SCHOOL

| FUNCTIONAL AREA | Existing | Required | Deficit |
|------------------------------|--------------|--------------|--------------|
| General Learning Unit | 879 | 2,001 | -1401 |
| Library Facilities | 141 | 285 | -144 |
| ISTEM Workshop | 0 | 200 | -200 |
| PE | 16 | 34 | -18 |
| Administration | 81 | 170 | -89 |
| Staff Facilities | 145 | 125 | 20 |
| Communal Hall | 613 | 272 | 341 |
| Pupil Facilities | 201 | 221 | -20 |
| Building Services | 93 | 58 | 35 |
| COLA | 111 | 234 | -123 |
| Total Functional Area | 2,280 | 3,600 | -1320 |

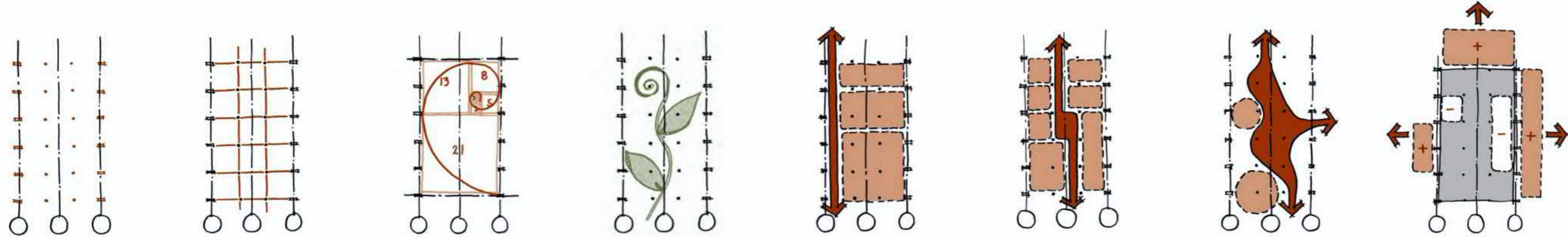
Outdoor Play Space is mandated by the NSW EFSG to be a minimum of 10m²/student.

| | | |
|------------------------|-----------------------|----------------------------|
| + Circulation @ 30% | Subtotal | 1,080 m ² |
| + Wall Thickness @ 10% | | 360 m ² |
| | Total Internal | 5,040 m² |

DISCLAIMER

As independent schools do not have area allocation guidelines, the Catholic Schools System has been referenced as a guide, as they provide a stronger competitor than Public Schools.

SHAC Design Principles



Grid / Axis

A consistent structural grid or planning system allows for modulation, flexibility, adaptability, and economy of construction.

Repetition / Rhythm

Rhythm and repetition of patterns, elements, or motifs at regular or irregular intervals results in a logical outcome an occupant instantly or subconsciously reads and understands about the structural grid, systems, design decisions of material or fenestration elements.

Symmetry / Proportion

Vitruvius calls symmetry the "...proper agreement between the members of the work itself." Proportion refers to the relationship of the parts or members. Humans innately consider symmetry and proportion beautiful, and as Leonardo Da Vinci saw, the mathematical relationships and ratios between parts of the human form are replicated in nature and so it is in the perfect building.

Scale / Geometry

Geometry is present from initial form-finding stages to beyond construction and sets up key design principles informing decisions in plan, elevation, section and 3D explorations. Geometry can provide solutions to innovative architectural forms, construction detailing and be the catalyst for the exploration of what is truly possible.

Order / Hierarchy

What is important? How is the space organised? The tools used to establish hierarchy and importance of space and function are shape, size, colour or emphasis of a particular element or space. Hierarchy influences the order in which the human eye perceives what it sees and the importance / power of a building element.

Affordability

Economy of scale, materiality and technique using pragmatism. A building form fit-for-purpose that is easy to adapt and still be maintained for longevity.

Adaptability

Architectural spaces ideally should be able to adapt to the future needs of the client and users, including paralleling growth of the School & student population with the growth of the built form, as well as the changing needs of the user.

Flexibility

Future-proofing the built form through flexible open plan spaces, utilising a building grid that can accommodate a range of spaces that expand, contract, open inwards and outwards.

Sustainability

An efficient architecture and site-wide ecosystem that values life through responsible, ethical design practices, employment, materials, systems, and healthy environments & landscapes.

SHAC Design Principles

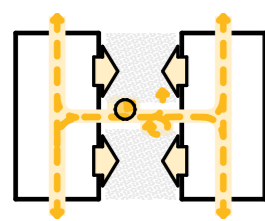
PHYSICAL MANIFESTATION OF PEDAGOGY

From our SHAC Design Principles we can develop specific teaching & learning spaces with small, medium and large spatial options, that are open, closed, indoor + outdoor, agile & flexible.

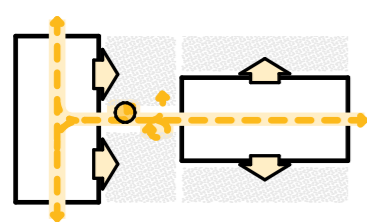
The SHAC Module is not limited to the GLA & Specialist learning spaces shown, nor with the same structural grid, however, provides the framework for the exploration of these principles to real world projects. The SHAC Module can expand, contract, breakout & connect to a multitude of other module sizes & shapes, & consider the following issues:

- Cross ventilation & natural daylighting;
- Efficiency of space & construction; the repeated module will potentially decrease costs, construction timeframes & detailing;
- Multitude of configuration options to service a diverse range of site layouts;
- Shared vertical circulation node with lift, servicing a minimum of two modules;
- Shared outdoor courtyard space;
- Option for external covered circulation link, or internal protected link;
- Opportunity for circulation zones & teaching & learning spaces to directly access outdoor learning, breakout spaces, & quiet study areas which promote a strong connection to the surrounding landscape;
- Continuous & clear circulation route provides year-round, wet weather protection for staff and students when travelling between classes & during break times; &
- Opportunity for increased interactions between staff & students, & informal learning outside of GLAs.

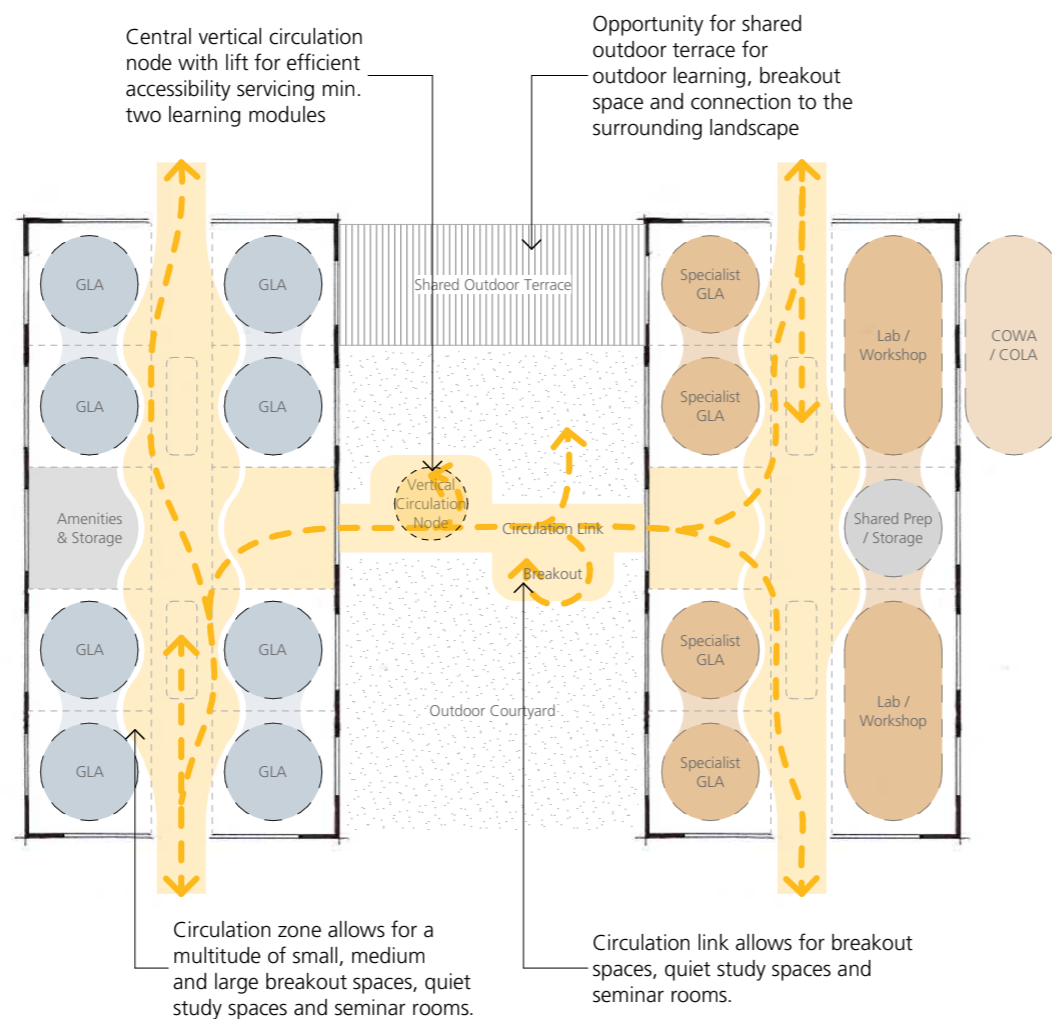
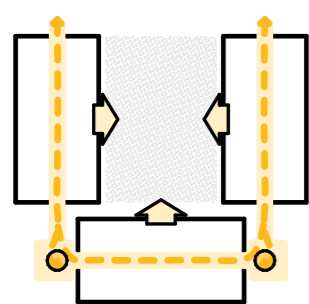
PARALLEL MODULES



PERPENDICULAR MODULES

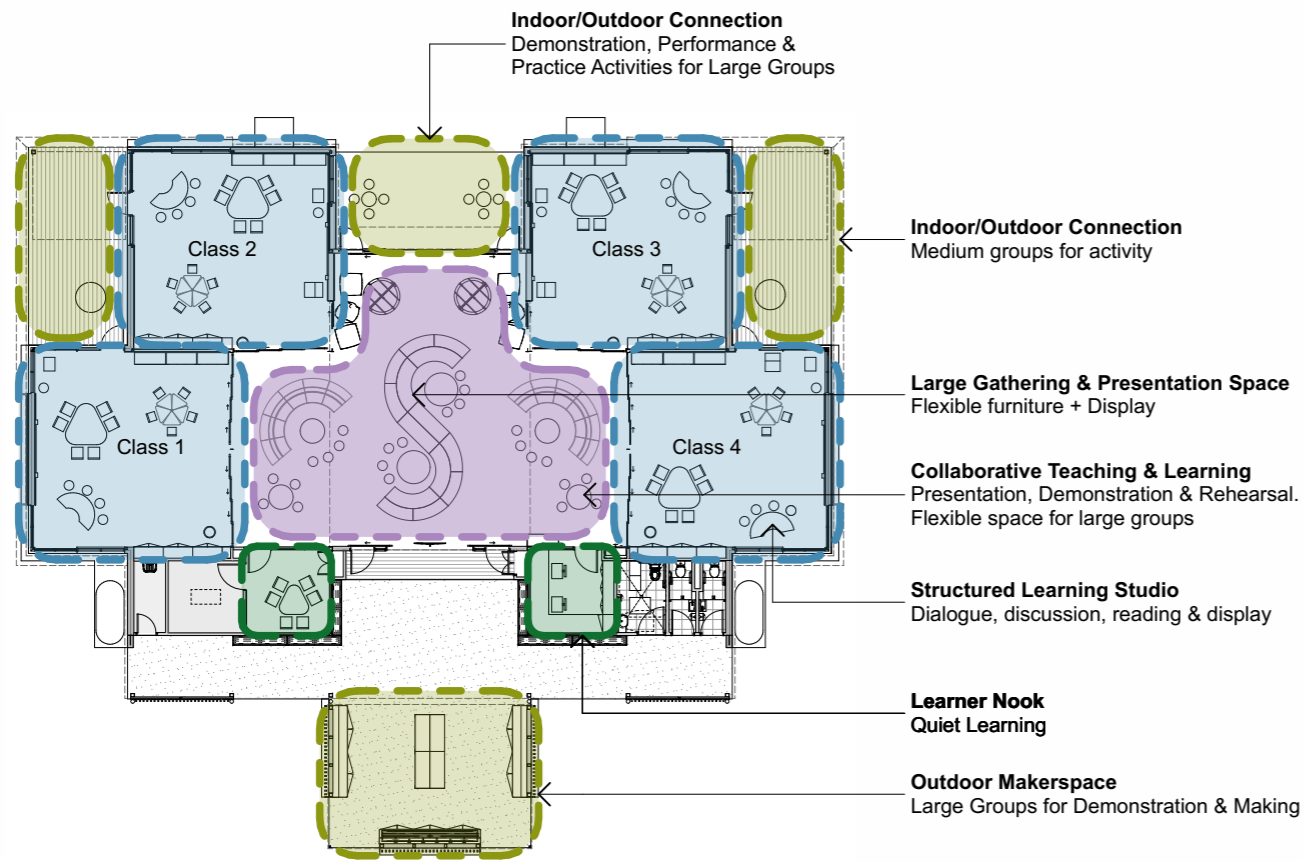


COURTYARD MODULES

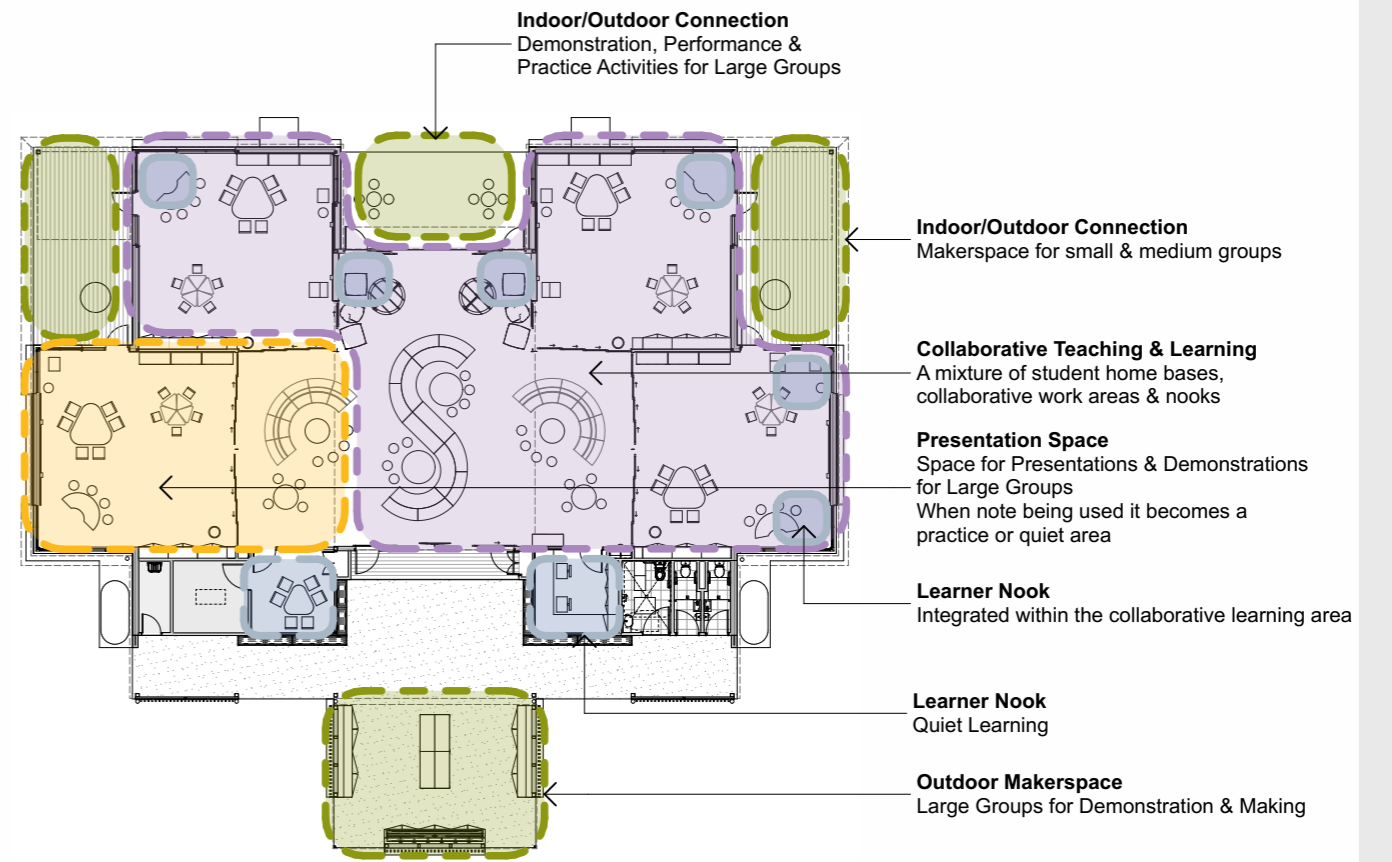


DR1.16 Pedagogy & Architecture

SHAC Design Principles



STREAM BASED LAYOUT



FUNCTION BASED LAYOUT



SOURCE: Newcastle City Council

Site Considerations



SHAC

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LOCALITY

The original custodians of this land and waters are the Awabakal and Worimi People, existing in and around *Muloobinba* (Newcastle) and the *Coquon* (Hunter River).

The Awabakal tribe consisted of four clans; Pambalong, Ash Island, Kurungbong and Lake Macquarie clans, with the Worimi tribe of ten clans; Garuagal, Maiangal, Gampingingal, Garrawerrigal, Buraigal, Warringal, Birroongal, Birrimbai, Yeerungal & Wallamba. They existed harmoniously by respecting territorial boundaries when hunting & gathering food and raw materials, however coming together for social and ceremonial occasions, which gave them the opportunity to share and trade.

The *Biraban*, or eagle hawk, is the totem of the coastal tribes and is held in the highest regard.

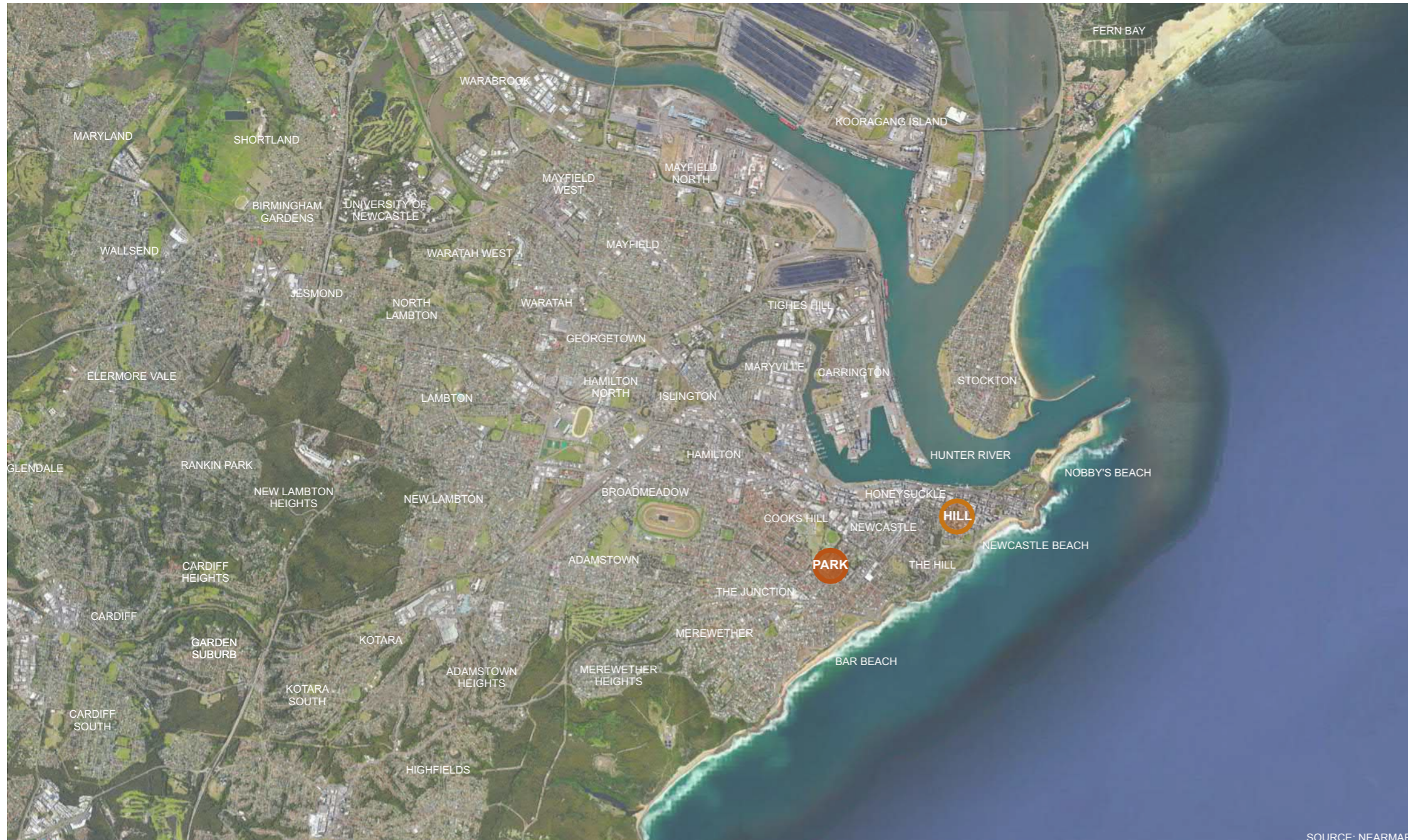
The first European to explore the region was John Shortland, originally in search of convicts who had seized the HMS Cumberland whilst sailing north from Sydney Cove. Shortland described the area as "a very fine coal river". Coal from the area soon became NSW's first export. The region was originally named after the Governor of New South Wales, John Hunter, and before long, Newcastle gained its name after England's famous coal port under the same name, a commission issued by Governor King on 15 March 1804.

Today, Newcastle is Australia's seventh largest city and is considered one of the country's best destinations, as well as being voted within the top 10 cities of the world for 2011 by Lonely Planet. Newcastle has a strong beach and surf culture, with the city centre being surrounded by 8 spectacular beaches and the largest coal exporting harbour in the world. Its connection to the water has been a strong influence over the city, with drainage channels from reclaimed swamps travelling across the city, including Cottage Creek, which was constructed to control flooding and connects Merewether, Hamilton, The Junction and Cooks Hill through National Park to the discharge point to the Harbour at Wharf Road.

Restaurants and cafes also play a major part in the lives of Novacastrians; a meeting place for locals, visitors and tourists with the majority of menus dedicated to coffee, fresh seafood and healthy wholefoods. Newcastle stands as the gateway to the Hunter and surrounds, being only an hour's drive from world-class wineries in the Hunter Valley, Australia's largest salt water lake; Lake Macquarie, whale and dolphin watching at Port Stephens, and world-famous horse studs in the Upper Hunter.

The University of Newcastle stands at the forefront of education within Newcastle and the Hunter Region, with a new landmark city education precinct under development and the Callaghan campus 12 kilometres from the CBD. Vocational education and training is offered by Hunter TAFE with 15 different campuses located across Newcastle, the Hunter and Central Coast regions. Newcastle is also home to a leader of technology and innovation, the CSIRO's Energy Centre; a solar field and energy research hub.

Newcastle has a range of public transport options including buses, the Stockton ferry and trains. Newcastle also has its own airport, with direct flights to the Gold Coast, Brisbane, Melbourne, Canberra and beyond. Most suburbs within Newcastle and Lake Macquarie can be accessed via the bus network, with a 'Fare Free Bus Zone' operating in the city centre between 7.30am and 6pm every day, and the train service terminating at Hamilton Train Station. Currently, a new transport interchange is being developed at Wickham to allow for the future development of Newcastle Light Rail to reconnect the city with the foreshore, which was the original vision for the city when it was first being developed; one that could be directly connected to its harbour and beaches.



SOURCE: NEARMAPS



SOURCE: GOOGLE IMAGES

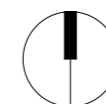
4293
DR2.01

RevF 14.10.21

Location Plan

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

NTS
@A3













SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

- | | | | |
|---|------------------------------|---|---------------------|
|  | - SUBJECT SITE |  | - MAIN ROADS |
|  | - SURROUNDING SCHOOLS |  | - WATER COURSE |
|  | - TOWN CENTRES |  | - RAIL & LIGHT RAIL |
|  | - RECREATION/OPEN SPACE |  | - PEDESTRIAN LINK |
|  | - HERITAGE CONSERVATION AREA | | |
|  | - COUNCIL CARPARK | | |

KEY POINTS

SCHOOLS AND EDUCATIONAL FACILITIES

- A. St Francis Xavier's College
- B. TAFE NSW
- C. University of Newcastle - City Campus
- D. Newcastle East Public School
- E. Hamilton Public School
- F. Newcastle High School
- G. St Joseph's Primary School
- H. The Junction Public School
- I. Nihon University- Proposed
- J. Newcastle High School - Cooks Hill Campus

SPORTS CENTRES

- K. The Forum Health & Wellness Centre
- L. Balance Collective - Newcastle City
- M. Genesis Gym & Sports Centre- Cooks Hill
- N. Arnold's Swim Centre

RECREATION AND OPEN SPACE

- O. Hawkins Oval
- P. Passmore Oval
- Q. National Park (Netball Courts, Soccer pitches, Athletic Track, Rugby Pitch)
- R. Civic Park
- S. Cathedral Park
- T. Foreshore Park
- U. Centennial Park
- V. Nesca Park
- W. The Obelisk
- X. Newcastle Hill Tennis Club
- Y. King Edward Park
- Z. Empire Park (Bar Beach Bowling Club, Bar Beach Skate Park, Tennis Courts, Cricket)
- AA. Townson Oval
- BB. Dixon Park



SOURCE: SHAC EDITED NEARMAP

Drawing and design © SHAC Pty Ltd 2016. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4293\4293 NGS park Campus - Stage 1\515 Sketch Design\4293.515.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.ppt date: 18/02/22 time: 4:53 pm

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

-  - SUBJECT SITE
-  - MAJOR COMMERCIAL CENTRES
-  - HERITAGE CONSERVATION AREAS
-  - RECREATION/OPEN SPACE
-  - MAIN ROADS
-  - WATER COURSE

KEY POINTS

SITE LOCATION

The Park Campus is located in the suburb of Cooks Hill & currently operates as a K-4, 2 stream, independent primary school. However, the masterplan is to plan for a K-6 3 stream primary school, with future growth to 4 stream.

The site is bordered on three sides by roads; Parkway Avenue, Union Street, & Corlette Street. Parkway Avenue travels north-west to south-east & is a busy road leading to & from Bar Beach to Pacific Highway. Union Street travels north-east to south-west and is also a busy road leading from the commercial centre of The Junction & intersection major roads including Glebe Road, Parkway Avenue, Parry Street, King Street, to Hunter Street. In contrast Corlette Avenue is a narrow residential street.

NATIONAL PARK

National Park is the oldest area of European settlement in Newcastle. Localities such as Cooks Hill and Hamilton, which surround the Newcastle Grammar site, were originally estuarine wetland and intertidal hind dune landscapes. These low lying areas have been heavily modified by vegetation removal, drain construction and infilling of land.

National Park was donated to Newcastle City Council in 1913 for the development of parkland. National Park has played a significant role in the provision of regional and sub-regional sporting facilities within Newcastle, being one of the region's largest and oldest sporting grounds. The site caters to a range of sports including netball, athletics, cricket, AFL, rugby, croquet and tennis, as well as general training fields.

The current use of the grounds go beyond providing for sporting activities, they also form critical community infrastructure for leisure, recreation and special events.

Newcastle Grammar School, as well as several other local schools, utilise this sporting infrastructure to support their physical activity and sporting curriculum.
(National Park Plan of Management 2012)

FLOOD MANAGEMENT

Cottage Creek runs along National Park Street and through National Park in a concrete incased drain that ends at Honeysuckle West, at Newcastle Harbour. National Park serves a flood management role within the Cottage Creek catchment and western CBD area, as a flood detention and storage area.

The Park Campus site is within a 'high risk' flood hazard zone and consideration needs to be given to the protection of new building assets on the site. Refer to the Flood Information Certificate provided by Newcastle City Council for flooding details and requirements.



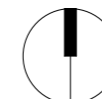
4293
DR2.03

RevG 14.10.21

Site Context Analysis

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

NTS
@A3



SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

HISTORY

The subject site is part of the *Coquun* (Hunter River) estuary, which across its catchment offered a diverse food supply of fish, shellfish, flora, and fauna to the indigenous inhabitants of the lower Hunter Region which comprised the Awabakal, Worimi, Wonnarua, Geawegal, Birrpa and Darkinjung tribes until the first European settlement in 1797. To them the Newcastle area was known as *Mulubinba*, after an indigenous fern called the *mulubin*, considered by various accounts to be of the genus *blechnum*, the roots of which were consumed once roasted and then beaten into a paste.

The site was on the lee-side of a dune system, and the verge of a swamp plain. Natural watercourses wove through the adjacent lowlands converging into a single stream (Cottage Creek), filtering and transferring water to *Yohaaba* (Newcastle Harbour) in the area known as *Meekarlba* (Honeysuckle Foreshore). A zone adjacent the junction of this tidal stream and harbour was deemed as 'high to exceptional cultural and scientific significance' in 2009 when excavated to reveal over 5000 artefacts consistent with Aboriginal occupation periods dating from 6716-6502 years ago.



Corrobarree at Newcastle c.1818 Joseph Lycett



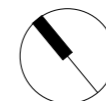
Aborigines hunting waterbirds c.1817 Joseph Lycett



Aborigines cooking & eating beached whales, Newcastle NSW c 1817 Joseph Lycett










Blechnum, image courtesy of Hunter Living Histories



SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

-  - WATERWAYS
-  - SWAMP
-  - ROADWAYS
-  - TRAINS AND TRAMS
-  - MARKET GARDENS
-  - RECREATIONAL SPACE
-  - APPROXIMATE LOCATION OF CURRENT SITE

HISTORY

Late 19th Century

- The site sat on the edge of a sandy lowlying expanse, overlooking a large waterhole in the near distance. The original watercourses, traversed in places by culverts continued to weave through the area and converge into what became known as Cottage Creek, prior to meeting the Hunter River.

- One early source refers to the predominant vegetation as 'Furze', thorny evergreen shrubs, and another more modern source as 'ti tree'.

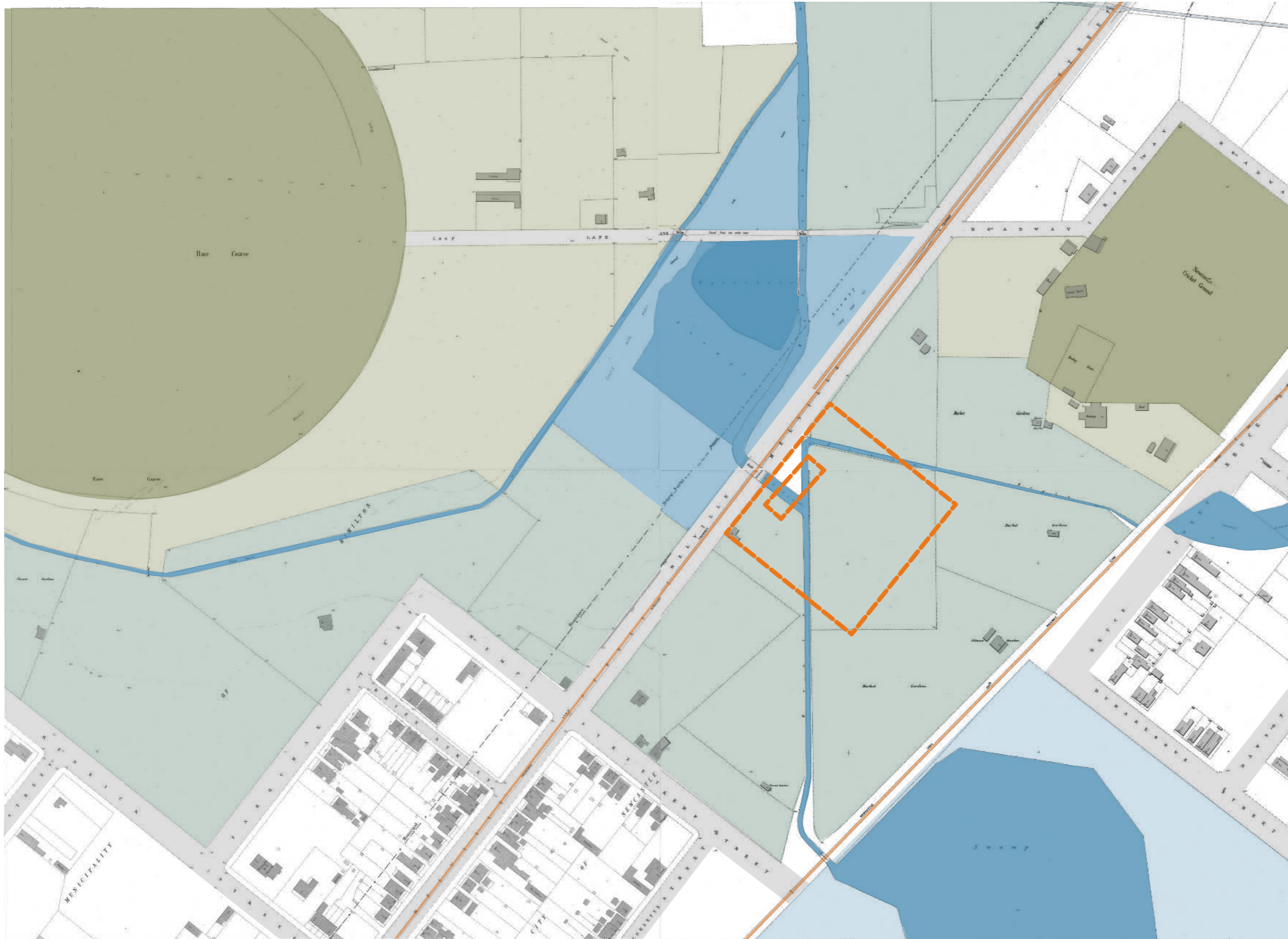
- The site was part of an extensive system of Chinese market gardens

- The site existed between two residential areas of The Junction and Cooks Hill, surrounded by the town's recreational precinct of the day. The original Cricket Ground and Centennial Park adjacent, while across the road was the original Race Course and the Northern Union Football Ground.

- A tramway is built on Melville Road (Union Street) that bounds the western boundary of the site.



Racecourse & Golf Course c.1907, image courtesy of Hunter Living Histories



Hunter District Water Board Plans c.1895

4293
DR2.05

RevE 14.10.21

Site History - Late 19th Century

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

NTS
@A3

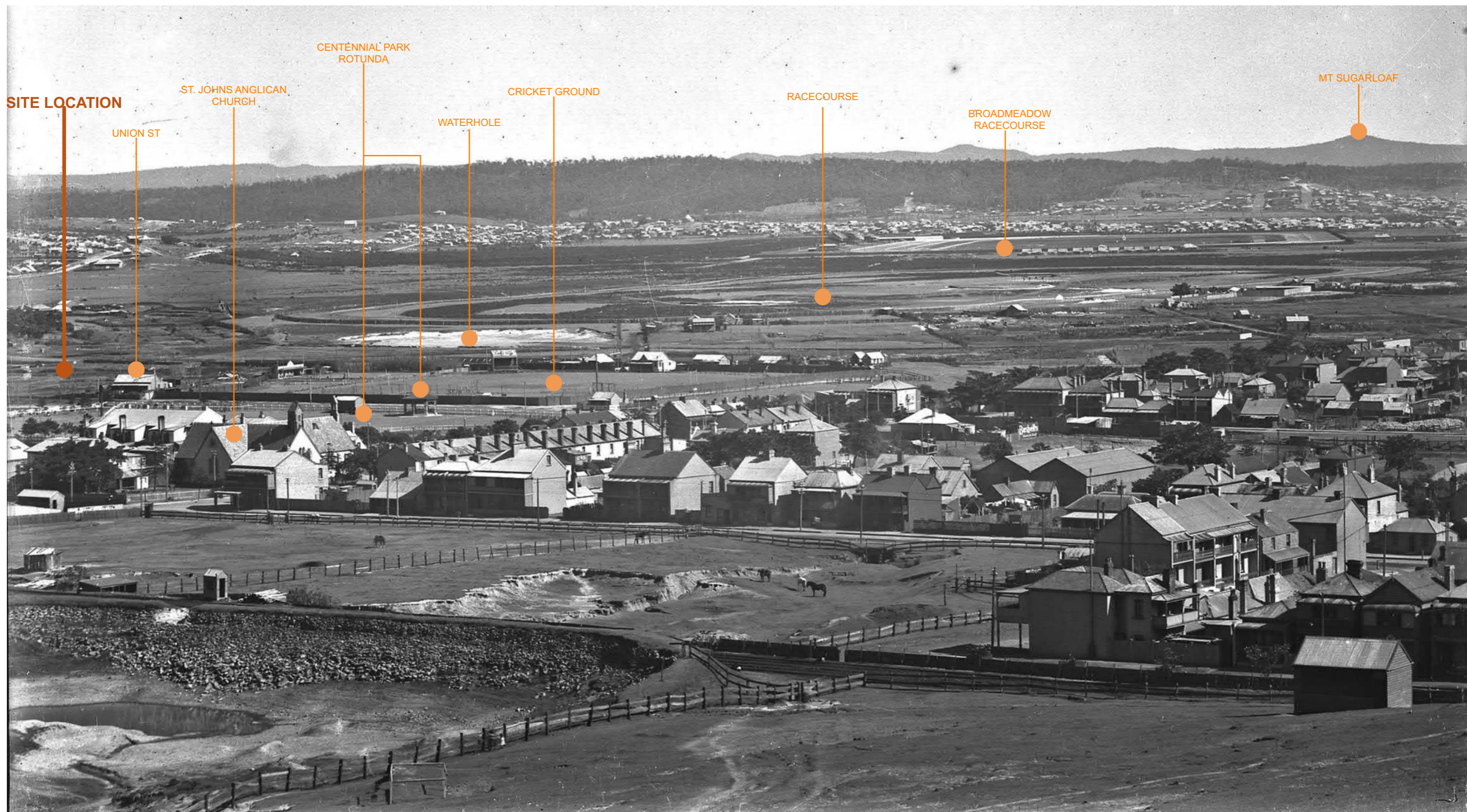
SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846



SSD Application

- 1. Dimensions are in millimeters unless otherwise shown.
- 2. Work to given dimensions. Do not scale from drawing.
- 3. Check all dimensions on site prior to construction and fabrication.
- 4. Bring any discrepancies to the attention of the proprietor & architect.

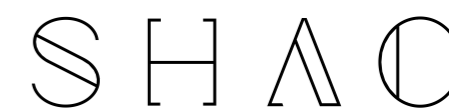


Newcastle Racecourse - 1897, image courtesy of Hunter Living Histories

4293
DR2.06
RevE 14.10.21

Site History - Late 19th Century
Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

NTS
@A3



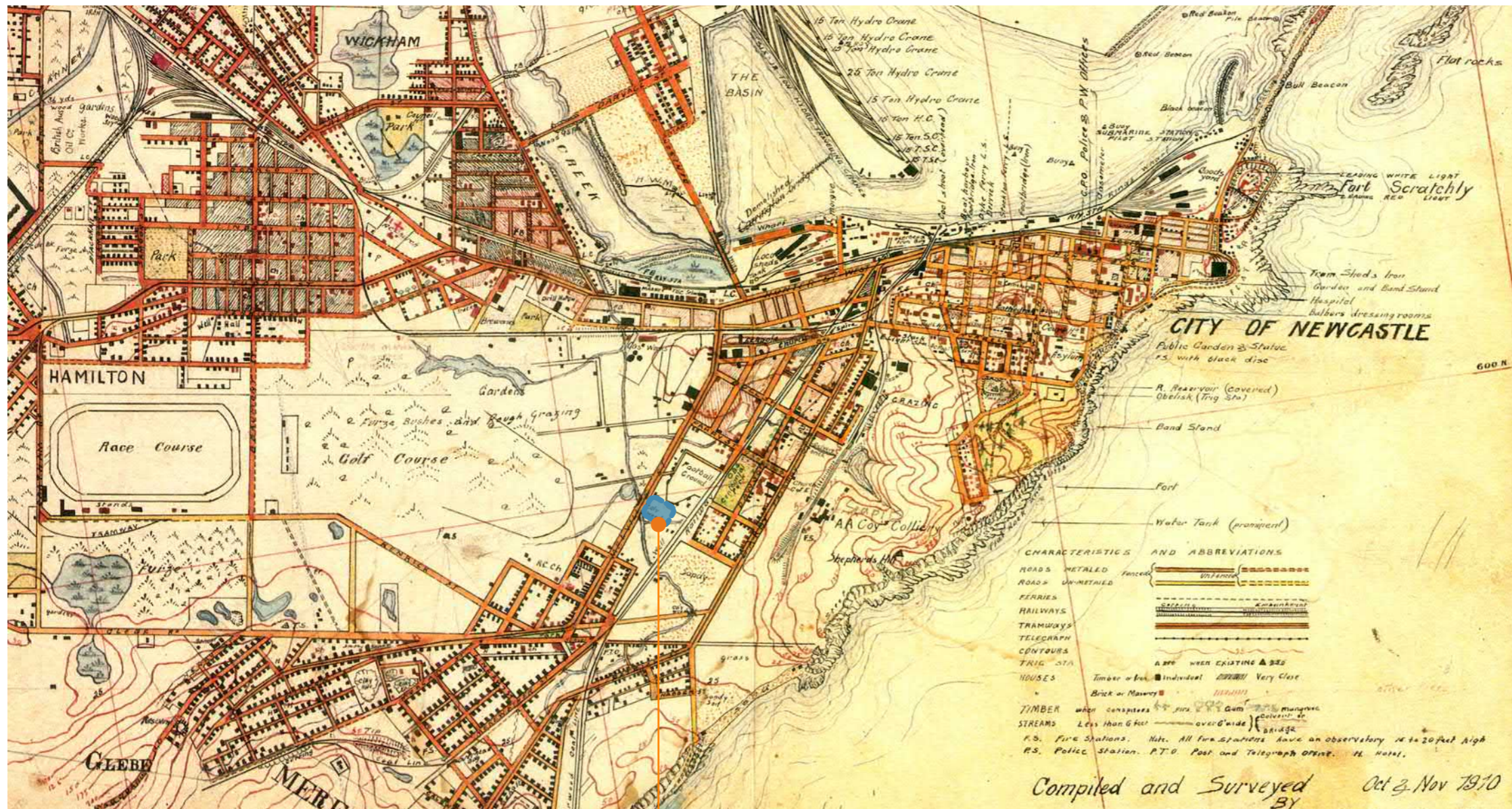
Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

Drawing and design © SHAC Pty Ltd 2016. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4200\4293 NGS park Campus - Stage 1\15 Sketch Design\4293.5.15.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.pptx date: 18/03/22 time: 4:53 pm



SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

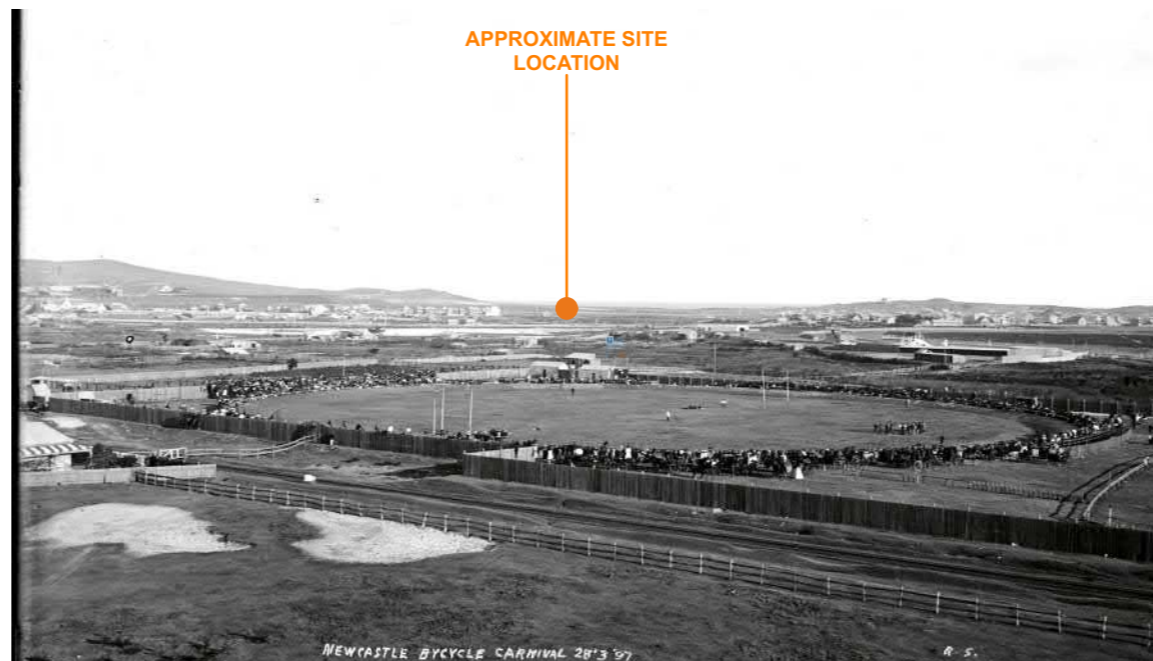


Barrett Plan 1910, image courtesy of Hunter Living Histories

APPROXIMATE SITE LOCATION



Centenary School Display, old racecourse, Newcastle September 17 1897, image courtesy of Hunter Living Histories



Newcastle Bicycle Carnival, Newcastle March 28 1897, image courtesy of Hunter Living Histories



SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

HISTORY

Early 20th Century (1913-35)

- The site and the majority of the lowlying original Race Course is developed by the Australian Agricultural Company (AA Co.). The town planning by Sulman & Hennessey fills in the swamps and transform this land into a 'respectable' suburb, modelled on the ideals of the Garden Suburb movement prevalent at the time. Waterways were engineered into stormwater drains or piped underground.
- The site is now bounded by the renamed Union Street to the west and to the south the major artery of Parkway Avenue.
- Between 1951-74 the site was occupied by the Newcastle Teachers' College, following which it was an annex of the Newcastle TAFE College. We expect the current trees on site date from this period.
- Newcastle Grammar School occupies the site from 1998.



Construction of Cottage Creek Stormwater Drain, image courtesy of Hunter Living Histories



Stormwater Drain on Parkway Avenue Adjacent to Park Site, image courtesy of Hunter Living Histories

SEAL OF THE AUSTRALIAN AGRICULTURAL COMPANY

GARDEN SUBURB Newcastle.

Close to the City Served by Train and Tram

A TRIUMPH OF TOWN-PLANNING

AMPLE PUBLIC RECREATION GROUNDS. GARDENS. BATHING BEACHES. IMPOSING TREE PLANTED AVENUES

85 LOTS.

First Subdivision

AUCTION OF THE GROUND SATURDAY May 30th 1914. AT 2.30 p.m.

Creer & Berkeley Auctioneers NEWCASTLE

TERMS One fifth, cash deposit. Balance in 1,2,3,4 & 5 years. With Interest at 5 per cent.

All Roads Made Gas, Water & Sewerage Available

William Brooks & Co. Ltd. Sydney.

Subdivision Advertisement, image courtesy of Hunter Living Histories

SITE LOCATION

Drawing and design © SHAC Pty Ltd 2016. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4200\4293 NGS park Campus - Stage 1\15 Sketch Design\4293.15.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.pptx date: 18/03/22 time: 4:53 pm

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

HERITAGE CONSERVATION AREAS

COOKS HILL STATEMENT OF SIGNIFICANCE

Cooks Hill Heritage Conservation Area is culturally significant on a number of levels. As a residential and commercial precinct it is regarded for its special historical character, liveable streetscapes, diverse range of historic residential and commercial buildings and several tree lined streets. The age of the suburb, relative to other suburbs of Newcastle, is apparent in the style and form of buildings and eclectic street layout.

It has a significant visual character comprising buildings which represent all of the common architectural styles including mid 19th century workers' houses and terraces, Federation bungalows, Inter-war cottages and post-war residential flat buildings. A critical mass of contributory buildings, traditional streetscapes, significant trees, sandstone kerb and gutters, artefacts, heritage listed hotels, shops and parklands, gives the suburb a strong sense of place and a distinctive historic identity valued by local residents and visitors.

Cooks Hill is closely associated with the Australian Agricultural Company as part of the original 2000 acre grant owned by the Company. The Company began to sell off parts of Cooks Hill in the 1850s. However even before that the Company built huts for its workmen and so the area began its life as a mining village in the midst of the Company's' railways and mines. When the first land sales did occur, development was rapid along Lake Macquarie Road (Darby Street) and eventually Blane Street (Hunter Street), becoming an extension of the main laid out streets towards the City Centre. The early houses were single and two storey terraces and miners' cottages, both brick and timber. Retailing and hotel keeping flourished as did the population. The area is significant as it reflects the land uses and activities of the AA Company. Its mines, its railways, and the Colliery railway serving the Merewether district, exercise a strong physical presence over Cooks Hill to this day.

- Key Period of Significance - circa 1850 to 1940.

HAMILTON SOUTH 'GARDEN SUBURB' STATEMENT OF SIGNIFICANCE

The Hamilton South 'Garden Suburb' Heritage Conservation Area is significant to the local community for the surviving evidence of an early twentieth century subdivision pattern made up of single dwellings on large "suburban" style allotments generally over 600 square metres. The precinct has associational significance with the eminent Australian architect and planner Sir John Sulman and as such, its original form is important evidence of his work and ideas. The suburb is one of Newcastle's earliest and largest examples of a planned garden suburb and as such is historically important. The evidence of Sulman's original design is reflected in the road layout, allotment shape and pattern, and form of housing – single storey detached bungalow and cottage style houses, with a consistent palette of face brick and painted weatherboard houses.

- Key Period of Significance - circa 1913 to 1940.

Sources:
NSW Office of Environment & Heritage
UoN Cultural Collection

COOKS HILL



19th terrace houses



19th brick miner's cottage & two storey weatherboard terrace house



Cooks Hill fire station, Union Street



Street Greenery, Parry Street



St John's Church, 1860



Victorian Era Villas, Bruce Street



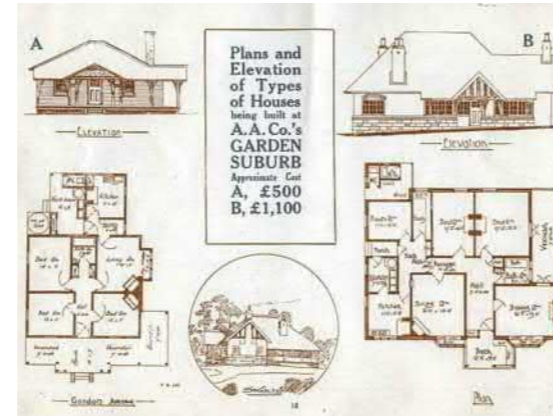
Fig Trees, Bruce Street



Recently renovated weatherboard terraces



'Garden Suburb' Masterplan & Advertisement, 1914



'Garden Suburb' Brochure 1913



Hamilton Ambulance Station, 1930s

HAMILTON SOUTH 'GARDEN SUBURB'



Brick Californian Bungalow, 1910s-20s, Kemp Street



Brick Californian Bungalow, 1910s-20s, Stewart Avenue



Weatherboard bungalow, 1910s-20s, National Park Street

SSD Application

- Dimensions are in millimeters unless otherwise shown.
- Work to given dimensions. Do not scale from drawing.
- Check all dimensions on site prior to construction and fabrication.
- Bring any discrepancies to the attention of the proprietor & architect.

NOTES

ACID SULPHATE ZONE

The subject site is identified to contain class 4 acid sulphate soils. The objectives of this clause are;

- To ensure all development does not disturb, expose or drain acid sulphate soils and cause environmental damage.

LAND ZONING

The subject site is located within R3 - Medium Density Residential Zone. The objectives of this zone are;

- To provide for the housing needs of the community within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents. School Establishments within this zone are permissible.

MINIMUM LOT SIZE

The subject site is identified as having a minimum lot size of 400m². The objectives of this clause are;

- To provide for the subdivision of land at a density that is appropriate for the site constraints, development potential and infrastructure capacity of the land,
- To ensure that lots are of a sufficient size to accommodate development.

BUILDING HEIGHTS

The subject site is not identified as having any height restrictions. Surrounding sites height limits = 10m. The objectives of this clause are;

- To permit a height of buildings that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.

HERITAGE

The School site is not identified to contain any items of heritage significance. The objectives of this clause are;

- To promote understanding, conservation and protection of state heritage
- To encourage adaptive reuse of the states heritage
- To provide for the identification and registration of items of state heritage significance
- To assist owners with the conservation of items of state heritage significance.

FLOOR SPACE RATIO

The subject site is not identified to have a floor space ratio restriction. The objectives of this clause are as follows:

- To support the viability of commercial centres and provide opportunity for economic development within those centres
- To facilitate the development of a variety of housing types
- To ensure that the development is compatible with the existing and desired future built form and character of the locality
- To provide a high level of amenity for the residential areas and ensure adequate provision for vehicles and pedestrian access, private open space and landscaping.

MINES SUBSIDENCE

The School site is located within a Guideline 2 Mines Subsidence Zone. The purpose of Guideline 2 is to:

- Prevent or minimise damage to a residential building should subsidence occur on the site.
- Ensure the residential building remains safe to persons inhabiting the residence.
- Ensure that when residential construction in abandoned mining affected areas occurs, compliance with the Act and Regulation is as simple and inexpensive for the home builder as practicable.

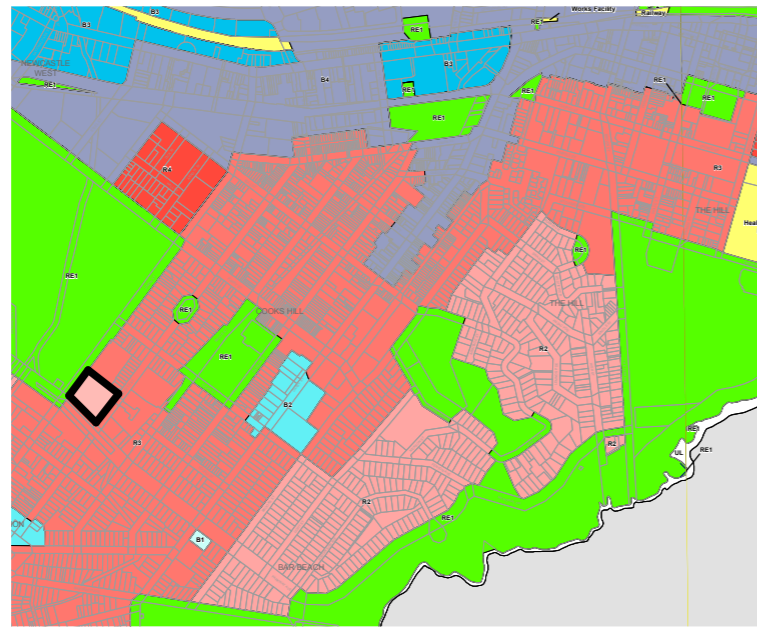
FLOODING

The Park Campus site has been identified as within a 'high-risk' flood hazard zone, further identified as being a:

- Flood storage area
- Flow path
- High hazard area
- High risk area

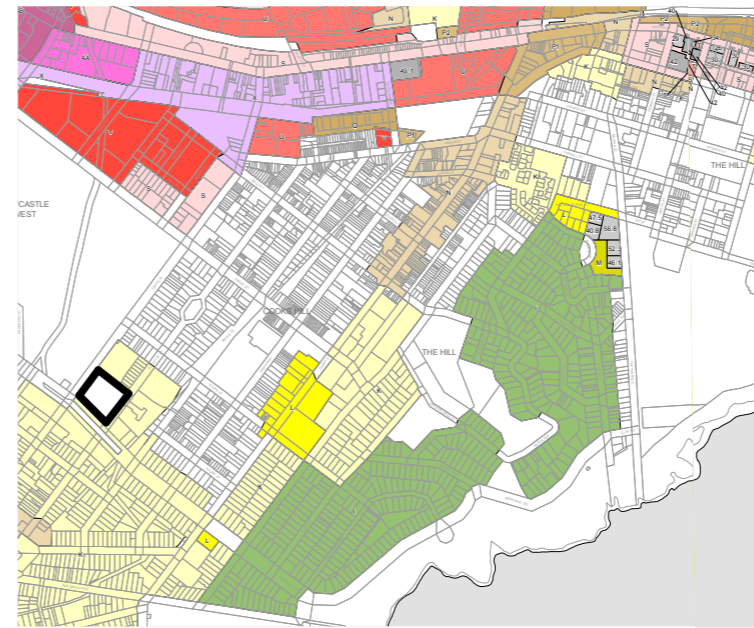
Land Zone

| | |
|-----|---|
| B1 | Neighbourhood Centre |
| B2 | Local Centre |
| B3 | Commercial Core |
| B4 | Mixed Use |
| B5 | Business Development |
| E1 | National Parks and Nature Reserves |
| E2 | Environmental Conservation |
| E3 | Environmental Management |
| E4 | Environmental Living |
| IN1 | General Industrial |
| IN2 | Light Industrial |
| IN3 | Heavy Industrial |
| R2 | Low Density Residential |
| R3 | Medium Density Residential |
| R4 | High Density Residential |
| RE1 | Public Recreation |
| RE2 | Private Recreation |
| SP2 | Infrastructure |
| SP3 | Tourist |
| W2 | Recreational Waterways |
| UL | Unzoned Land |
| SSP | SEPP (State Significant Precincts) 2005 |
| TP | SEPP (Three Ports) 2013 |



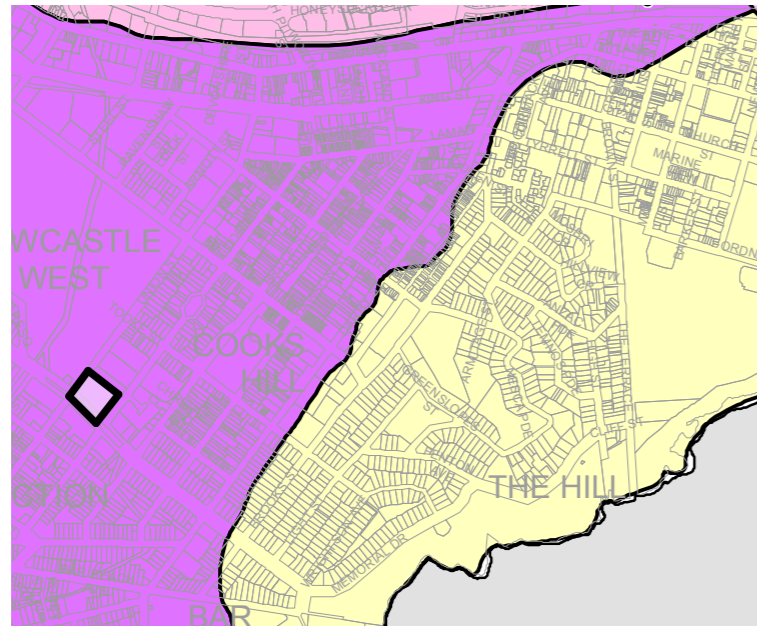
Maximum Building Height (m)

| | |
|----|-----|
| I | 8.5 |
| K | 10 |
| L | 11 |
| M | 12 |
| N | 14 |
| O | 15 |
| P1 | 17 |
| P2 | 18 |
| Q | 20 |
| R | 21 |
| S | 24 |
| T | 27 |
| U | 30 |
| V | 35 |
| X | 45 |
| AA | 60 |
| AB | 90 |



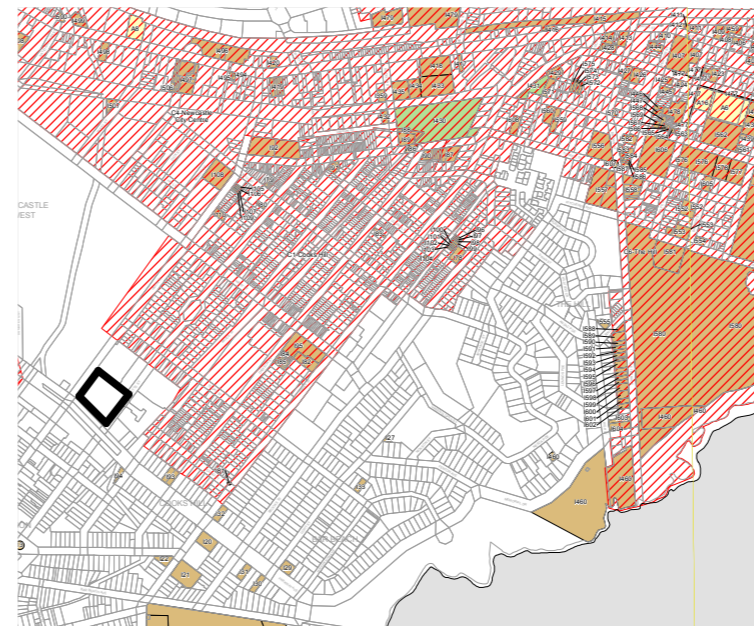
Acid Sulfate Soils

| | |
|---|---------|
| 1 | Class 1 |
| 2 | Class 2 |
| 3 | Class 3 |
| 4 | Class 4 |
| 5 | Class 5 |



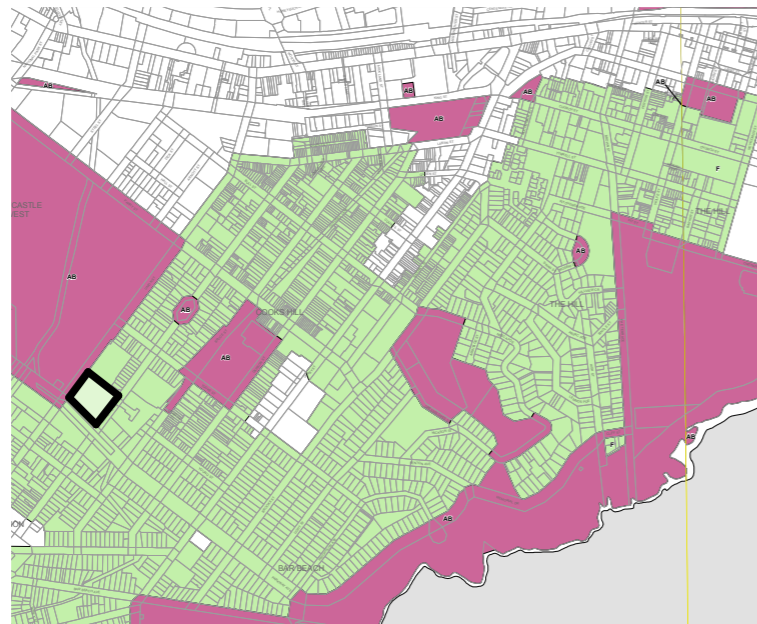
Heritage

| |
|-----------------------------|
| Conservation Area - General |
| Item - General |
| Item - Archaeological |
| Item - Landscape |



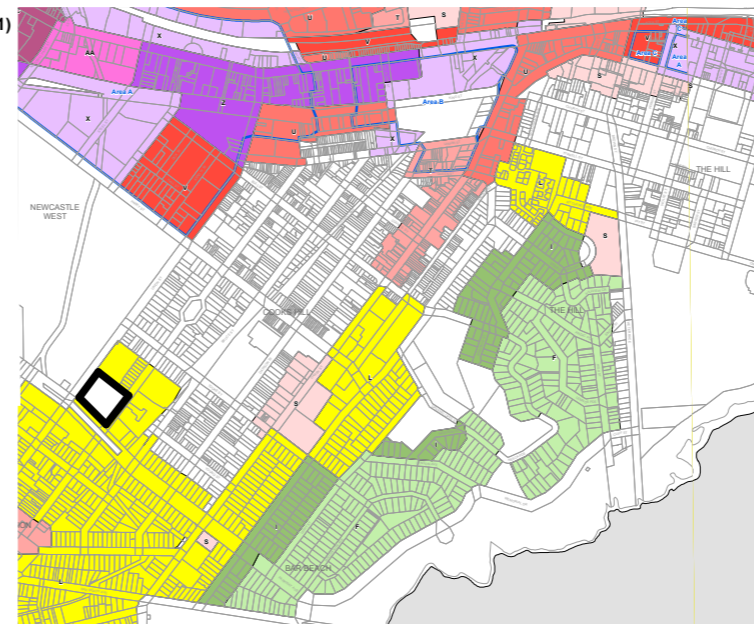
Minimum Lot Size (sq m)

| | |
|----|---------------|
| C | 250 |
| F | 400 |
| G | 450 |
| U | 1000 |
| W | 4000 |
| Z | 20000 (2ha) |
| AB | 400000 (40ha) |



Maximum Floor Space Ratio (n:1)












| | |
|----------------------|------|
| F | 0.6 |
| I | 0.75 |
| L | 0.9 |
| N | 1 |
| S | 1.5 |
| T | 2 |
| U | 2.5 |
| V | 3 |
| X | 4 |
| Z | 5 |
| AA | 6 |
| AB | 7 |
| AC | 8 |
| Refer to Clause 7.10 | |



SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

| | | | |
|---|----------------------------|---|--|
|  | - EXISTING BUILDINGS |  | - PUBLIC BUS STOPS |
|  | - OPEN RECREATION |  | - SCHOOL ENTRY POINTS |
|  | - CARPARKING |  | - PRIVACY CONCERNS |
|  | - BUS BAY |  | - TRAFFIC AND NOISE ISSUES |
|  | - LOW SCALE RESIDENTIAL |  | - ADMINISTRATION / VISITOR ENTRY POINT |
|  | - MEDIUM SCALE RESIDENTIAL | | |

KEY POINTS

TRAFFIC

Major congestion during drop off and pick up hours. School does not have any off street parking. Parents and staff must park on street, and compete with residents and other workers who park for free around national park and walk to work on king/hunter street.

PRIVACY

The site is bound by multistorey residential development to the north, east & south. Any development needs to consider the impact of development on the school site for these neighbours. But also for the neighbours from the school - acoustic & visual privacy.

FLOODING

The existing site already suffers during rain events with overland flow. Landscaping growth & maintenance has been affected, as well as impact on functional floor area within the building, during large events.

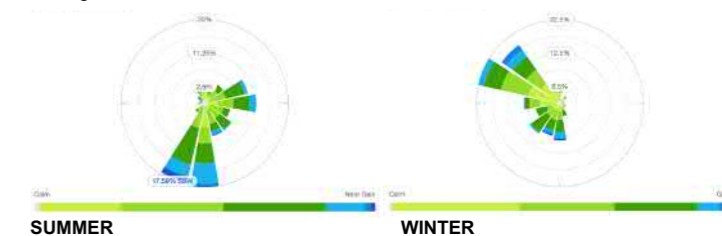
MINES SUBSIDENCE

The subject site is affected by previous underground mine workings. Structure & geotechnical advice has been sought to confirm impact on development.

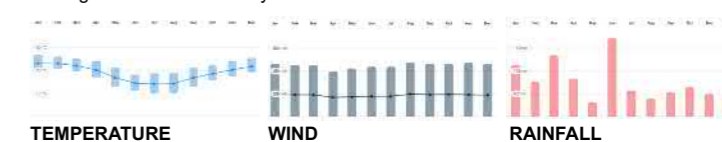
CLIMATE ANALYSIS

NEWCASTLE (NOBBYS) WEATHERSTATION

Average wind data for 1 Year



Average weather data for 5 years

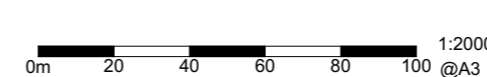


4293
DR2.11

RevH 14.10.21

Site Analysis Plan

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW



1:2000
@A3













SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

SSD Application

- Dimensions are in millimeters unless otherwise shown.
- Work to given dimensions. Do not scale from drawing.
- Check all dimensions on site prior to construction and fabrication.
- Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

| | | | |
|---|--------------------------------|---|--|
|  | - EXISTING PERMANENT BUILDINGS |  | - HARDSTAND |
|  | - ROAD |  | - WATERCOURSE |
|  | - TURF |  | - SCHOOL ENTRY POINTS |
|  | - SYNTHETIC TURF |  | - EXISTING SITE TREES |
|  | - SAND PIT |  | - SCHOOL SITE BOUNDARY |
|  | - MULCH |  | - ADMINISTRATION / VISITOR ENTRY POINT |

KEY POINTS

NEWCASTLE GRAMMAR SCHOOL - PARK CAMPUS

LOT / DP NUMBERS: 102-/DP861562
 SITE AREA: Approximately 9,440m²
 ZONING: R3 - Medium Density Residential
 CAR PARKING: No existing on-site carparking

FUNCTIONAL BREAKDOWN

A: SANDY WARREN PERFORMANCE CENTRE - 2 STOREYS - 1,289m²
 The original double height theatre was constructed in the 1960s & is now named in memory of Sandi Warren, a long-standing teacher at the School. The Western extension that includes the three Kindergarten GPLAs was construction in 2015.

| | |
|-----------|-------------------|
| Hall | 614m ² |
| GPLA | 240m ² |
| Amenities | 147m ² |
| Canteen | 33m ² |
| Store | 65m ² |
| Circ. | 164m ² |
| Office | 26m ² |

B: CLASSROOM BLOCK - 2 STOREYS - 857m²
 The two-storey brick building was constructed in 2001.

| | |
|-----------|-------------------|
| Art/OOSH | 68m ² |
| Music | 16m ² |
| GPLA | 555m ² |
| PE Store | 16m ² |
| Amenities | 21m ² |
| Store | 5m ² |
| Circ. | 176m ² |

C: CLASSROOM BLOCK - 1 STOREY - 189m²
 Blocks C & D lightweight metal clad buildings that are remnants of the former Newcastle Teachers' College which operated on the site from 1949-1973.

| | |
|-------|------------------|
| GPLA | 87m ² |
| Staff | 76m ² |
| Store | 26m ² |

D: CLASSROOM BLOCK - 1 STOREY - 203m²
 GPLA 203m²

F: ADMINISTRATION BLOCK - 1 STOREY - 320m²
 The single storey 1960s brick building is a remnant of the former Newcastle Teachers' College.

| | |
|---------|-------------------|
| Library | 144m ² |
| Admin | 84m ² |
| Staff | 48m ² |
| Circ. | 44m ² |



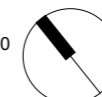
4293
DR2.12

RevH 14.10.21

Existing Site Plan

Newcastle Grammar School - Park Campus Stage 1
 Parkway Avenue, Cooks Hill NSW

0m 10 20 30 40 50 1:1000 @A3











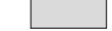





SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

| | | | |
|---|--------------------------------|---|--|
|  | - EXISTING PERMANENT BUILDINGS |  | - EXISTING SITE TREES |
|  | - ROAD |  | - SCHOOL SITE BOUNDARY |
|  | - OPEN PLAY SPACE |  | - ADMINISTRATION / VISITOR ENTRY POINT |
|  | - HARDSTAND |  | - TRAFFIC AND NOISE CONCERNS |
|  | - WATERCOURSE |  | - PRIVACY & SAFETY CONCERNS |
|  | - CONSTRAINT |  | - OPPORTUNITY FOR RELATIONSHIP W/ STREET |
|  | - OPPORTUNITIES |  | - SCHOOL ENTRY POINTS |

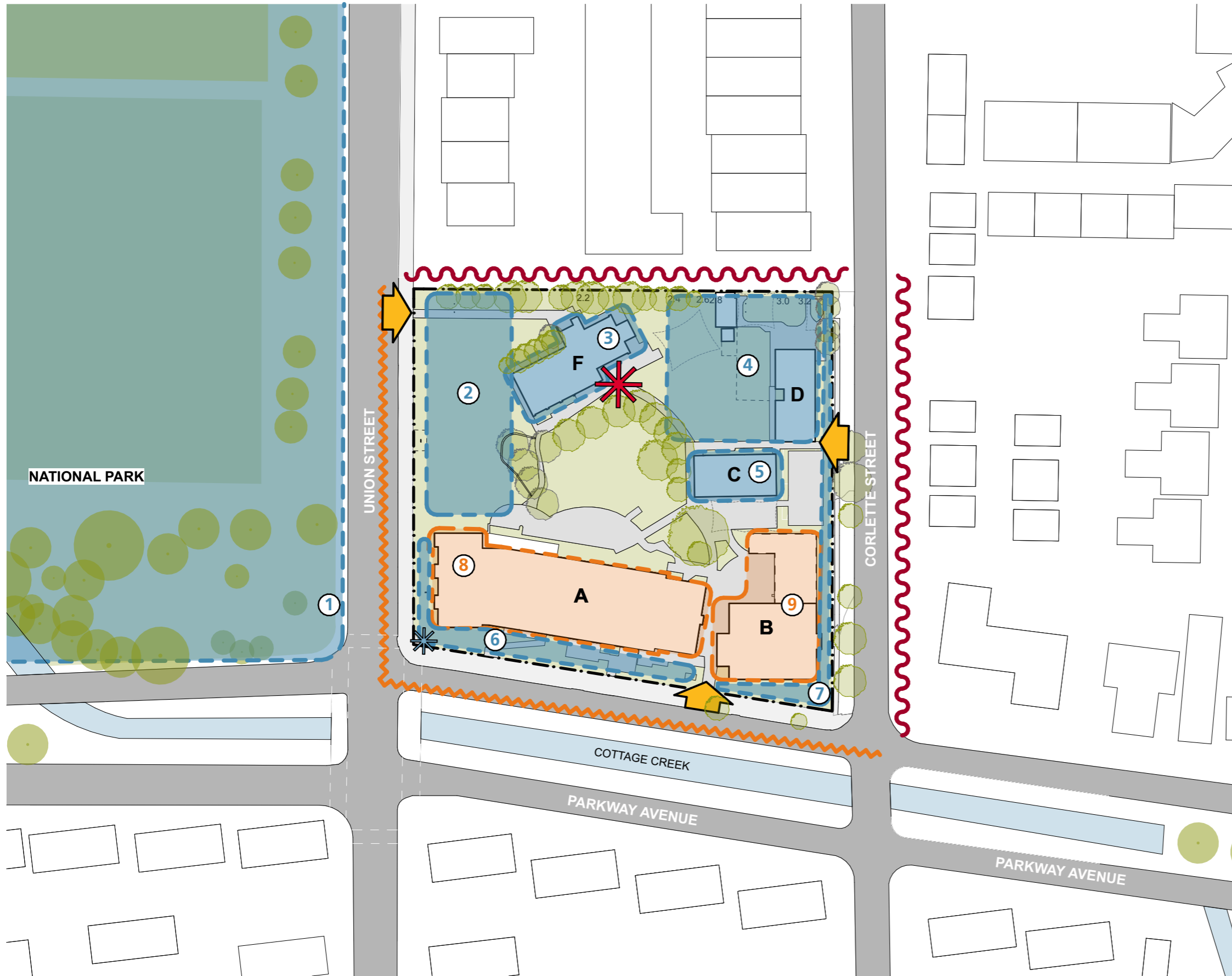
KEY POINTS

OPPORTUNITIES

- 1:** Proximity to National Park sports grounds provides opportunity to access large open green space and sporting facilities.
- 2:** Open green space on site could be developed before the decommissioning of existing buildings and further development, to maximise efficiency on site.
- 3, 4 & 5:** Non-significant & aged buildings could be removed to open the site possibilities up for more efficient, higher density development. Services are available in the area.
- 6 & 7:** Major street frontages, which are currently under utilised, could be developed to create a greater street presence and welcoming to the School and broader community.

CONSTRAINTS

- 8:** The existing significant hall building cannot be demolished and limits development opportunities along Parkway Avenue.
- 9:** Significant location of an existing two storey building limits development opportunity on the corner of Parkway Avenue and Corlette Street.



4293
DR2.13

RevH 14.10.21

Opportunities and Constraints

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

0m 10 20 30 40 50 1:1000 @A3













SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

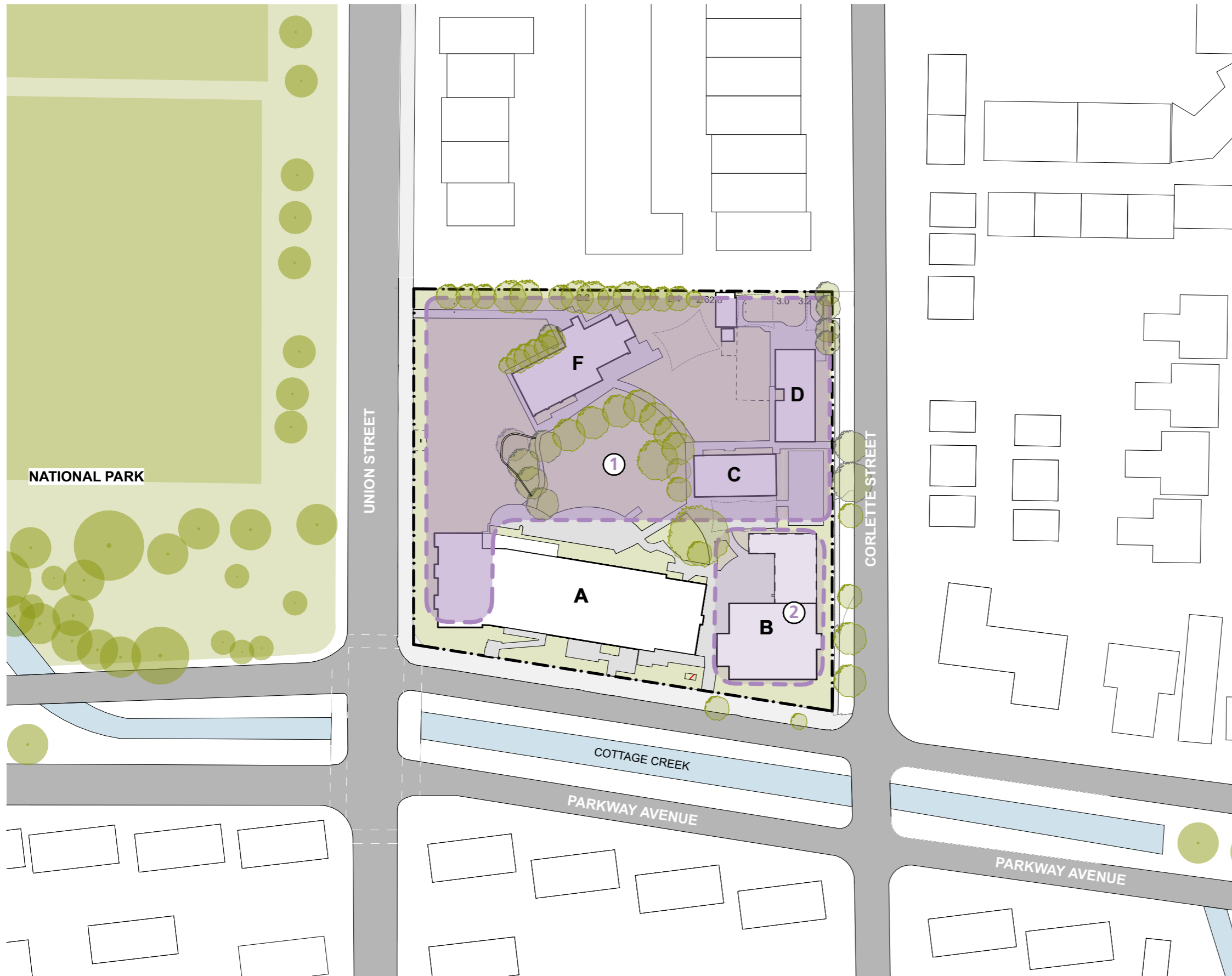
LEGEND

| | | | |
|---|--------------------------------|---|--|
|  | - EXISTING PERMANENT BUILDINGS |  | - DEVELOPABLE AREA |
|  | - ROAD |  | - POTENTIAL INTERNAL MODIFICATION |
|  | - OPEN PLAY SPACE |  | - EXISTING SITE TREES |
|  | - HARDSTAND |  | - SCHOOL SITE BOUNDARY |
|  | - WATERCOURSE |  | - ADMINISTRATION / VISITOR ENTRY POINT |

KEY POINTS

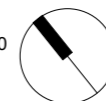
DEVELOPABLE AREAS

- 1:** The removal of several existing buildings from site provides opportunity to develop a significant area of the site, including the potential for denser design solutions and multi-storey buildings. The site has no height limit regulation, the height limit of surrounding site's is 10m.
- 2:** Potential internal modifications of existing building, or demolition.



Developable Areas

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW



SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

NGS - PARK CAMPUS



SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

NGS - PARK CAMPUS



3 1/2 - 4 STOREY RESIDENTIAL UNITS

PARKWAY AVE
EAST

COTTAGE CREEK

PARKWAY AVE
WEST

3 STOREY RESIDENTIAL UNITS

1-2 STOREY HOUSES

4293
DR2.16

RevF 14.10.21

Photographic Analysis - Streetscape Union Street

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

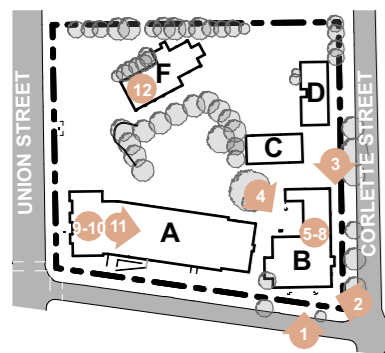
NTS
@A3

SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

SSD Application

1. Dimensions are in millimeters unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.



1. Block B Parkway Avenue facade
2. Block B Parkway Avenue facade
3. Block B Corlette Avenue facade
4. Outdoor learning area adjacent to Block B
5. Ground floor GPLA in Block B
6. First floor GPLA in Block B
7. First floor balcony, Block B
8. Concrete stairs, Block B
9. Kingergarten Corridor, Block A
10. Kingergarten GPLA, Block A
11. Sandy Warren Performing Arts Centre, Block A
12. Library space, Block A

4293
DR2.17

RevF 14.10.21

Photographic Analysis - Buildings

Newcastle Grammar School - Park Campus Stage 1
Parkway Avenue, Cooks Hill NSW

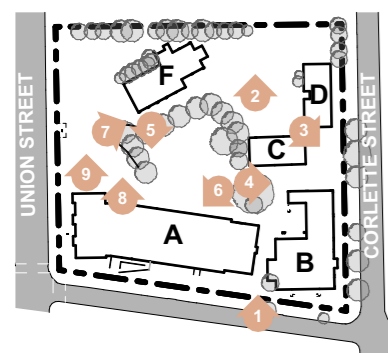
SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846



SSD Application

- 1. Dimensions are in millimeters unless otherwise shown.
- 2. Work to given dimensions. Do not scale from drawing.
- 3. Check all dimensions on site prior to construction and fabrication.
- 4. Bring any discrepancies to the attention of the proprietor & architect.



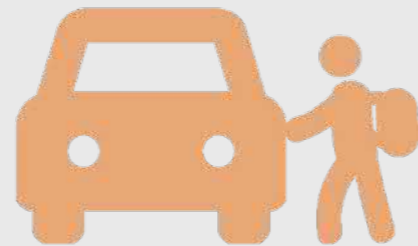
- 1. Pain student entry from Parkway Avenue
- 2. Playground equipment adjacent to Block F
- 3. Hardstand play area behind Block C
- 4. COLA next to Block C & in front of the hardstand play area
- 5. Central play area
- 6. Path & shade cloth off Block A
- 7. Path past Block F to playground space
- 8. View of the open green space from the canteen
- 9. Open, unshaded play space adjacent to Union Street boundary

Drawing and design © SHAC Pty Ltd 2016. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4293\4293 NGS Park Campus - Stage 1\15 Sketch Design\4293.5.15.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.pptx date: 18/02/22 time: 4:55 pm



Design Process

Masterplan Objectives



MAXIMISE OPEN PLAY SPACE

- Site is small & currently does not provide sufficient (10m²/student) open play space for students, with current student capacity, as well as projected increase.
- Usage of adjacent park is an unsatisfactory compromise due to safety concerns.
- Proposed buildings are multistorey with an undercroft & roof top play area to maximise play space.

PROVIDE ON SITE KISS N' DROP

- Student drop-off & pick-up is an important issue at the School. It can, at times increase traffic congestion around the site.
- An onsite kiss n' drop would alleviate some of the pressure on the surrounding streets by bringing the cars on site & keeping them in motion in conjunction with internal NGS management approaches.

PRIVACY CONSIDERATIONS & NEIGHBOURS

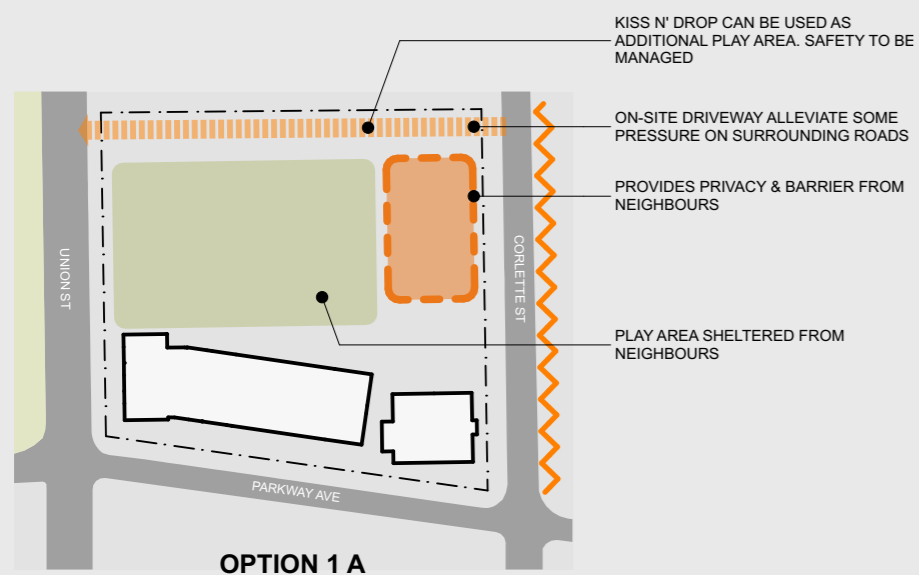
- As a school, the site also impacts on the surrounding neighbours' amenity with acoustic & visual impacts.
- Providing physical, visual & auditory separation between neighbours & the School would maximise students' safety and focus, as well as reduce impact of school on the neighbouring community.

CREATE A SCHOOL PRESENCE

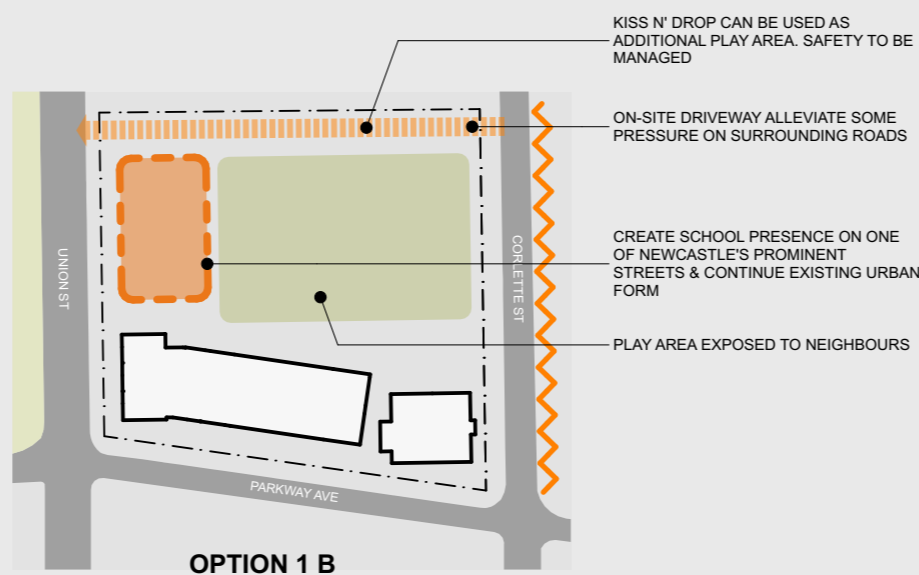
- Union Street & Parkway Avenue are prominent Newcastle streets, but the School lacks a street presence that advertises the School, its reputation, and its main entry & control point.
- Locating an iconic building along Union Street would create a street presence for the School.

DR3.02 Design Process

Masterplan Options



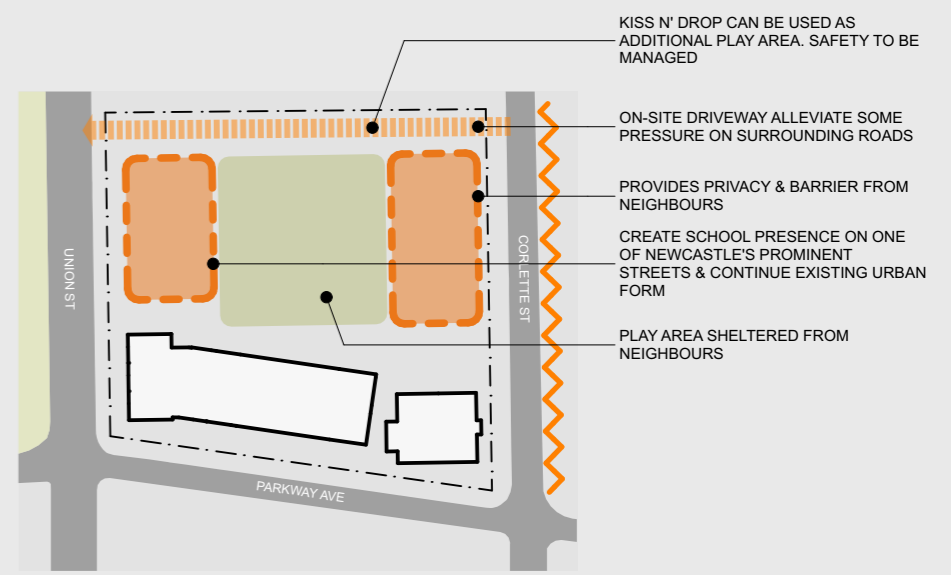
OPTION 1 A



OPTION 1 B

OPTION 1

- Relocate years 5 & 6 to Park Campus
- Construct one new building
- Proposal allows for 5 & 6 to relocate but doesn't allow for future predicted student population increase

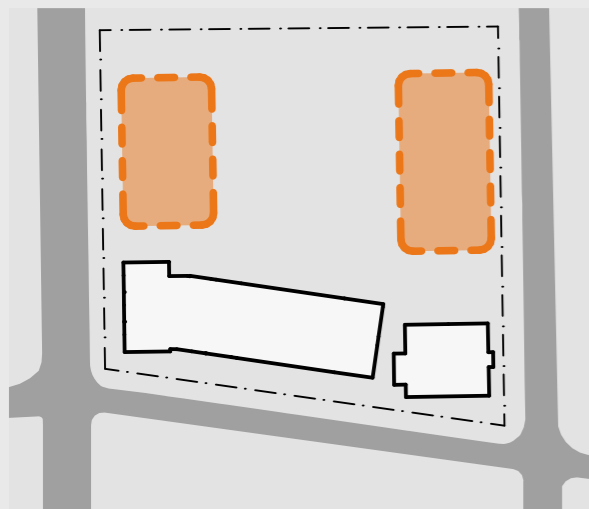


OPTION 2 - PREFERRED

- Relocate years 5 & 6 to Park campus
- Staged construction of two new buildings
- Stage 1 satisfies core capacities for K-6 but does not provide increased capacity for requested specialist learning or staff & admin spaces

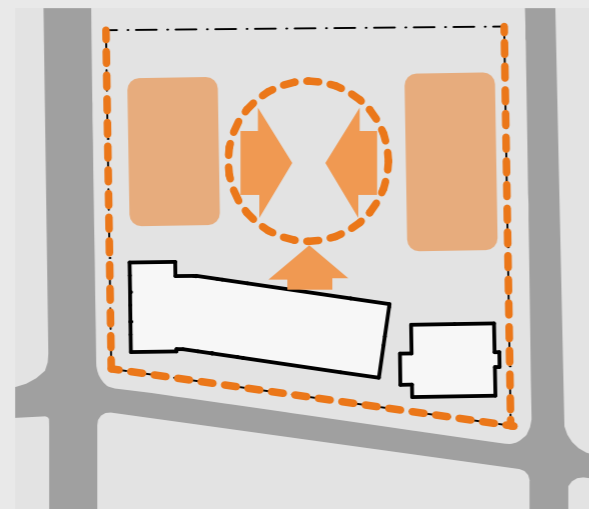
Masterplan Design Diagrams

Drawing and design © SHAC Pty Ltd. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4200\4293 NGS park Campus - Stage 1\515 Sketch Design\4293.515.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.dwg date: 18/02/22 time: 4:55 pm



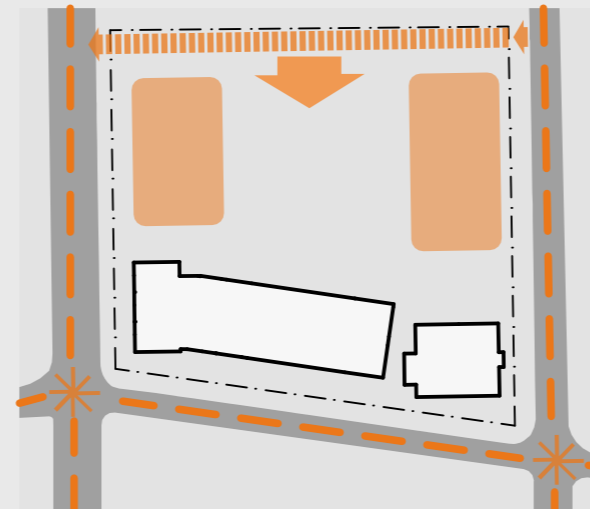
PERIMETER BUILT FORM

- New built form located on the perimeter of the site to continue the urban street pattern, create a secured play area, & maximise the size of the play area



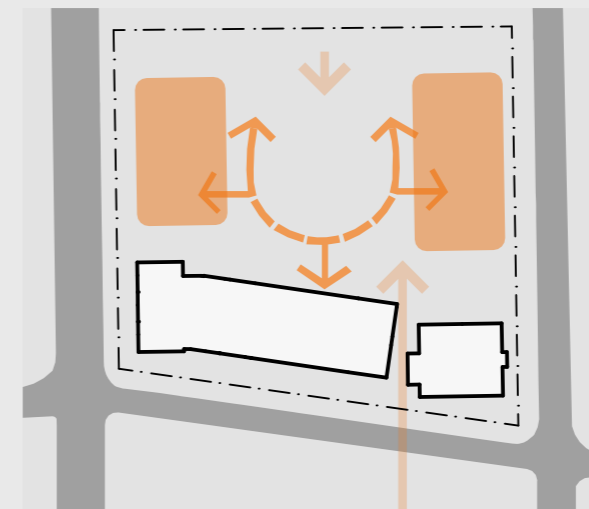
COMMUNITY & CONNECTION

- Existing & proposed buildings face central courtyard & each other, emphasising the sense of the School's community & unity



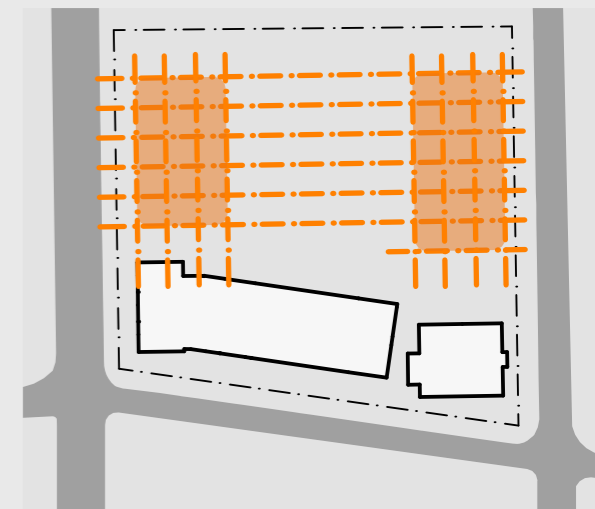
TRAFFIC CIRCULATION

- On-site kiss & drop will ease traffic & parking pressure on surrounding community streets
- Kiss n' drop located along northern boundary maximises the functional play space & the distance between vehicular & pedestrian entries



SITE LEGIBILITY

- Once one reaches the central courtyard the whole school is visible, making wayfinding legible

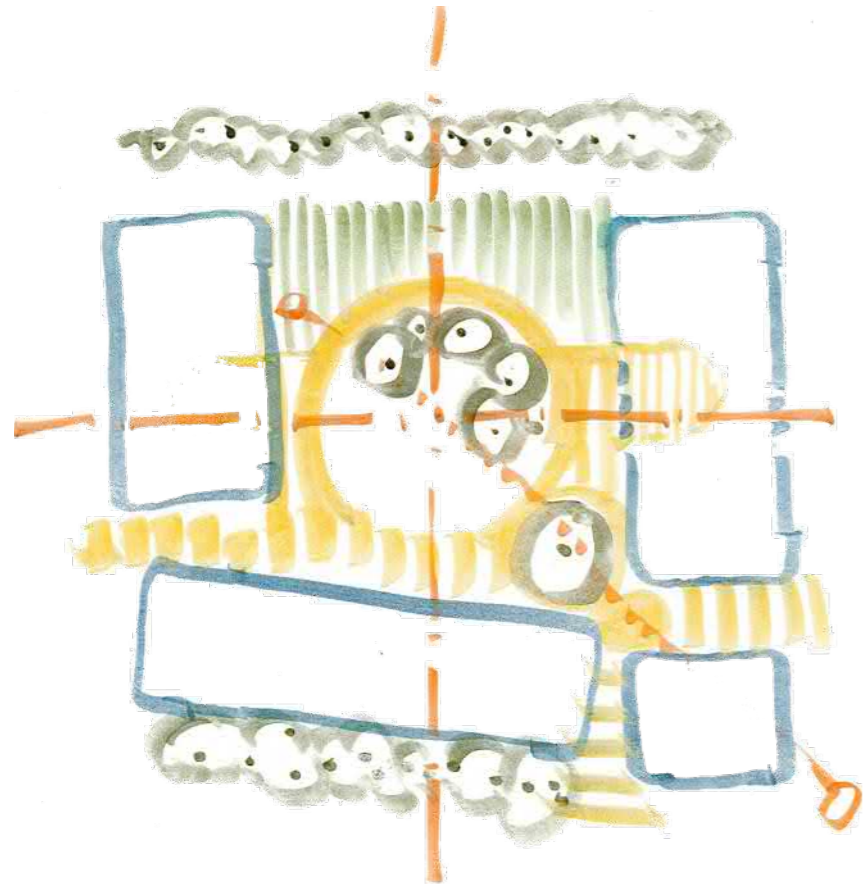


EFFICIENCY & FLEXIBILITY

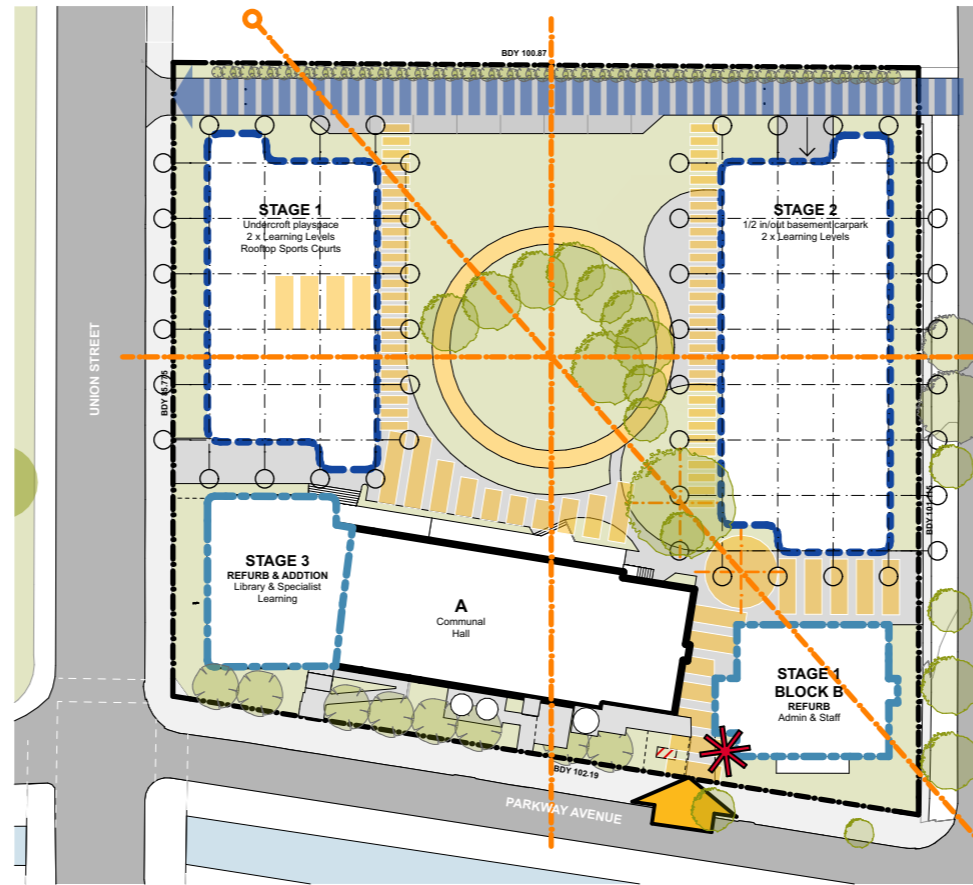
- Structural efficiency
- Rationalised structural spans
- The regular grid allows for flexibility & future adaptation of the floor plate

DR3.04 Design Process

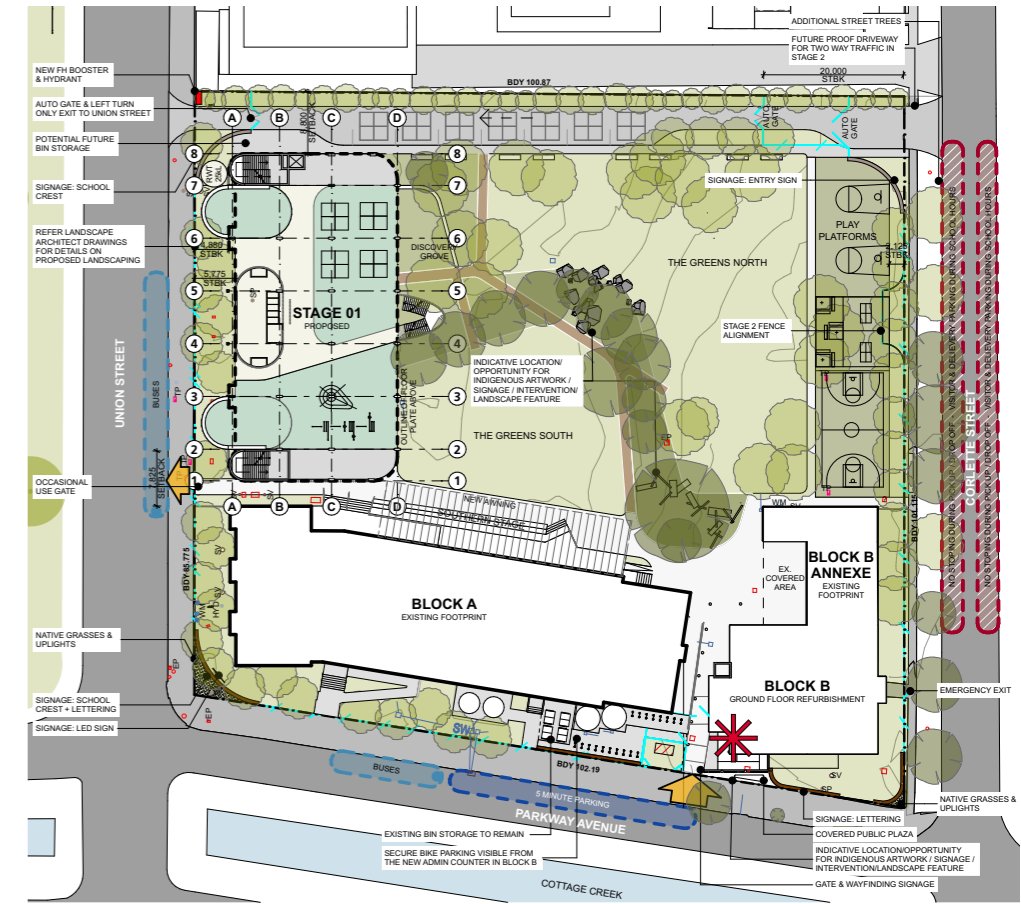
Site Plan Development



CONCEPT SKETCH



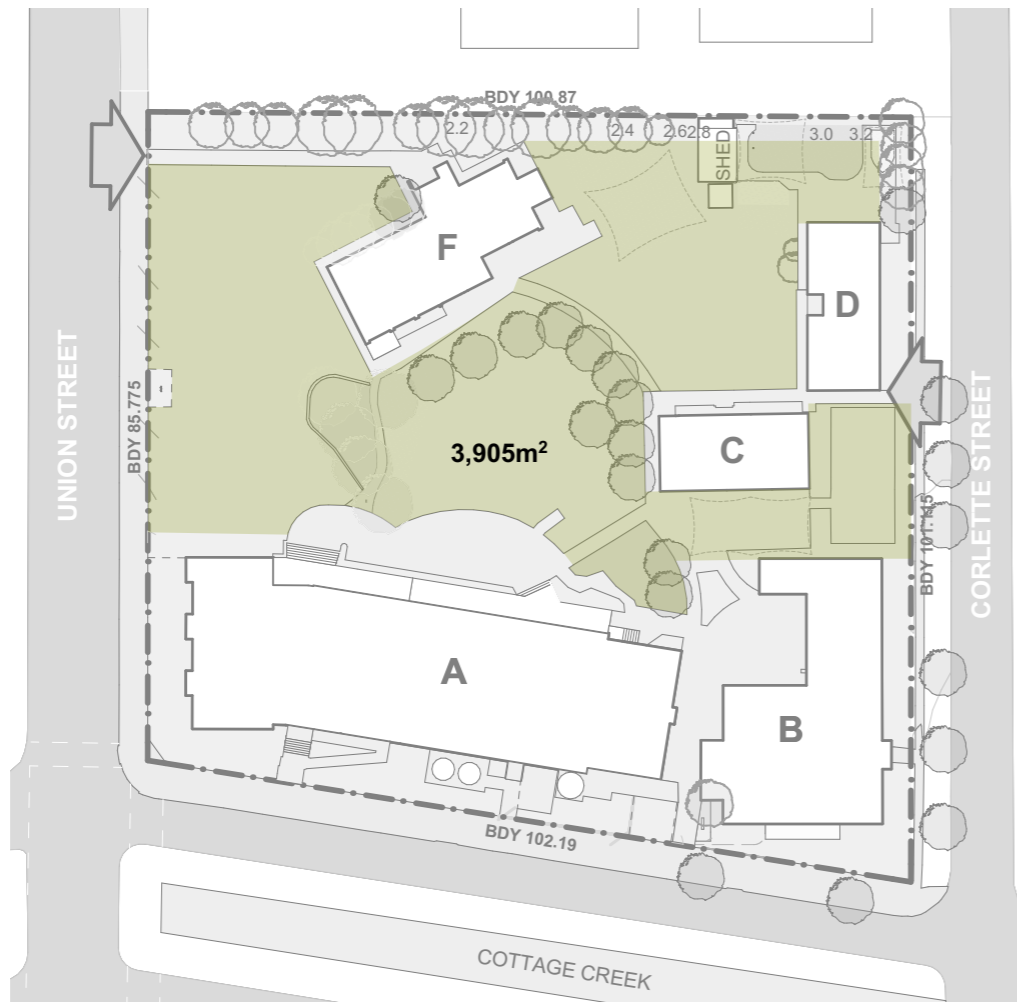
MASTERPLAN



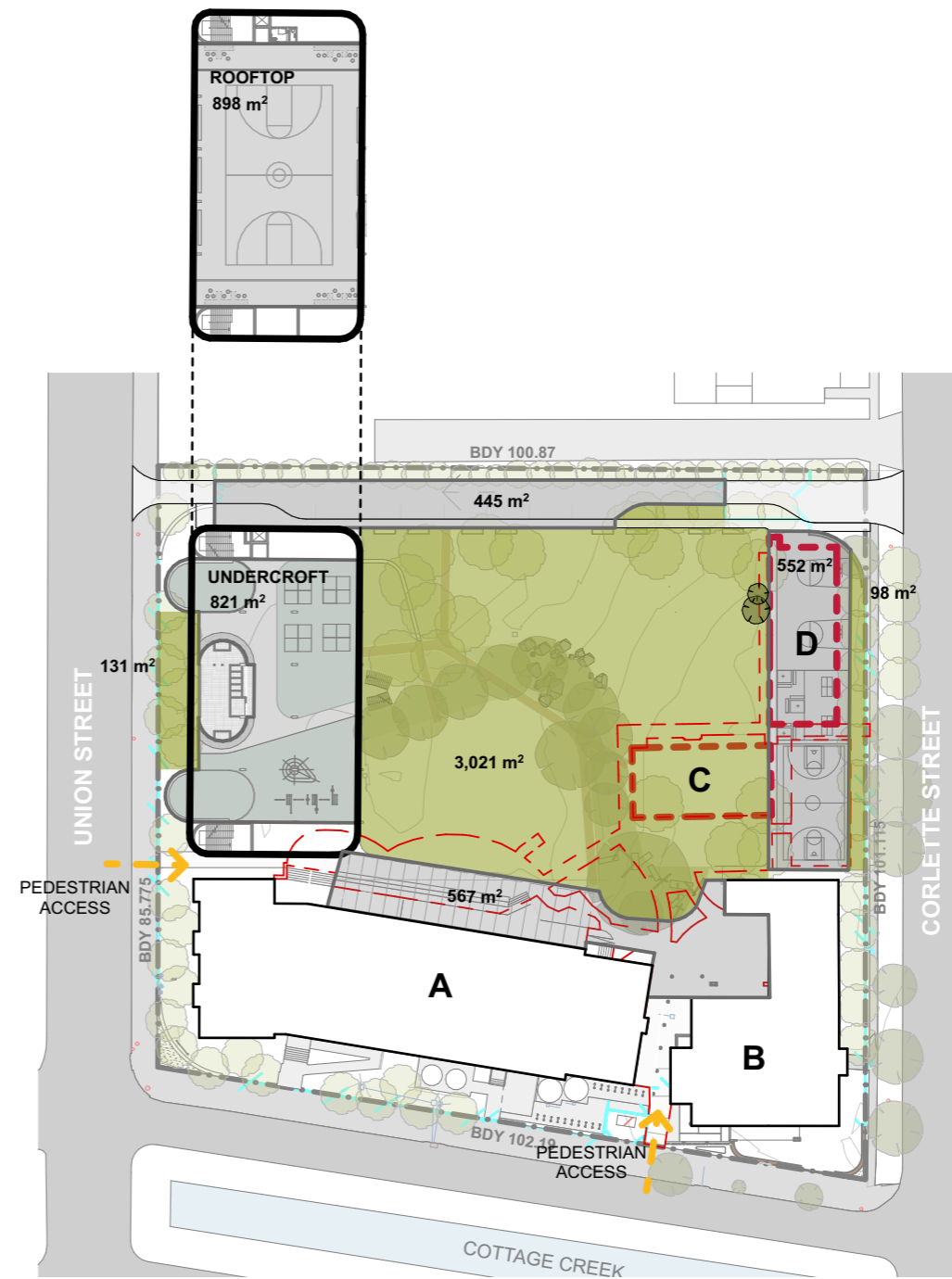
STAGE 01 - CONCEPT DESIGN

DR3.05 Design Process

Outdoor Play Analysis



EXISTING OUTDOOR PLAY SPACE
= 3,905m²



PROPOSED STAGE 01 OUTDOOR PLAY PLACE
3,021m² + 821m² + 898m² = 6,533m²

DR3.06 Design Process

CPTED

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES (CPTED)

According to the Educational Facilities Standards and Guidelines (EFSG) "major problems affecting schools, with enormous cost, are arson, theft and vandalism. The impact of these activities is not only measured in financial terms but also in the effect on student learning outcomes, interruptions to operations and emotional trauma experienced by student, teachers and parents."

The security risk for all projects must be minimised.

Crime Prevention Through Environmental Design (CPTED) guidelines have been outlined by the *Crime Prevention & the Assessment of Development Application* report published in 2001 by the former Department of Urban Affairs & Planning, (now the Department of Planning, Industry and Environment)

CPTED seeks to influence the design of buildings & places to:

- increase the perception of risk to criminals by increasing the possibility of detection, challenge & capture
- increase the effort required to commit crime by increasing the time, energy, or resources which need to be expended
- reduce the potential rewards of crime by minimising, removing or concealing 'crime benefits'
- remove conditions that create confusion about required norms of behaviour

The four principles of CPTED are:

- surveillance
- access control
- territorial reinforcement
- space management

Surveillance

As well as deterring crime, surveillance is important for ensuring the safety of the students. Natural & technical surveillance allows:

- staff to see what students are doing
- students to see what students are doing
- the community to detect potential trespassers out of hours

Design considerations that achieve deterrence in the NGS project include:

- S1 clear sightlines between public & private spaces
- S2 clear sightlines to toilets
- S3 effective lighting of public spaces
- S4 landscaping that makes the place attractive, but does not provide offenders with places to hide or entrap victims

Access Control:

Physical & symbolic barriers can be used to attract, channel, or restrict the movement of people. They minimise the opportunities for crime & increase the effort required to commit crime.

Physical barriers (fencing, walls, locked doors etc.) & symbolic boundaries (landscaping, level changes etc.) are important to clearly indicate where people are & are not permitted to go. However, these barriers must not be overly hostile.

Effective access control will be incorporated on the NGS Park Campus site by creating:

- AC1 landscapes & physical locations that channel & group pedestrians into targeted areas
- AC2 public spaces which attract, rather than discourage people from gathering
- AC3 restricted access to internal areas or high-risk areas

Territorial Reinforcement

Areas that are well-maintained & well-used generate a feeling of "ownership" which encourages people to inhabit the space, reducing the opportunity for crime & increasing the risk to criminals. Community ownership also increases the likelihood that people who witness crimes will report it.

Territorial reinforcement included in this design are:

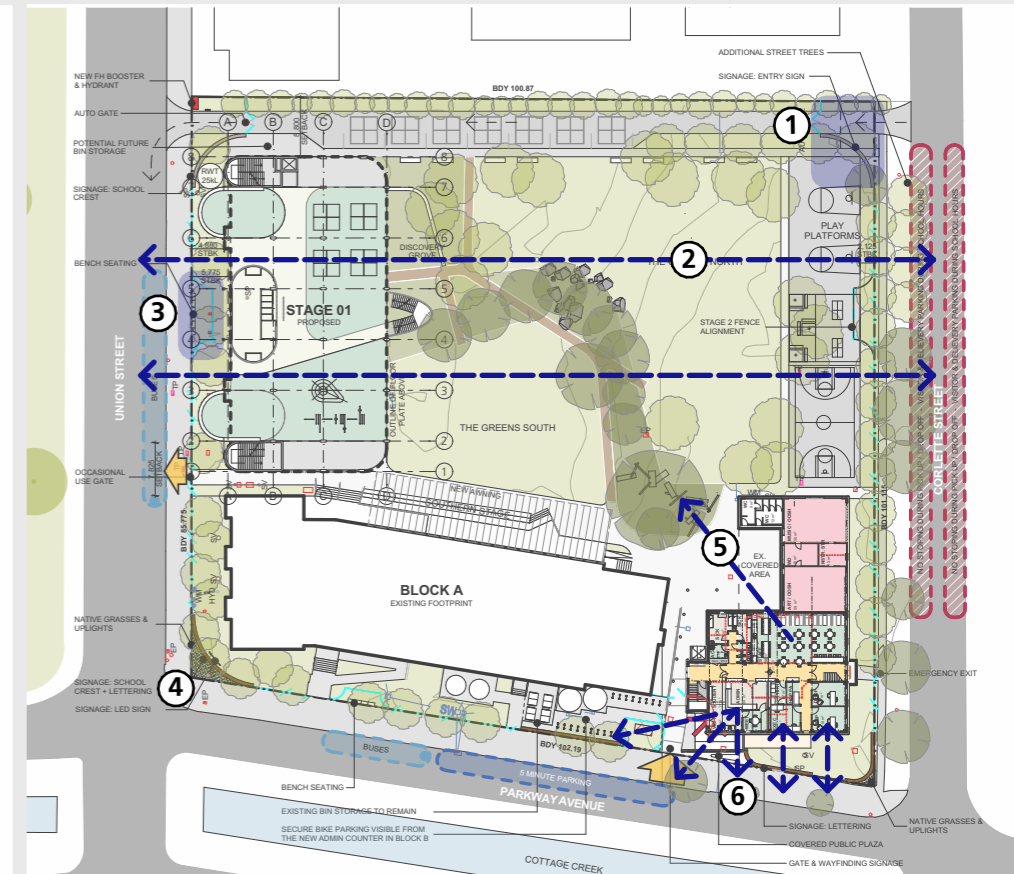
- TR1 design that encourages people to gather in public space & to feel some responsibility for its use & condition
- TR2 design with clear transitions & boundaries between public & private space
- TR3 clear design cues on who is to use space & what it is to be used for

Space Management

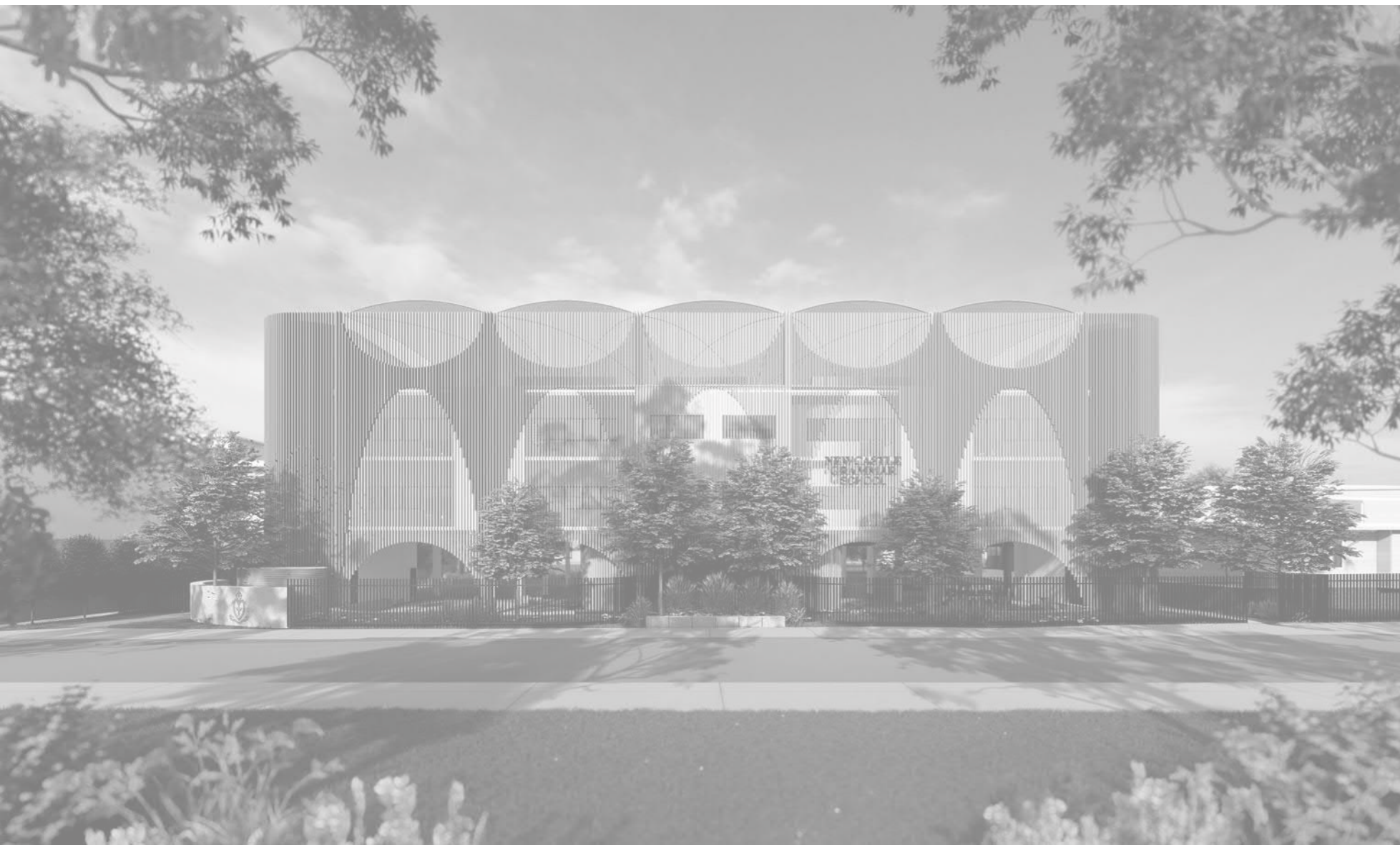
Related to territorial reinforcement, space management ensures that spaces are appropriately utilised & maintained.

Space management strategies utilised in the NGS project include:

- activity coordination
- site cleanliness
- rapid repair of vandalism & graffiti
- the replacement of burned out pedestrian & car park lighting
- the removal or refurbishment of decayed physical assets



1. The vehicular gate & adjacent standstone wall provides a clear transition onto the School site.
2. The palisade fence & undercroft provide clear west-east site lines through the site.
3. Setbacks in the perimeter fence provides niches with seating for the public encouraging them to gather.
4. The perimeter planting is to be low lying as to not allow offenders to hide or entrap victims
5. The staff room has a sightline to the central playground.
6. The administration counter & staff offices overlook the street, the secure bike parking, the public entrance, & adjacent plaza.

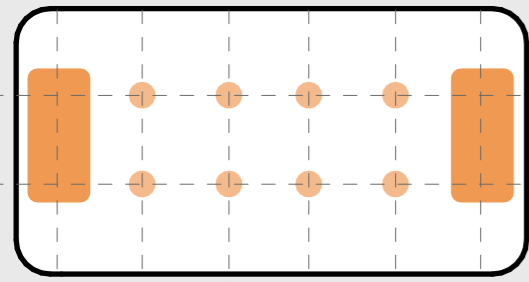


Union Street Building



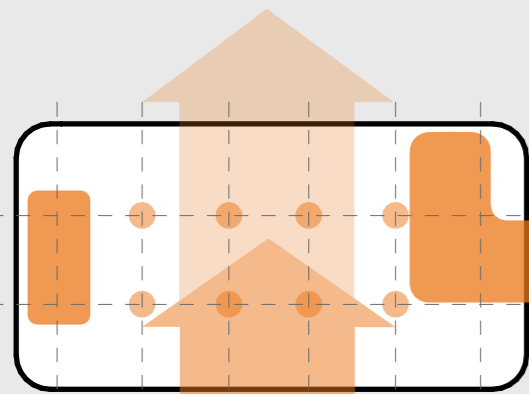
S H A C

Union Street Planning Diagrams



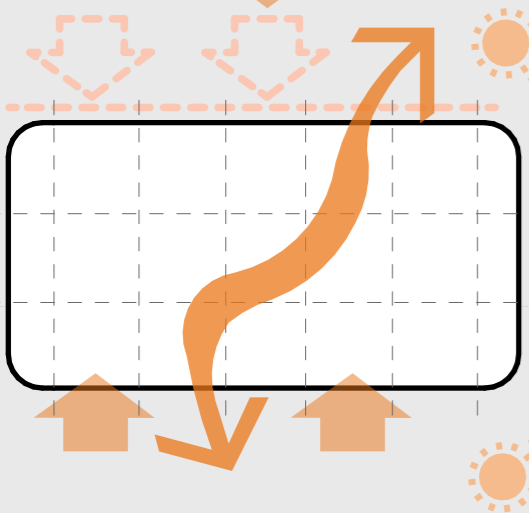
GRID & SYMMETRY

- Structural efficiency
- Rationalised structural spans
- Kit of part of materials



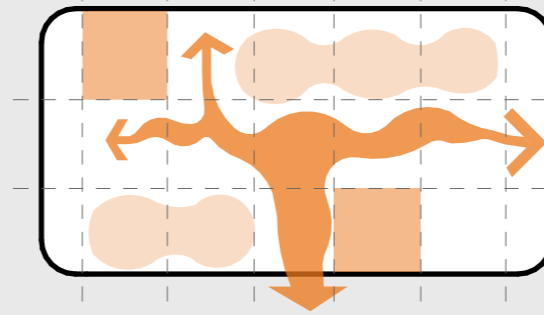
MAXIMISING OPEN SPACE

- The undercroft playspace maximises the onsite play area & maintains its connection with National Park



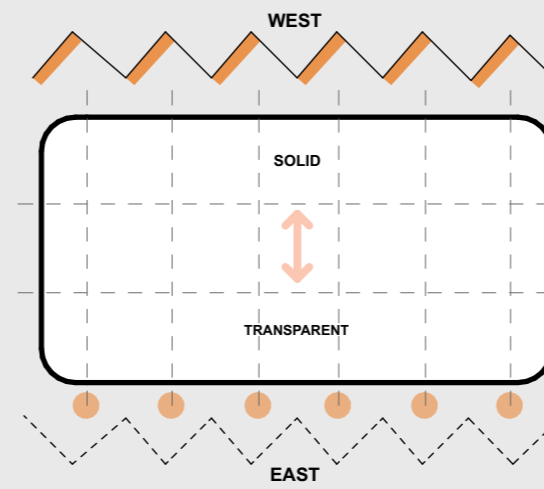
NATURAL LIGHT & VENTILATION

- Form allows good light & air penetration



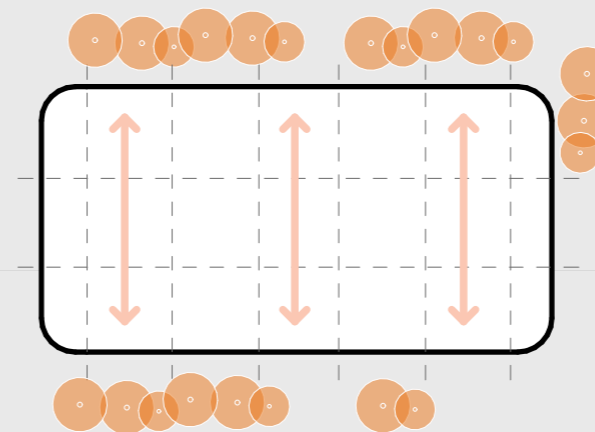
FLEXIBILITY

- The regular grid allows for flexibility & future adaptation of the floor plate



PUBLIC / PRIVATE EDGES

- The building maintains privacy from the busy public street
- The decks on the other side allow the classrooms to open up & have a relationship with the rest of the School

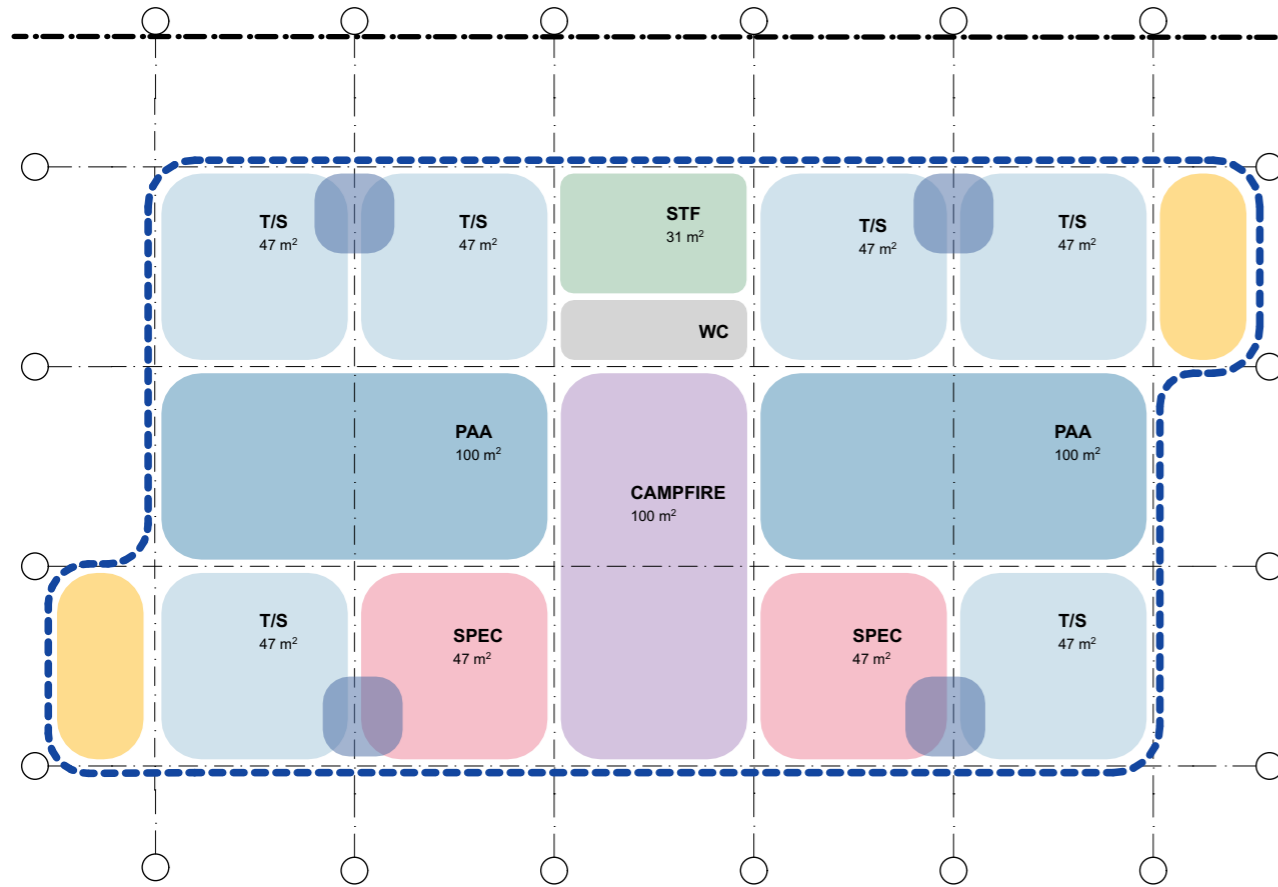


CONNECTION TO NATURE

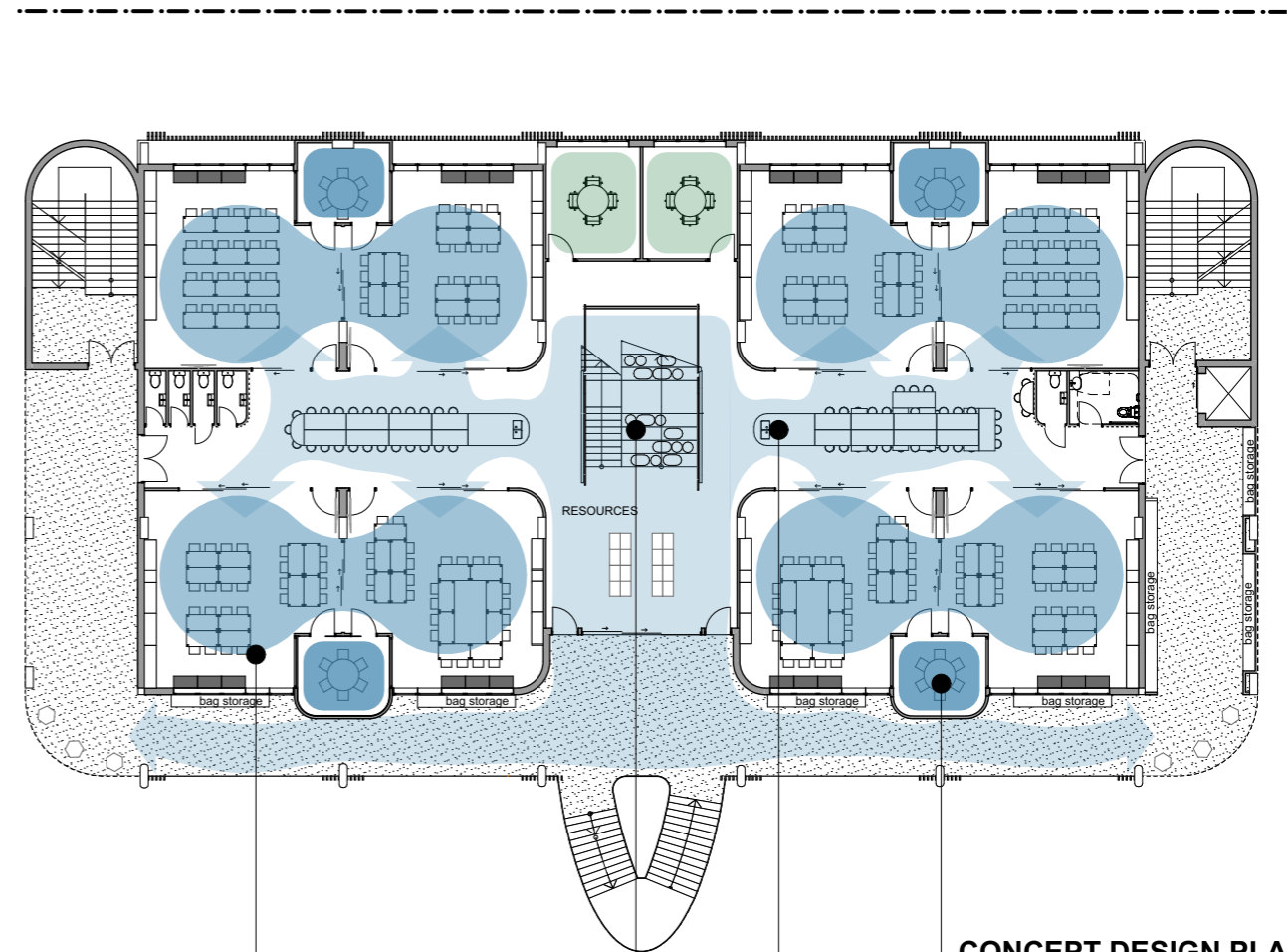
- The building has views to nature on either side

DR3.08 Design Process

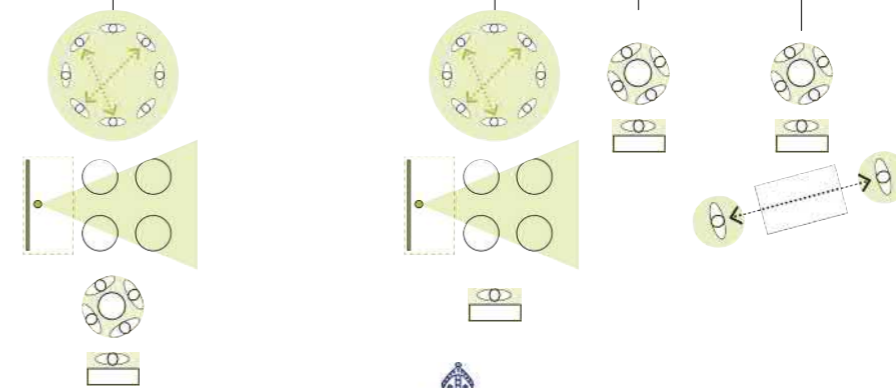
Union Street Planning Development



CONCEPT LAYOUT



CONCEPT DESIGN PLAN



4293

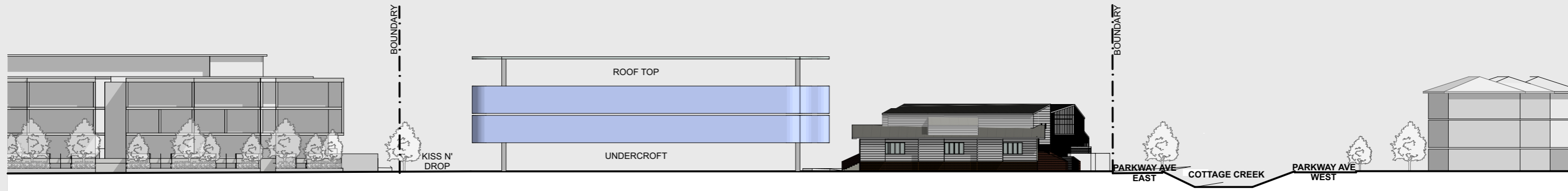
RevE 14.10.21



SHAC

DR3.09 Design Process

Built Form - Scale



The site is located within a low point of the greater catchment & is identified as being within a high-risk flood zone. The proposed Union Street building is located on the low point of the site.

The Union Street building is also opposite National Park, an expansive parkland. Views of this open park counters the physical constraints of the site.

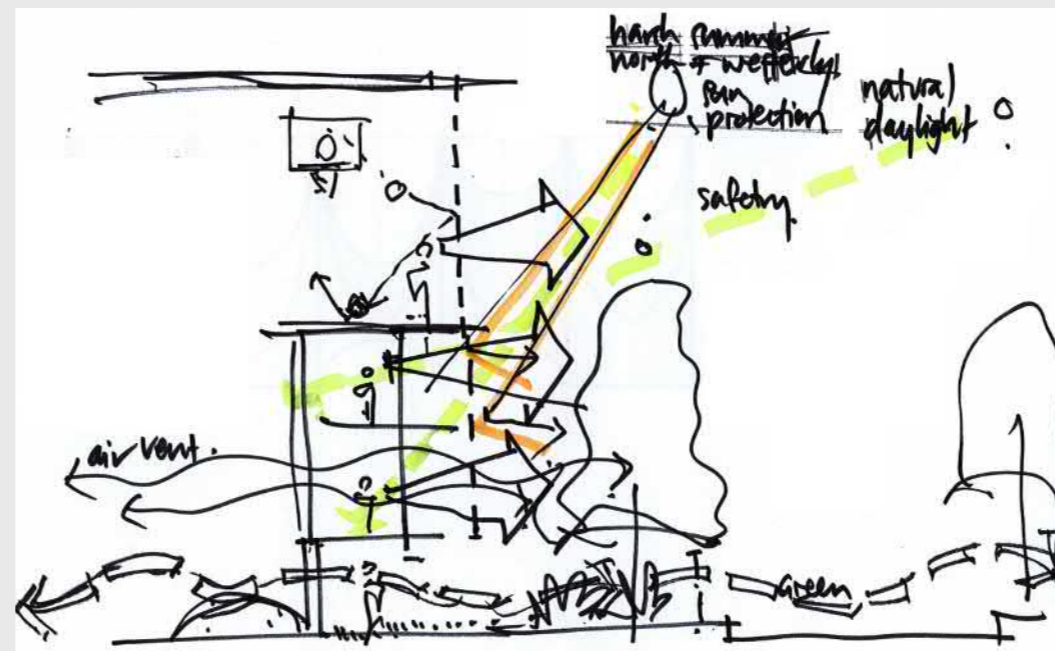
The physical constraints of the site also make open play space precious.

Therefore, elevating the building by one full storey addresses the flooding issues, maintains views of the park from the play space & maximises the available play space as the undercroft space will be used as a covered outdoor play area.

The proposed buildings located on street frontages to continue urban street pattern.

Along the Union Street frontage the site is neighboured by a 3 1/2 to 4 storey multi-residential building to the north & a three storey multi-residential building to the south. The scale of the proposed building will respect & respond to the existing context.

Capitalising on the surrounding height precedents is essential to optimising the amenity of the site by allowing for a rooftop play area, maximising the open play space on the tight site.



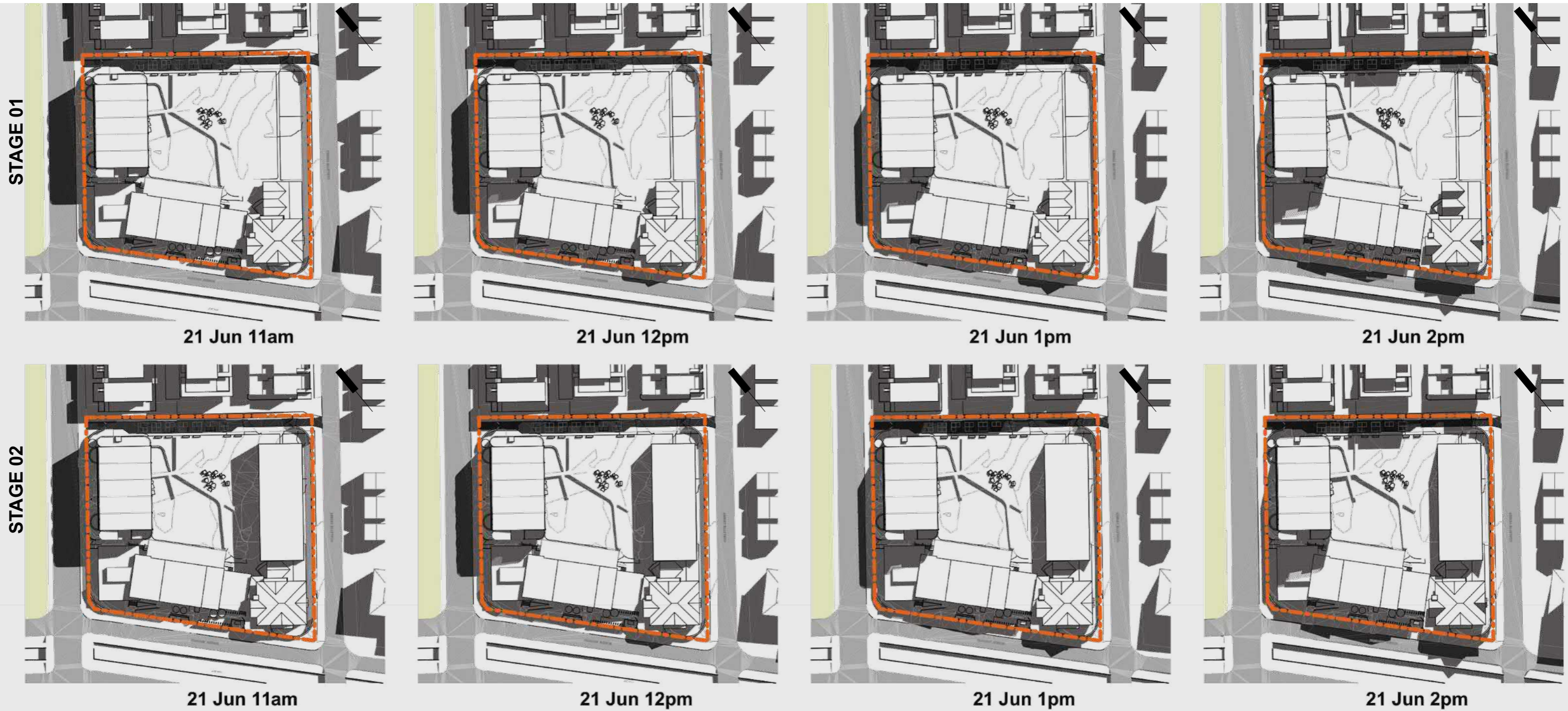
MULTISTOREY CHILDCARE - KAUNITZ YEUNG



HOME BUSH WEST PS - TANNER KIBBLE DENTON

DR3.10 Design Process

Site Shadow Diagrams



4293

RevE 14.10.21



Newcastle
Grammar
— SCHOOL —

SHAC

DR3.11 Design Process

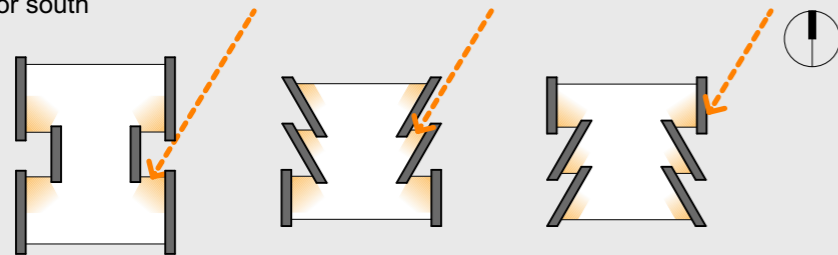
Facade Exploration

East/West Sun Shading

The long facades of the proposed building are orientated east & west. While the eastern facade is shaded by the covered decks, the western facade is exposed to the harsh afternoon sun. Therefore strategies that minimise the direct penetration of the western sun, while maintaining natural daylighting, are required.

Strategy 01 -

Avoid windows on east/west facade by shifting windows to face north or south



However, this strategy obstructs east/west views which is not suitable for this site as the building faces the National Park to the west, and the central landscaped play area to the east. A lack of windows to the long elevations also impacts the passive cross ventilation of the building.

Creating niches also reduces the flexibility of the internal space

Strategy 02 -

Vertical sun shading can effectively block the eastern & western sun.

| | PLAN | IDEAL ORIENTATION | VIEW RESTRICTION |
|----------------------|------|-------------------|------------------|
| VERTICAL FIN | | | |
| SLANTED VERTICAL FIN | | | |
| EGG CRATES | | | |

In order to maintain views to National Park to the west, & the central landscaped play area to the east vertical fins orientated perpendicular to the facade would be most appropriate.



DR3.12 Design Process

Facade Motif



Across its known history and far beyond, the site of the NGS Park Campus has been a place of harvest, a source of nourishment for its communities.

The first people of the area are known to have managed the streams, waterholes and estuarine lowlands as part of their sustainable cultural practice for at least 5000 years.

At the outset of European settlement, the first Government Farm in Newcastle was on the eastern bank of Cottage Creek. As the town grew, the Park Campus site was part of the network of Chinese Market Gardens, being cultivated from the ancient alluvial soil to feed the colony.

In more recent times the site has been associated with Education, initially as the Teachers' College, followed by a TAFE satellite and today as the NGS Park Campus, enabling individuals to develop their full potential.

As such, we consider the inherent 'spirit of place' (genius loci) - the intangible essence of the surrounds - to be that of growth.



It is with this in mind that our design is being guided by the theme of 'Garden', an undeniable symbol of growth - and influenced by the following associated concepts:

KINDER-GARTEN

German educator Friedrich Froebel's ideology instantly came to mind, when the theme of Garden began to inform this project.

He invented the term Kindergarten (meaning garden of children), reflecting his belief that children should be nurtured and nourished "like plants in a garden" through play based activities.

It is our intention to create the framework - a collection of spaces - in which the metaphoric garden (cohort) can flourish. Tangibly this is translated in the built form to spaces which have **moments of fun, considered pockets of sunlight and shade and unexpected opportunities to learn.**



AUDITORIUM OF BONDY & RADIO FRANCE CHORALE SINGING CONSERVATORY - PARC-ARCHITECTS

THE CLOISTER

Traditionally a verdant reserve for learning and recreation, enclosed by a succession of arches (an arcade).

We have used this Architectural typology (in a modern way) to address the environmental factors that directly affect our site.

Facing due west, there is a need to screen the building from solar extremes and harsh westerly winds yet at the same time allow cooling breezes and winter sun to permeate through the building.

The vertical batten screen with succession of archways encompassing the building is the clever device which enables this thermal performance, while also providing a level of privacy from the public roadway and allowing long views to the parkland and playground from within.



CURIOSITY CURRICULUM

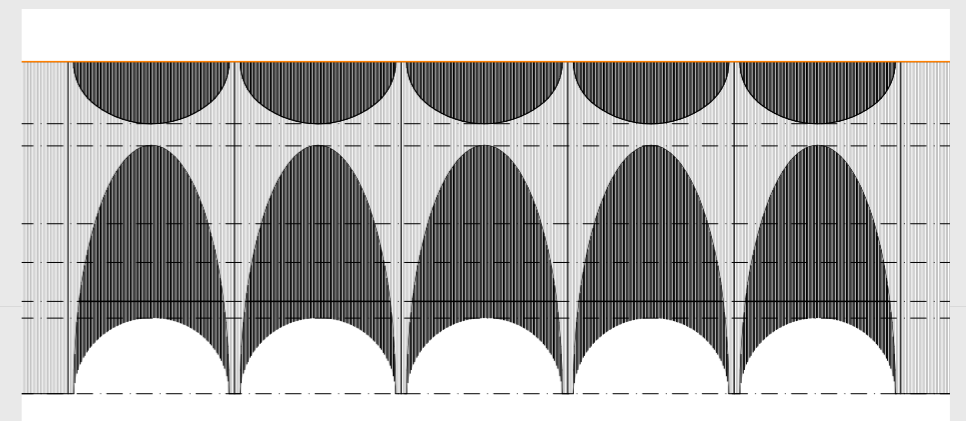
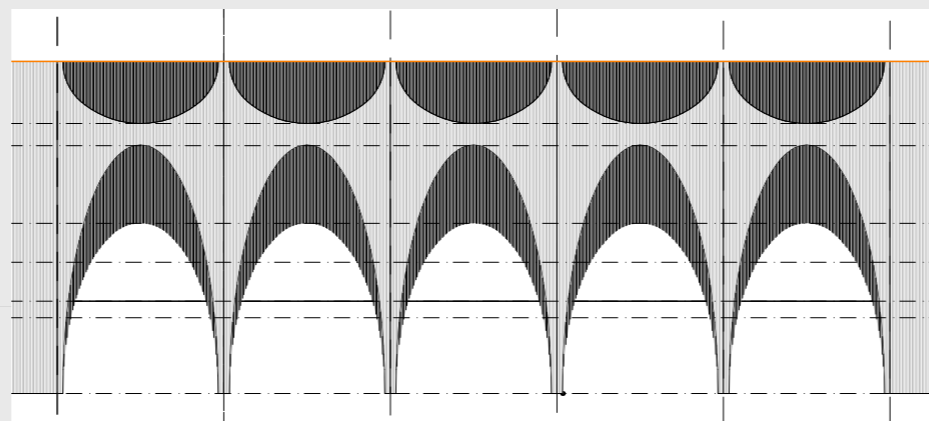
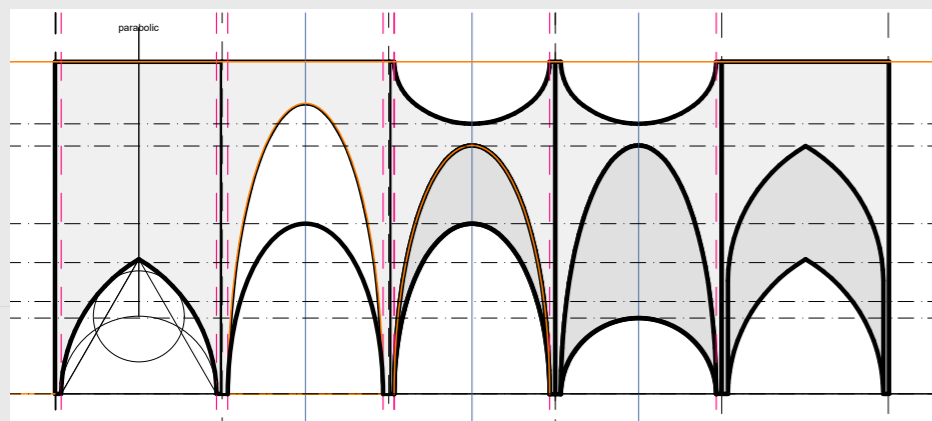
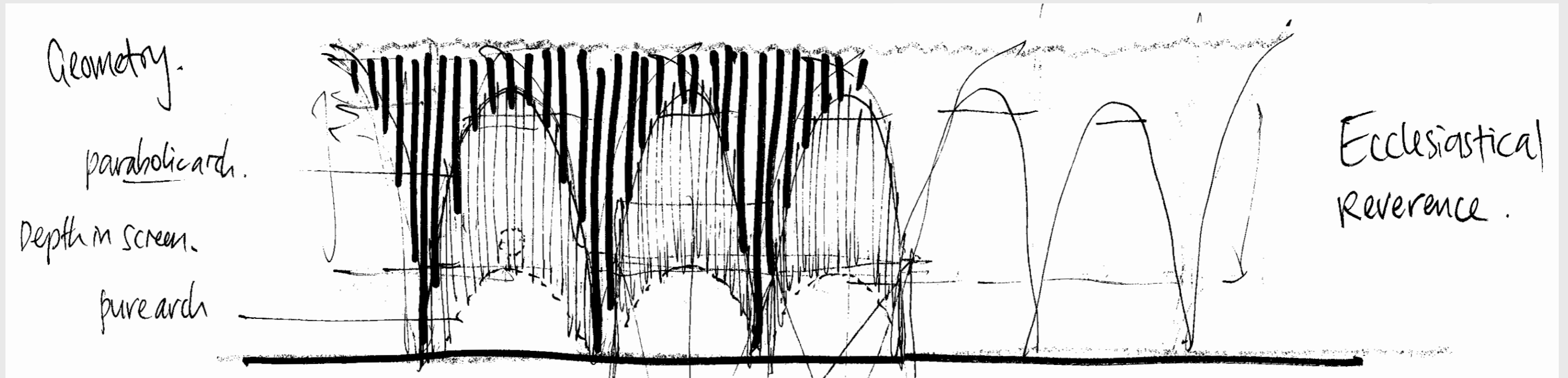
In an education ecosystem, SHAC seek to explore opportunities to express the architecture so that educators and students can benefit from seeing and understanding the elements of the parts that make up the whole. These may include, columns and beams, arches and trusses, grids, symmetry and symbolism, integration of landscape, and sustainable energy systems.

The physical environment has a powerful influence on learning itself and should inspire curiosity and creativity, allow for ease of investigation, require self-management and invite self-direction. The environment can act as the 'third teacher' and be owned by all learners rather than seen as the teacher's domain.

One fundamental element of the Cloister and expressed in our facade is the Arch. It is one aspect of the building with mathematical, historical, engineering and aesthetic values which can all be explored through deeper investigation.

DR3.13 Design Process

Geometric Exploration



DR3.14 Design Process

Exterior Material Palette

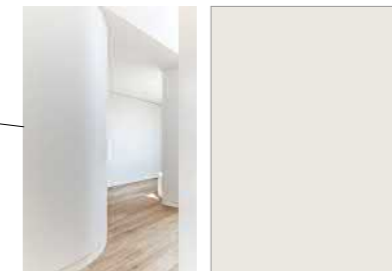


Tensile Membrane Roof
The tensile membrane roof was chosen as it provides shade & weather protection, while admitting light, & being lightweight & able to be shaped into dramatic forms which compliment the arches of the facade battens.



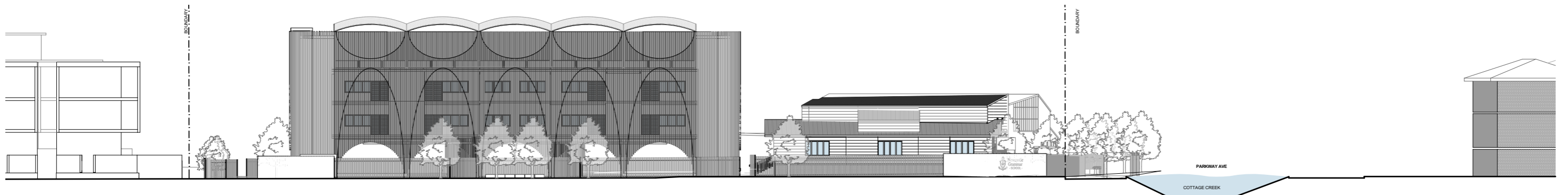
Facade Battens
The choice of light colours reflects the colour of the sand of the nearby beaches & emphasises the light & airy quality of the battens while also reducing heat stress on the building.

Specified Colour: Interpon Harvest, Interpon Domain



Behind the Battens
Lighter hues were selected to emphasise the play of shadow & light of the battens & recessed/solid components of the facades.

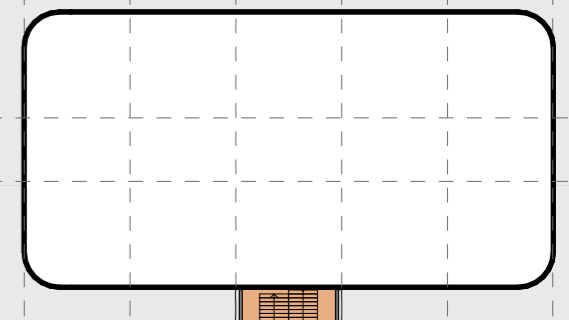
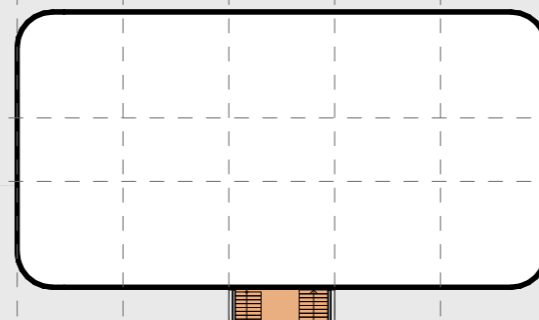
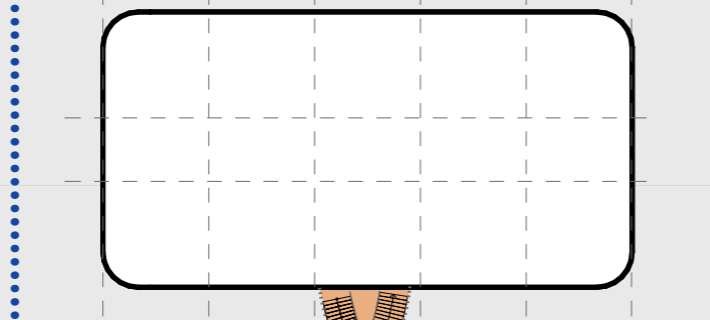
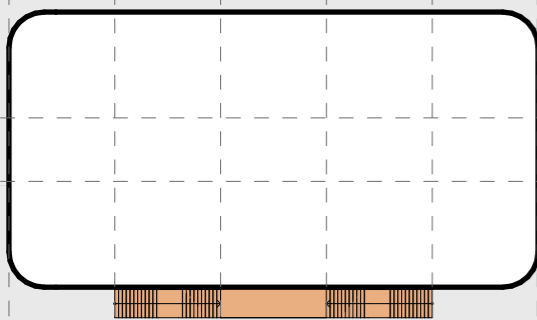
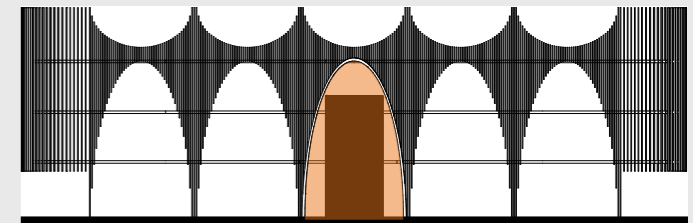
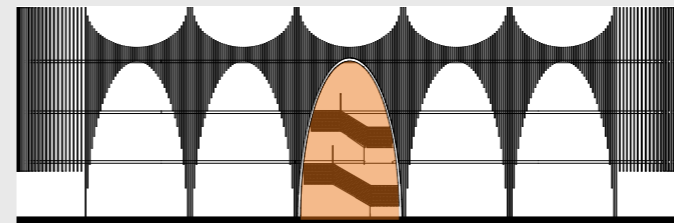
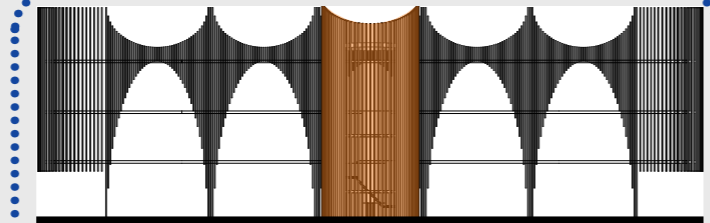
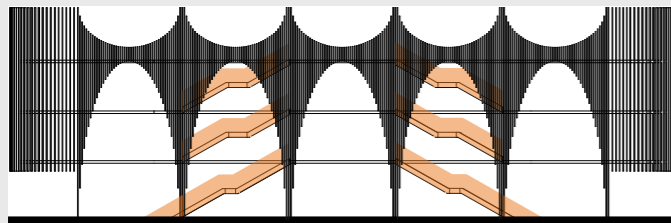
Specified Colour: Dulux Natural White



SHAC

DR3.15 Design Process

Eastern Feature Stair



4293

RevF 18.03.22



Newcastle
Grammar
— SCHOOL —

SHAC

DR3.16 Design Process

Sustainability

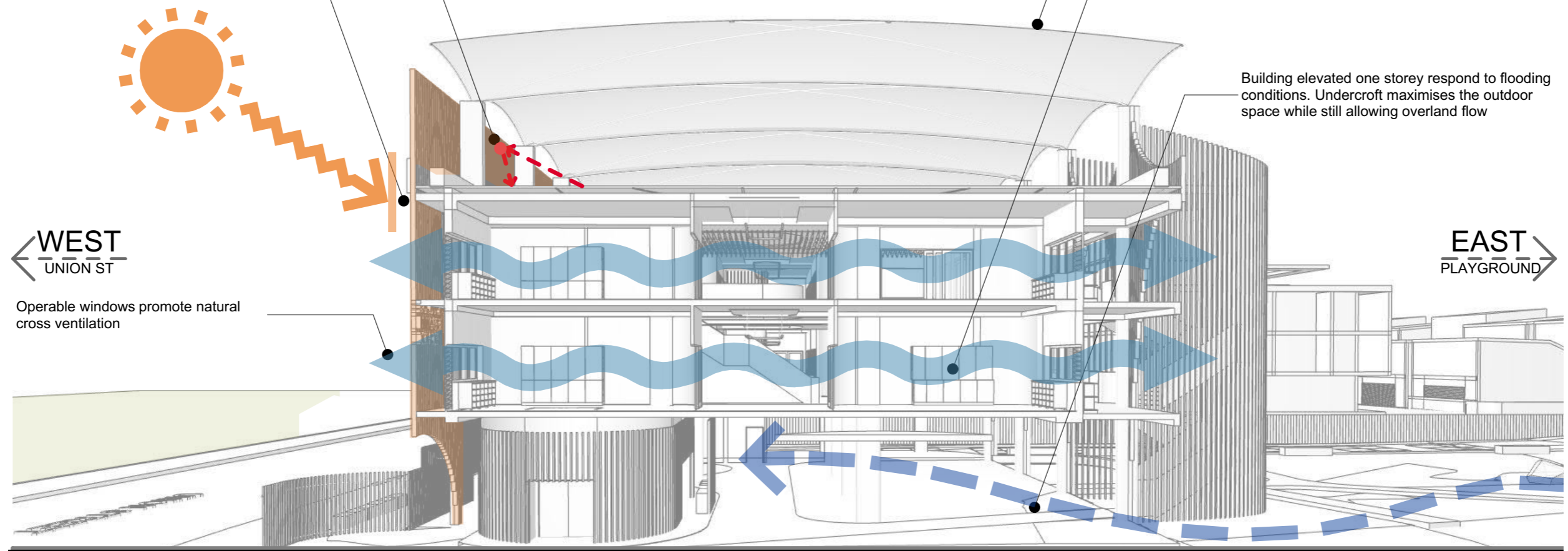
Vertical battens also act as a barrier for the rooftop play area, preventing balls from falling on the street below

Sunshading to protect from the harsh western sun is integrated & celebrated in the architectural expression as the main design feature, vertical battens

Translucent shade allows for water collection. Optimises the natural daylight & provides weather protection. Maximising the usability of the rooftop play area

Classrooms located on the perimeter of the building to maximise natural daylighting

Building elevated one storey respond to flooding conditions. Undercroft maximises the outdoor space while still allowing overland flow



Drawing and design © SHAC Pty Ltd. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4200\4293 NGS park Campus - Stage 1\515 Sketch Design\4293.515.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.rvt date: 18/3/22 time: 4:56 pm

4293

RevE 14.10.21



Newcastle
Grammar
— SCHOOL —

SHAC

DR3.17 Design Process

Connecting with Country

Indigenous Focus Group

The project team including educators from the School have & will continue to actively consult with local Indigenous knowledge holders that have registered their interest in the project.

These Indigenous representatives are Awabakal, Wonnarua, Dunghutti & Gomeri descendants.

Through the initial workshop it was expressed that it is vital that the architectural & landscape design includes:

An Exploration of the History of the Area, including:

- Its pre-colonial history as a swamp land the important food & resources it would have provided the Awabakal people
- Display, depiction & explanation of the traditional tools & resources the land would have provided the Awabakal people
- Age appropriate explanation of the dark Aboriginal history from the advent of European settlement
- Acknowledgement of local Indigenous leaders such as Uncle Bill Smith & Uncle Ron Gordon
- Acknowledgement & exploration of the diversity of the Indigenous population of Newcastle

It was noted that the historical research should include the Indigenous perspective & not only rely on coloniser's records.

Archaeological Interpretation

- Interpretation of the cultural importance of the area

Plants Native to the Specific Site

- An Indigenous knowledge holder has provided a native plant list to be incorporated into the landscape design

Awabakal Language

- It was noted language is deeply connected to culture & should not used without being paired with cultural elements to provide further interpretation

Design Opportunities to Connect with Country



JOHN MAWURNDJUL



SORETTA FIELDING

STORYTELLING THROUGH ART

It was suggested that a mural depicting a timeline of the pre & post-colonial history of the site could be incorporated on the ceiling of the undercroft.



LUCY SIMPSON



TOTEM & MOTIFS

Landscape & architectural elements that illustrate the layered natural of the site & explores the significance of the land upon which the site sits & resources it would have provided.



NATIVE PLANTING

The current landscape design includes a rooftop bushtucker garden, as well as native plants throughout the site. It is intended that plants that are a source of food or resources will be complimented by informative signage that illustrates their value. These signs will also include Awabakal language.



INFORMATIVE SIGNAGE

Explanatory signage will accompany these design elements. It is intended that the signage will also incorporate Awabakal language.

Furthermore, the heritage consultant suggested that the information be delivered through a fictional Awabakal child narrator to make the information more engaging & relatable.

Connecting with Country - Awabakal

AWABAKAL TOTEM - WEDGE TAIL EAGLE



The wedge-tailed eagle (eaglehawk) is a high order totem and is the overall totem for the Awabakal people. The Awabakal word for the wedge-tailed eagle is *Biraban* (also Birabaan) meaning 'the bird who cries 'bira', referring to the cry that a wedge-tailed eagle makes.

For the Awabakal people, the wedge-tailed eagle is a symbol of Kon (also Koin); a significant celestial being who created the first people. Kon lives in the bush and looks like an Aboriginal man, but in flight resembles a wedge-tailed eagle. He is also connected to Awabakal ceremony, including men's business.

The eagle is also connected to sacred sites containing circles of stones on the crest of hills and mountains. It is believed that the wedge-tailed eagle placed them there. The wedge-tailed eagle watches over the Awabakal people and provides a link between the natural and spiritual worlds.

BIRABAN 'JOHN MCGILL'



We-pong, later known as Biraban was an Aboriginal man of the Lake Macquarie region, who was born around 1800. He was taken to Sydney as a boy to work as a servant to an officer in the military barracks. During his time in Sydney, Biraban learned English and was given the name John McGill by the settlers. In 1821 he was taken to Port Macquarie with Commandant Francis Allman to help establish the convict settlement. While at Port Macquarie, Biraban was called upon to assist in tracking runaway convicts. After returning to Lake Macquarie, he became known as Biraban. This name, means 'eaglehawk' (wedge-tailed eagle). The wedge-tailed eagle is an important totem of the Awabakal people, and to be granted this name signified he was an important member and leader of his community.

From 1825 Biraban worked with missionary Lancelot Threlkeld in Lake Macquarie (traditionally known as *Awaba*). Biraban was an excellent teacher and translator. Through his knowledge of English and his traditional language, Biraban taught Threlkeld the Awabakal language. Biraban's contributions as an intermediary between Aboriginal and non-Aboriginal people were recognised by Governor Darling who gifted Biraban with a breast plate. Breast plates such as this were often given to local Aboriginal leaders to recognise them as leaders of their groups.

Biraban's skills as a leader, teacher, scholar, and interpreter continue to inspire people today.

IMAGE: BEERABAHN OR MACGILL, CHIEF OF BARTABAH OR LAKE MACQUARIE c 1830, STATE LIBRARY OF NSW

BURIGON



Burigon was an Awabakal man and elder who lived in the Newcastle Region and is documented as having close connections with the penal settlement of Newcastle (*Muloobinba*). In particular, he is known to have had a friendly relationship with Commandant James Wallis. They hunted and fished together, and Wallis spoke of the kindness that Burigon had showed him. Burigon is also recorded as leading a corroboree with 40 other Aboriginal people to entertain Governor Macquarie during a visit at the request of Wallis. Wallis also painted many scenes of Awabakal life and Burigon is known to have been portrayed in some of these paintings.

Burigon, alongside other people from his group, including Biraban, are recorded as capturing absconding convicts on the outskirts of the settlement and bringing them back to the soldiers. Unfortunately, Burigon was attacked by a convict named Kirby while bringing him back to the Newcastle settlement. A member of Burigon's group then struck Kirby down with a waddy. The attack occurred just behind Christ Church which was then the outskirts of town. Burigon was attended to by the surgeon but eventually died from the injury (1820). Kirby was sent to Sydney for trial and found guilty for the murder of Burigon. It was the first time a British person had been executed for murder of an Aboriginal person.

These comments, paintings and stories, from Wallis speak to the importance of Burigon and his role in his community as a leader and mediator.

IMAGE: BURIGON 1820, NEWCASTLE ART GALLERY COLLECTION

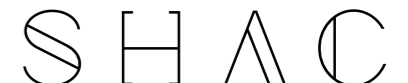
Jackey (*Kah-ling-te-ah*) & Molly Morgan (*Mah-rah-kah*)



Jackey was a significant Awabakal elder in the 1800s. Missionary Threlkeld also referred to the Awabakal people as 'old Jackey's tribe'. Black Jacks Point in the Green Point Reserve is named after Jackey.

Molly Morgan was part of Jacky's tribe and appears in Threlkeld's records in 1828 as well as her daughter Sally M'gee (*Kur-mahng*). Molly Morgan also appears in Jonathan Warner's records in 1833 and is listed now with two daughters, Sally M'gee and Charlotte (Jonathan Warner resided in the present-day Warner's Bay area and the locality later took his name). Sally M'gee was tragically killed in 1835 by a convict and was buried by her people on a sandy flat on Platts farm close to where Mayfield is located today. Molly also died tragically from a gunshot wound and is buried in the Swansea area. Molly Morgan (*Mah-rah-kah*) is an important ancestor for present-day Awabakal descendants as a direct link to the region. A park located in Charlestown, bears her name, paying tribute to the lives of Mahrahkah, her descendants and their Traditional Lands.

IMAGE: ABORIGINAL WOMAN & CHILDREN WALKING BY A BILLABONG, 2884, STATE LIBRARY OF NSW



DR3.20 Design Process

Biophilic Design

Biophilic Design Interpretation

- Providing **connection between interior and exterior** play spaces through an open ground floor zone
- **Integration of landscape** into and part of the building design
- Manipulating **shadow, light and form** through the parabolic screening to the building exterior
- Utilising **organic form** in the screening of the exterior
- **Enhancing the existing landscape features** of the site with complimentary planting and trees
- Utilising **native species** in Landscape design
- Encourage students to **play, engage, discover and explore** the school as a **bountiful landscape**
- Utilising large deck spaces to connect to external space and **optimise protection, light and ventilation.**

ENVIRONMENTAL FEATURES



QUALITIES

- Colour
- Water
- Air
- Sunlight
- Materials
- Views & Vistas
- Geology
- Landscape
- Local Habitat
- Local Ecosystem

PLACE - BASED RELATIONSHIP



QUALITIES

- Cultural identity
- Historic qualities
- Indigenous significance
- Orientation
- Key site features
- Local ecologies
- Spirit of place

NATURAL PATTERNS AND PROCESSES



QUALITIES

- Sensory experience
- Ageing & change
- Growth & decay
- Focal points direct site
- Transitional spaces to the outside
- Contrasting textures & materials

NATURAL SHAPES AND FORMS



QUALITIES

- Light manipulation
- Reflection
- Shadow
- Spaciousness
- Shape & form
- Harmony
- Gradual vs direct transitions

NATURE IN SPACE



QUALITIES

- Motifs (repeated patterns)
- Form in nature
- Site response
- Integration
- Seamlessness
- Subtle features
- Interior connection to exterior space

EVOLVED HUMAN - NATURE RELATIONSHIP



QUALITIES

- Prospect & refuge
- Order & complexity
- Protection
- Attachment
- Exploration
- Discovery
- Connection to place



Design
Quality



Newcastle
Grammar
— SCHOOL —

S H A C

DR4.01 Principles of Quality Design for Schools

Better Placed

The following section lists the Education SEPP Design Quality Principles to be used when designing new schools and school building upgrades. These principles are a set of values that enable a common understanding between school developers, design teams, school staff, students and the community when designing new school buildings or upgrades.

BETTER FIT CONTEXT, BUILT FORM & LANDSCAPE

Schools should be designed to respond to and enhance the positive qualities of their setting, landscape and heritage, including Aboriginal cultural heritage

The design and spatial organisation of buildings and the spaces between them should be informed by site conditions such as topography, orientation and climate

Landscape should be integrated into the design of school developments to enhance on-site amenity, contribute to the streetscape and mitigate negative impacts on neighbouring sites

School buildings and their grounds on land that is identified in or under a local environmental plan as a scenic protection area should be designed to recognise and protect the special visual qualities and natural environment of the area, and located and designed to minimise the development's visual impact on those qualities and that natural environment.

BETTER PERFORMANCE SUSTAINABLE, EFFICIENT & DURABLE

Good design combines positive environmental, social and economic outcomes. Schools and school buildings should be designed to minimise the consumption of energy, water and natural resources and reduce waste and encourage recycling

Schools should be designed to be durable, resilient and adaptable, enabling them to evolve over time to meet future requirements.

BETTER FOR COMMUNITY ACCESSIBLE & INCLUSIVE

School buildings and their grounds should provide good wayfinding and be welcoming, accessible and inclusive to people with differing needs and capabilities (Note: Wayfinding refers to information systems that guide people through a physical environment and enhance their understanding and experience of the space)

Schools should actively seek opportunities for their facilities to be shared with the community and cater for activities outside of school hours.

BETTER FOR PEOPLE HEALTH & SAFETY

Good school development optimises health, safety and security within its boundaries and the surrounding public domain, and balances this with the need to create a welcoming and accessible environment.

BETTER WORKING AMENITY

Schools should provide pleasant and engaging spaces that are accessible for a wide range of educational, informal and community activities, while also considering the amenity of adjacent development and the local neighbourhood

Schools located near busy roads or near rail corridors should incorporate appropriate noise mitigation measures to ensure a high level of amenity for occupants

Schools should include appropriate, efficient, stage and age appropriate indoor and outdoor learning and play spaces, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage and service areas.

BETTER VALUE WHOLE OF LIFE, FLEXIBLE & ADAPTIVE

School design should consider future needs and take a whole-of-life-cycle approach underpinned by site wide strategic and spatial planning

Good design for schools should deliver high environmental performance, ease of adaptation and maximise multi-use facilities.

BETTER LOOK & FEEL AESTHETICS

School buildings and their landscape setting should be aesthetically pleasing by achieving a built form that has good proportions and a balanced composition of elements

Schools should respond to positive elements from the site and surrounding neighbourhood and have a positive impact on the quality and character of a neighbourhood

The built form should respond to the existing or desired future context, particularly, positive elements from the site and surrounding neighbourhood, and have a positive impact on the quality and sense of identity of the neighbourhood.

DR4.02 Design Considerations

Design Response

BETTER FIT CONTEXT, BUILT FORM & LANDSCAPE

Respect and respond to its physical context, neighbourhood character, streetscape quality and heritage

Consider interpretation of Aboriginal cultural heritage within the design of buildings and open spaces in consultation with local Aboriginal community

Respond to its natural environment including scenic value, local landscape setting and orientation neighbouring properties

Retain existing built form and vegetation where significant

Include tree planting and other planting that enhances opportunities for play and learning

Ensure landscaping improves the amenity within school grounds and for uses adjacent to the school

Be informed by a current Conservation Management Plan (CMP) and consider local heritage items both on the school site and in the local neighbourhood

Take advantage of its context by optimising access to nearby transport, public facilities and local centres

Consider height and scale of school development in relationship to neighbouring properties

DESIGN RESPONSE

The proposed buildings are located on the Union and Corlette street frontages and continue the urban street pattern. Although disparate from the neighbouring multi-residential the proposed design of the Union Street building will enhance the quality of the streetscape.

The project team, including representatives from the School, have and will continue to actively consult with local Indigenous parties that have registered their interest in the project.

The location of the Stage 1 building is at the low-point of the flood prone site. Elevating the building by one full storey addresses the flooding issues and maintains the visual connection from the playground to the significant park across the street.

The use of vertical fins acts as effective sunshading from the harsh western sun while maintaining the views to the campus' namesake, the park.

The majority of the existing built form is not fit for purpose, at the end of their life, or obstructing future development of the campus. The two significant buildings are to be retained. The vegetation on site is relatively young and not significant.

This is address in the landscape design by Gallagher Studios.

This is address in the landscape design by Gallagher Studios.

The site is located between two local heritage conservation areas Cooks Hill and Hamilton South. However, the existing site and its immediate neighbours do not reflect the character of the local heritage areas having been developed within the last 50 years.

The proposed development will maintain its existing connection to nearby transport, public facilities, & local centres, with its 3 main boundaries. By reducing offsite reliance to kiss n' drop, the use of external roadways & paths is enhanced.

The scale of the buildings respects the height of the existing 4 and 3 storey buildings neighbouring the site.

REFERENCE

DR3.09 Built Form
2.26 Elevations - Site

DR 3.17 & 3.18
Connecting with Country

DR3.09 Built Form
DR3.16 Sustainability

Landscape Package

Landscape Package

DR2.09 Surrounding
Heritage Conservation
Areas

DR3.09 Built Form
DR3.16 Sustainability

BETTER PERFORMANCE SUSTAINABLE, EFFICIENT & DURABLE

Be responsive to local climate including sun, wind and aspect

Select materials and approaches to detailing that are robust and durable

Integrate landscape, planting and Water Sensitive Urban Design (WSUD) principles to enhance amenity and building performance

Include deep soil zones for ground water recharge and planting

Minimise reliance on mechanical systems

Include initiatives to reduce waste, embodied energy and emissions, through passive design principles and the use of advanced energy production systems where possible

Maximise opportunities for safe walking, cycling and public transport access to and from the school

DESIGN RESPONSE

Responding to the western orientation has driven the development of the Union Street facade and overall architectural expression.

Material selection will ensure durability, this will be addressed further during design development & documentation.

The landscape design includes extensive planting to provide shade to the play spaces & enhance amenity.

This is address in the landscape design by Gallagher Studios.

The teaching spaces are located on the perimeter of the building maximising natural daylighting. Furthermore each classroom's fenestration includes operable louvres allowing for natural ventilation.

See above response.

Strategies to reduce waste & minimise the embodied energy in the materials will be further explored during design development & documentation.

For further information refer to the ESD report.

The location of the main entrance along Parkway Avenue, away from the intersection is in close proximity to the bus stops & ensures pedestrian/bicyclist safety of students.

Storage onsite for bikes & scooters has been included in a secure, but still visible area of the site.

REFERENCE

DR3.11 Facade
Exploration

Landscape Package

Landscape Package

DR3.16 Sustainability
2.21-2.24 Floor Plans

DR3.16 Sustainability
2.21-2.24 Floor Plan
ESD Report

2.02 Site Plan - Proposed

DR4.03 Design Considerations

Design Response



Establish security requirements early to ensure any required secure lines can be designed and integrated with built form

Balance security with accessibility and inclusiveness by minimising the use of fencing particularly along street frontages

Engage students, educators and the community in development of the vision and design brief for the school

Allow for passive and dynamic play of different age groups

Provide school frontages and entrances that are visible, engaging and welcoming

Encourage access for members of the community to shared facilities after hours

Ensure clear and logical wayfinding across the school site and between buildings for all users including after hours community users

Ensure accessibility for all users of the site

DESIGN RESPONSE

The School has requested that the site only have one pedestrian entry, along Parkway Avenue. The refurbishment of Block B establishes a new administration reception that has a direct view of the entry & acts as the central point for site access.

Due to the surrounding context and tight site a boundary fence along the street frontages is required, however the proposed strategy includes niches in the fencing to provide public seating and planting to soften the barrier.

Workshops with the School's educators have been integral to the design process. The design team has also held consultation sessions with the community and local Indigenous knowledgeholders. Public information sessions were also completed throughout masterplan & concept design development.

The landscape design includes a variety of outdoor spaces that account for active play on the hardstand areas and open turf spaces, as well as passive play in the Discovery Grove and in the undercroft.

The boundary fence is softened by the inclusion of indents that provide public seating and planting. The pedestrian entrance on Parkway Avenue includes a public plaza that provides a sheltered place to wait for buses, and invites parents and visitors to dwell.

The existing performing arts centre has a dedicated entry off Parkway Avenue that can provide access after hours without allowing access to the rest of the site.

All the building and paths on site lead to the central play area, making wayfinding clear.

Stage 01 includes the installation of a new lift to Block B to make it accessible, as well as a lift in the Stage 01 building. All the teaching spaces in the Stage 01 building have both sliding & hinged doors to ensure universal accessibility.

The relatively flat site enables the play spaces to be fully accessible.

Stage 02 works addresses the remaining access requirements for the Corlette Street & Block B building.

REFERENCE

DR3.06 CPTED
2.11 Block B Ground Floor Plan

2.02 Site Plan - Proposed
Landscape Package

DR3.17-18 Connecting with Country

Landscape Package

2.02 Site Plan - Proposed

2.02 Site Plan - Proposed

DR3.03 Masterplan Design Diagrams
2.02 Site Plan - Proposed

2.11 Block B Ground Floor Plan
2.21 Ground Floor Plan



Locate buildings and design facades that optimise fresh air intake and access to daylight

Prioritise pedestrians and avoid conflicts between vehicles and people

Provide covered areas for protection from sun and rain

Support safe walking and cycling to and from school through connections to local bike and foot paths and the provision of bike parking and end of journey facilities

Support passive surveillance, including through the location of toilets and areas for communal use outside of school hours

Incorporate Crime Prevention Through Environmental Design (CPTED) principles

Clearly define access arrangements for after school hours

Consider location and number of toilet facilities to allow safe use by different age groups and genders

DESIGN RESPONSE

The classrooms are located on the perimeter of the building maximising natural daylighting. Furthermore, each classroom's fenestration includes operable louvres allowing for natural ventilation.

Pedestrians & bicyclists will enter on Parkway Avenue, while the vehicular entry is located off Corlette Street. The gates to the driveway will be closed outside of drop-off & pick-up times to maximise the safety of the students & provide additional play space. Bicycle parking is provided adjacent to the Parkway entry to prevent them from being taken onto the site.

The covered decks, undercroft & shaded rooftop play space provides all weather use, maximising the functionality.

There are existing bike lanes on Union Street & Parkway Avenue. Secure bike parking is provided adjacent to the main Parkway Avenue entrance.

The proposed administration desk in Block B has a view of Parkway Avenue & the bicycle parking. The proposed staff room has a view of the playground.

The toilets in the Stage 1 building are visible from the surrounding teaching spaces.

CPTED principles have been incorporated.

The access to the school site is managed directly by NGS, but the public access buildings such as the library & hall are located on the site's boundaries.

Each storey of the proposed building includes student & staff amenities divided into two banks. This ensures that the toilets are being used by students of the same age group, as well as having direct access from both internal teaching spaces & external playgrounds.

REFERENCE

DR3.07 Union Street Planning Diagrams
DR3.16 Sustainability

2.02 Site Plan - Proposed

2.21 - 24 Floor Plans

2.02 Site Plan - Proposed

2.02 Site Plan - Proposed
2.21 - 24 Floor Plans

DR3.06 CPTED

2.21 - 24 Floor Plans

DR4.04 Design Considerations

Design Response



Be integrated into, and maximise the use of the natural environment for learning and play

Ensure access to sunlight, natural ventilation and visual outlook wherever possible.

Facilitate flexible learning by providing access to technology

Seek opportunities for buildings and outdoor spaces to be learning tools in themselves

Provide a diversity of indoor and outdoor spaces to facilitate informal and formal uses

Provide buffer planting in setbacks where appropriate to reduce the impact of new development

High rise schools should consider and seek to minimise the negative impacts of overshadowing and wind on surrounding built form and open space, and on school grounds.

Ensure outdoor play ground space is sufficient to accommodate the student population including future growth.

Locate buildings away from noisy roads and other noise sources to ensure acoustic levels within teaching and learning spaces are acceptable

Where teaching and learning spaces must be located alongside noise sources, arrange built form to ensure dual aspect that will allow for natural ventilation away from the noise source. In extreme cases, mechanical systems and other technologies may be necessary to ensure acoustic levels can be maintained along with cross flow ventilation and natural light.

DESIGN RESPONSE

The landscape design proposes a variety of outdoor learning spaces.

The facade battens are perpendicular to the facade to maintain views to the park opposite. The teaching spaces are located on the perimeter of the building to maximise the natural daylighting & ventilation.

As part of the Inquiry Based Learning pedagogy, a high level of technology access is provided to all interior & exterior functional areas.

The geometry of the facade screen can be used as a learning tool. The inclusion of native planting provides an opportunity to learn about bush tucker, bush medicine & how the natural environment can be used as tools.

The formal teaching spaces are complimented by the central makerspace, campfire area, outdoor decks & undercroft which can be used for formal & informal activities.

Buffer planting is provided in selected setback locations.

N/A however, proposed buildings do not significantly overshadow the site & surrounding buildings.

Although the site is constrained, the outdoor play space has been maximised by elevating the Union Street building to create an undercroft & including a rooftop play space.

The buildings have been located to the boundaries to provide an open, protected internal school space on the site. Acoustics of the buildings will be addressed as per the Acoustic Engineer's report requirements.

Noted & included in the design services approach.

REFERENCE

2.02 Site Plan - Proposed Landscape Package

DR3.07 Union Street Planning Diagrams
DR3.16 Sustainability

DR3.12 Facade Motif Landscape Package

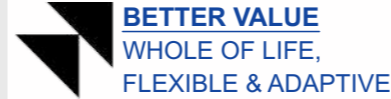
2.21-24 Floor Plans Landscape Package

2.02 Site Plan - Proposed Landscape Package

DR3.10 Site Shadow Diagrams

DR3.05 Outdoor Play Analysis

DR3.16 Sustainability Service Engineer Documents



Allow for future adaptation to accommodate demographic changes, new teaching and learning approaches and the integration of new technologies

Be based on a masterplan of the school site that includes the testing of options for future potential growth

Take a whole-of-lifecycle approach when considering cost and consider wider public benefits over time

Provide capacity for multiple uses, flexibility and change of use over time

Respond to the findings of a site appraisal including in-ground conditions, contamination, flora and fauna, flooding, drainage and erosion, noise and traffic generation

Understand the potential impacts of future local projected growth

Design learning spaces to cater for a range of learning styles and group sizes

Consider providing areas for collaboration, group learning, presentations, specialised focus labs, project space and wet areas, display areas, student breakout, teacher meetings, and reflective / quiet spaces.

DESIGN RESPONSE

The regular structural grid allows for flexibility & future adaption of the floor plate.

The masterplan accounts for potential future growth while acknowledging the constraints of the site & the School's desire to cap student numbers at a point to maintain their personalised educational & governance approach.

Sustainability Assessment has been undertaken by Marline Newcastle. The proposed design will achieve the required equivalent 4-stars.

With the use of mobile furniture, the teaching & makerspaces maximise their flexibility. Additionally, the tiered seating in the Campfire can be used for large gatherings as well as a breakout space.

Refer to flooding & geotechnical reports.

The School is aware of the future projected growth but is committed to maintaining their personalised educational approach which will result in an eventual capping of student numbers.

The flexibility of the teaching spaces provides the opportunity to cater to a range of learning styles & group sizes.

Each floor plate of the Stage 01 building includes formal teaching spaces with shared withdrawal rooms. With the use of large sliding doors the teaching spaces open directly onto the shared makerspace that is also a wet area. Therefore, these spaces can be used as individual teaching spaces or opened up to act as a seamless learning zone that facilitates a variety of learning styles.

The tiered seating in the Campfire area can be used for large group presentations as well as a quiet reflective breakout space. The space surrounding the tiered seating is to house learning resources. The covered decks provide additional breakout space.

There is also a specialist focus lab located on the second floor of the Stage 01 building & the first floor of Block B. This lab will support STEM focused learning.

There is also a teaching hub & support space on each level.

All wall surfaces between the skirting & door height are finished with a pinable material to allow for displays.

REFERENCE

DR3.16 Sustainability 2.21-24 Floor Plans

Masterplan Package

ESD Report - Marline

DR3.08 Union Street Planning Development 2.21-24 Floor Plans

Flooding & Geotechnical Reports

DR3.08 Union Street Planning Development

DR3.08 Union Street Planning Development

DR Section 1 - Bried Development

DR3.08 Union Street Planning Development

2.21-24 Floor Plans

DR4.05 Design Considerations

Design Response



- Reflect a commitment to and investment in design excellence
- Create engaging and attractive environments
- Achieve a purposeful composition of materials and elements through a rigorous design process
- Provide an engaging environment for pedestrians visually and materially along public street frontages
- Seek opportunities to enhance public facing areas with landscaping and ensure landscape and building design are integrated
- Integrate service elements with the building design
- Balance internal spatial requirements with an external mass and scale that responds to its environment
- Avoid long stretches of security fencing to public facing areas through arrangement of building edges, landscaping, gates and other openings
- Look for opportunities to include public art.

DESIGN RESPONSE

REFERENCE

| | |
|---|---|
| This commitment is illustrated with our 2 presentations to the SDRP, taking on their advice as well as the detailed design consideration of the Union Street facade. | DR4.06-8 SDRP responses 2.33-40 Perspectives |
| The coordination between the architectural, landscape architects & the School. | |
| The material palette has been carefully chosen to achieve the desired aesthetic while optimising the building's thermal performance. | DR3.14 - Exterior Material Palette |
| The perimeter fencing will incorporate coloured segments to provide visual interest along the street frontages. | 2.02 Site Plan - Proposed |
| The perimeter sandstone walls help to define the site's corners & signify the entrances. The sandstone materiality also contributes to the School's presence. | |
| Sections of the perimeter fence will be setback along the street frontages to form low level gardens & provide public seating. This will soften boundary between the school & the street. | 2.02 Site Plan - Proposed Landscape Package |
| SHAC and Gallagher Studios have worked together closely to ensure that the landscape & building design work together symbiotically. | |
| Early involvement of service engineers has enabled the service requirements to be integrated into the building design. | 2.02 Site Plan - Proposed |
| Refer to DR4.02 | DR4.02 |
| The school has requested that the site only have one pedestrian entry on Parkway Avenue. The long stretches of fence along the street frontages are broken up with a material changes & landscaped setbacks as mentioned above. | 2.02 Site Plan - Proposed Landscape Package |
| Art is to be incorporated into the undercroft space, further opportunities will be investigated through the design development process & through further consultation with Indigenous Representatives. | DR3.17-18 Connecting with Country 2.32 Sigange Plans 2.33-40 Perspectives |

Drawing and design © SHAC Pty Ltd. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4200\4203 NGS park Campus - Stage 1\515 Sketch Design\4293.515.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.ph date: 18/3/22 time: 4:56 pm

DR4.06 Design Process

Response to SDRP Feedback

| GANSW ADVICE & RECOMMENDATIONS | DESIGN RESPONSE |
|---|---|
| SDRP - First Review 07.07.21 | |
| 1 The Park Campus upgrade presents an opportunity for social cohesion and community benefit. Safety concerns should be balanced with the need to create a welcoming street presence. The proposed stage 1 and stage 2 buildings create a wall to the street. The following should be considered to improve this condition: | |
| a introducing a plaza at one or more of the entries | Noted and incorporated into the design. There is only one pedestrian entrance to the site located on Parkway Avenue. The fence at this entrance has been pulled back onto the site to create a plaza on the public footpath which includes undercover seating that provides shelter for; students waiting for buses, informal conversations between parents, visitors, and the wider community. |
| b setting the fence back from the boundary to allow for planting on both sides | Following Council and CPTED review, setting back the fence has not been endorsed and fences have been located on the boundary to avoid creating a dwell zone outside the school. |
| c exploring graphics and the fence construction to introduce colour and movement, which might signify entry locations | Noted and incorporated into the design. |
| d creating views into the courtyard and through the undercroft space | There are views from Union Street through the undercroft and to the courtyard space beyond. |
| e provide street trees | As public and school buses stop on Union Street and Parkway Avenue, it is not suitable to add street trees, however additional street trees have been added along Corlette Street. |
| 2 Reconsider the language used to describe the neighbouring social housing properties. The description of "conflicting uses" is more appropriate than "disruptive neighbours" as the school could also be considered a disruptive neighbour to the social housing residents. | Noted and adopted. |
| 3 The success of the northern kiss-and-drop driveway is essential to ensure good long-term traffic management with increasing student numbers. The school needs to be an active participant in the drop-off and pick-up management system to manage congestion, particularly along the narrow Corlette Street. Regarding the kiss-and-drop, the following should be considered: | |
| a where on-site car parking is required, explore options for including it as part of the kiss-and-drop driveway | On-site parking is not part of the Stage 1 scope. The car bays shown on the driveway are to allow for overtaking, increasing the flow of traffic during drop-off and pick-up times. |
| b explore the possibility of a wider kiss-and-drop and parking area as a hard surface court or play space during school hours | Outside of the drop-off and pick-up times the gates to the kiss n' drop will be closed and the driveway will act as a hard surface play space. |
| c remove barriers between the hard driveway and the soft landscape to enable flexibility. | There are no formal barriers between the driveway and soft landscaping, however sandstone blocks are utilised to form an informal barrier safety barrier which can also be used for seating during kiss n' drop and play times. |
| 4 Demonstrate how a positive street condition will be achieved with the introduction of the stage 2 half-sunken basement, including setbacks and landscaping. | The half in/half out carpark provides a barrier at street level, so students aren't directly connected to the street level & eastern neighbours. The half storey rise also allows for landscape level changes, slides, amphitheatres, & ramp, from the playground into the building. |

| GANSW ADVICE & RECOMMENDATIONS | DESIGN RESPONSE |
|--|--|
| 5 Provide a screen of tall shrubs or trees towards the northern boundary to support privacy and outlook. | Noted and adopted. |
| 6 Provide details on the landscape design, including outdoor education settings, food garden design, street trees, etc. | Noted and adopted. |
| 7 Provide sections and elevations which show the new buildings, existing buildings and adjoining residential properties to illustrate the proposal in context. | Completed for SDRP Second Review. |
| 8 Provide further information on how consultation with Peter Townsend from the Awabakal Land Council and other local Aboriginal engagement has informed the design to date. Develop a strategy to integrate learned stories and outcomes from Heritage Now into the design. | Heritage Now facilitated a workshop with four registered Aboriginal representative parties. The initial workshops held on the 3rd and 6th of September discussed the proposed project, site history, and proposed themes for the inclusion of Aboriginal stories, culture, and language. |
| 9 It is recommended that the design team consistently engage with Aboriginal cultural and spatial experts throughout the project life cycle. | Noted and adopted. The registered Aboriginal representative parties are interested in being involved in the detailed design of landscape and architectural elements. |
| 10 For further information, refer to the draft framework Connecting with Country on the GANSW website. | Noted. |
| 11 The vertical battened façade, with the arch and parabola motif concept, should be strengthened through design development and detailing. The following should be considered: | |
| a maintain the depth of the battens to ensure the arch and parabola motif does not appear stuck on or too thin | The batten depth will need to be resolved during design development to balance the architectural expression, cost implications, and technical and structural requirements. |
| b be honest with materials and avoid the use of timber-look aluminium products | Noted. The battens are to be an anodised finish. |
| c maintain regularity of the batten spacing on both sides of the building to ensure the sense of proportion | Noted and adopted. |
| d develop the north and south ends of the building to feel less utilitarian, which might include peeling down the battens as per the main façade | The northern and southern facades screening patterns have been further developed to continue the parabolic language of the western and eastern facades. |
| e consider orientating the battens to the north to increase the functionality of the solar shading | The spacing between the battens will provide adequate sunshading. The perpendicular orientation of the battens maintains the views across the street to National Park. |
| 12 The materials and elements behind the battens will enhance the façade. Consider using darker colours and materials to create a sense of depth and solid and transparent elements to play with openings. | Darker colours where considered however subtle, lighter hues where selected to emphasis the play of shadow and light of the battens and recessed/solid components of the facades. |
| 13 The courtyard side façade, where the bones of the building are exposed, requires further detailed development, particularly the stairs. Consider the expression of the slab edges, how to neatly frame the stairs between the columns, and test options for the stair balustrading. | Noted. An updated stair and eastern elevation was presented and the second SDRP. |

DR4.07 Design Process

Response to SDRP Feedback

| GANSW ADVICE & RECOMMENDATIONS | DESIGN RESPONSE |
|--|--|
| 14 To provide equitable access across the campus when stage 1 and stage 2 are complete, consider locating the lift on the south of the stage 1 building to reduce travel distances. Additionally, the lobby which serves the stair and this lift is currently too small. | As it is expected that a significant proportion of parents will use the kiss n' drop, the location of the lift on the northern side of the buildings is likely to reduce the travel distance during the kiss n' drop times. Furthermore, relocating the lift to the southern side of the building would not comply as it contains plant equipment and would be within 6m of the adjacent Block A. The lift lobbies have been removed. |
| 15 The bike and scooter parking requires surveillance from teachers and should be made secure from potential theft. | The bike and scooter parking is now adjacent to the main entrance on Parkway Avenue, in front of Block A. This allows the bikes and scooters to be immediately stored and not have to travel through the site. This location is also visible from the new administration counter in Block B maximising its supervision. |
| 16 Develop a materials palette for the project. | Completed. |
| 17 Provide sections and 3D views of the undercroft and roof space to demonstrate the look and feel, usability, and safety. | Completed. |
| 18 For the building to be used successfully as an educational tool for sustainability principles, the building should exhibit optimal ESD outcomes. Prioritise natural daylighting and thermal comfort modelling to test the design. Additionally, include a building management system that can automate louvres etc. and allow for user control. | The long narrow floor plate maximises natural daylighting and ventilation. The vertical battens are integrated and celebrated in the architectural expression as the main design feature while also protecting the western façade from the harsh western sun. |
| 19 Aiming for a net-zero building is highly encouraged to reach NSW's Net Zero emissions goal by 2050. Refer to 'NSW, DPIE, Net Zero Plan, Stage 1: 2020- 2030' for further information. | Noted & included in review by Marline Newcastle - NarClim & Greenstar Equivalency Review. |
| SDRP - Second Review 01.09.21 | |
| 1 The planned ongoing consultation with the Awabakal Land Council representatives is supported. Ensure the engagement informs the bush tucker garden placement, internal and external materials, the landscape journey, and the yarning circle. | As per comment to SDRP01 advice, ongoing consultation, including two information sessions have been completed prior to submitting the SSD. Consultation will continue. |
| 2 Develop the bush tucker garden and roof planting with consideration to maintenance and input from the Indigenous community consultation. The roof planting next to the sports court is likely to be better suited to decorative landscaping protected by screens, as it has the potential to be damaged by balls. | This has been addressed by the landscape design development & will be continued through future design & documentation stages. |
| 3 The street frontages require further development to ensure they are inviting and the entrances to the campus are clear. Consider the following: | |
| a Consider the architecture, entries, fencing, landscape and signage together to create a clear hierarchy and sequence of arrival. | Fence lines have been set back from the site boundary at the main school entries and allow for softening of the school edges. Landscaping including trees and native understorey species are included within the fence line. Fence treatments may include the use of colour to highlight the school entry points and incorporate the school colours as well as wayfinding signage and the school logo. This will be further investigated in future detailed design stages. |

| GANSW ADVICE & RECOMMENDATIONS | DESIGN RESPONSE |
|---|---|
| b Develop the integration of the sandstone boundary walls, so their function is not just to define the corners. For example, at the main entrance on Parkway Avenue, continue the sandstone wall up to the gate, so the sandstone is a marker of the main entry. | The sandstone walls & coloured fence are being used in conjunction with signage as the marker of focal points, in particular for the entry off Parkway Avenue. |
| c As signage pre-empts the entry location, consider reducing the size of the school logo on the proposed stage 1 building so this does not read as the main entry. Additionally, a smaller school logo on the Stage 1 building would be more sympathetic to the façade design. | The size of the school logo has been reduced on the Stage 1 building. However, it is valuable to have a significant sign on this building for branding purposes as it is opposite one of the largest public park in Newcastle. |
| d Develop the public seating along Union Street and Parkway Avenue to create a generous public realm. Test different shapes and heights for the seating nooks and sandstone walls to be more sinuous and create a less formal response. Additionally, consider the placement of the seating and indents into the landscaping, so the services and water tanks along Parkway Avenue are not exposed. | Linear sandstone seating is provided at the school entry. Seats are positioned close to bus stop and pickup points and are intended as short stay seating while waiting. The linear arrangement allows users to survey the streetscape and watch for an approaching bus or car pickup without directing views into the school. The arrangement also discourages long term use of the seating which may be of concern given incidents of antisocial behaviour that exists within the immediate area. The size, shape and height of the seating will be further investigated during future detailed design stages of the project. |
| 4 Provide variation within the tree and plant species across the site, particularly along the boundaries. Consider the following: | |
| a Provide canopy trees in between the screening shrubs along the northern boundary to create variation in species, as shown elsewhere in the landscape design. The driveway is primarily a play space and, secondly, a driveway as drop-off and pick-up is for only an hour in both the morning and afternoon. | Two species of trees have been provided along the northern boundary of the site in order to provide screening / privacy between the school and the adjacent residential development including <i>Syzygium Smithii</i> and <i>Elaeocarpus reticulatus</i> . These species have been appropriately selected due to their dense form and limited size and spread in order to provide a good level of screening without causing ongoing maintenance which is a major concern currently faced by the school. The smaller size of these tree reduces conflicts with cars and small buses that will use the internal street and also any uplift of the adjacent paving. Larger canopy trees have been provided in more appropriate locations along the southern edge of the internal street where trees have more room to grow including <i>Melaleuca species</i> and <i>Eucalyptus</i> species. These trees will provide shade to both the internal road and the internal street. |
| b Plant a variety of tree species along the eastern boundary that can be retained after constructing the Stage 2 building. | Tree planting along this frontage will consist of <i>Eucalyptus haemastoma</i> and <i>Angophora costata</i> . These tree will provide a good level of screening and canopy cover to the eastern boundary of the school and reach a height of approximately 15m tall. Their limited height will also limit there structural root zone increasing their potential for retention during the construction of the Stage 2 building. |

DR4.08 Design Process

Response to SDRP Feedback

| GANSW ADVICE & RECOMMENDATIONS | DESIGN RESPONSE |
|--|---|
| <p>c Refine the placement of the western boundary trees to reflect a relationship with the proposed stage 1 building. For example, the trees could align or deliberately misalign with the arches and parabolas.</p> | <p>Tree planting of <i>Banksia serrata</i> and <i>Banksia robur</i> are proposed along the west facing frontage of Union Street. The intent of their placement does not reflect the arrangement of the building. They have been placed to provide a consistent level of screening and canopy cover to the undercroft play space which extends out beyond the roofline of the proposed building, protecting it from harsh western sun along this frontage.</p> |
| <p>5 Explore the resolution of the external courtyard stair's roof, which could include tilting it or adjusting the height.</p> | <p>The roof is slightly sloped back to the building to aid connection to downpipes and gutters. The pitching point of the roof aligns with the slab of the rooftop playspace maintain simplicity and aid with structural detailing.</p> |
| <p>6 Consider the internal planning and functions as seen through the arches and parabolas from the eastern courtyard.</p> | <p>Futher functional specific development of the internal spaces will continue, following submission of the SSD. The use of colour, shape, texture & tone will be considered to differentiate the two levels of teaching space, as well s the separate classroom spaces beyond.</p> |
| <p>7 Regarding the interior design, consider the following:</p> | |
| <p>a Use light reflective colours for the interior ceilings. Place darker colours at lower levels.</p> | <p>The ceiling colour is white throughout the building except for a ceiling feature component above the practical activity areas.</p> |
| <p>b Develop the wet area bench to feel less commercial.</p> | <p>We believe the design of the bench is inline with a domestic feel utilising soft curves and robust materials not unfamiliar to a domestic setting.</p> |
| <p>c Incorporate displays for student work to discourage the use of Blu Tack or sticky tape on walls.</p> | <p>All available wall space from skirting to door height are pinboard, including all communal areas.</p> |
| <p>d Consider the colour and materials palette, which could include adding brighter colours to complement the sophisticated timber and natural base palette.</p> | <p>The scheme draws on biophilic principles to develop a calm environment resulting in a space which supports concentration and learning. An analogous colour range from the base green through to blues & purples in soft furnishing has been incorporated.</p> |
| <p>8 Regarding the lift and stair lobbies:</p> | |
| <p>a Continue to explore ways to move the lift to the south of the Stage 1 building to allow for equitable and more convenient access to future stages to the south and east.</p> | <p>As it is expected that a significant proportion of parents will use the kiss n' drop, the location of the lift on the northern side of the buildings is likely to reduce the travel distance during the kiss n' drop times.</p> <p>Furthermore, relocating the lift to the southern side of the building would not comply as it contains plant equipment and would be within 6m of the adjacent Block A.</p> |
| <p>b Use double swing doors for the lift and stair lobbies to allow easier and more comfortable access and circulation.</p> | <p>Noted and completed.</p> |
| <p>9 Continue to develop the sustainability initiatives within the design for educational purposes. For example, consider water collection within the landscape design as the soil is sandy.</p> | <p>Noted and will continue during design development and documentation. A 25kL rainwater tank is to be installed for rainwater reuse.</p> |

Drawing and design © SHAC Pty Ltd. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: \Volumes\Projects\4200\4293 park Campus - Stage 1\515 Sketch Design\4293.515.05 NGS Park Campus Stage 1 MASTERPLAN FILE ONLY.dwg date: 18/3/22 time: 4:56 pm