

---

Association For Learning Environments  
2023 James D. MacConnell Award

# Domremy College, Five Dock, NSW



## Project Details

**Project Name:** Domremy College - Stages 1 & 2

**Location:** Five Dock, Sydney

**Council Name:** City of Canada Bay

**Principal:** Antoinette McGahan

**Occupancy Date:** January 2021

**Grades Housed:** From Year 7 to Year 12

**Capacity (Students):** 759 students

**Gross Floor Area:** 27,986 sq. ft.

**Per Occupant (gross):** 45.87 sq. ft.

**Building Construction:** \$8,283,607 USD

## Submitting Applicant | Firm

**Project Role:** Architect

**Contact:** Terese Nguyen

**Title:** Practice Communications

**Phone:** +61 3 9699 3644



# Executive Summary

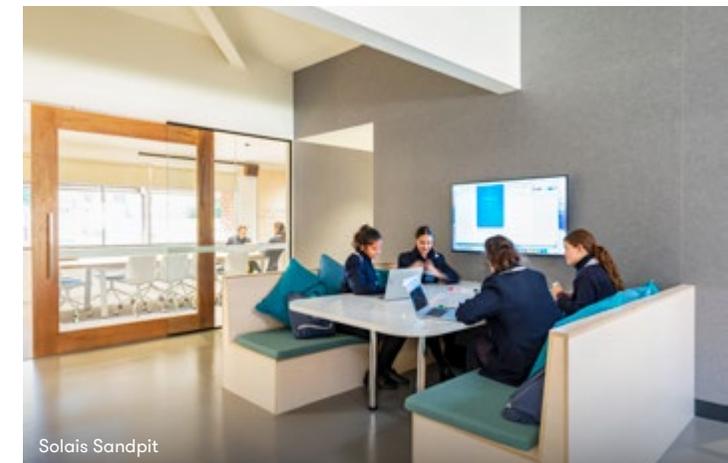
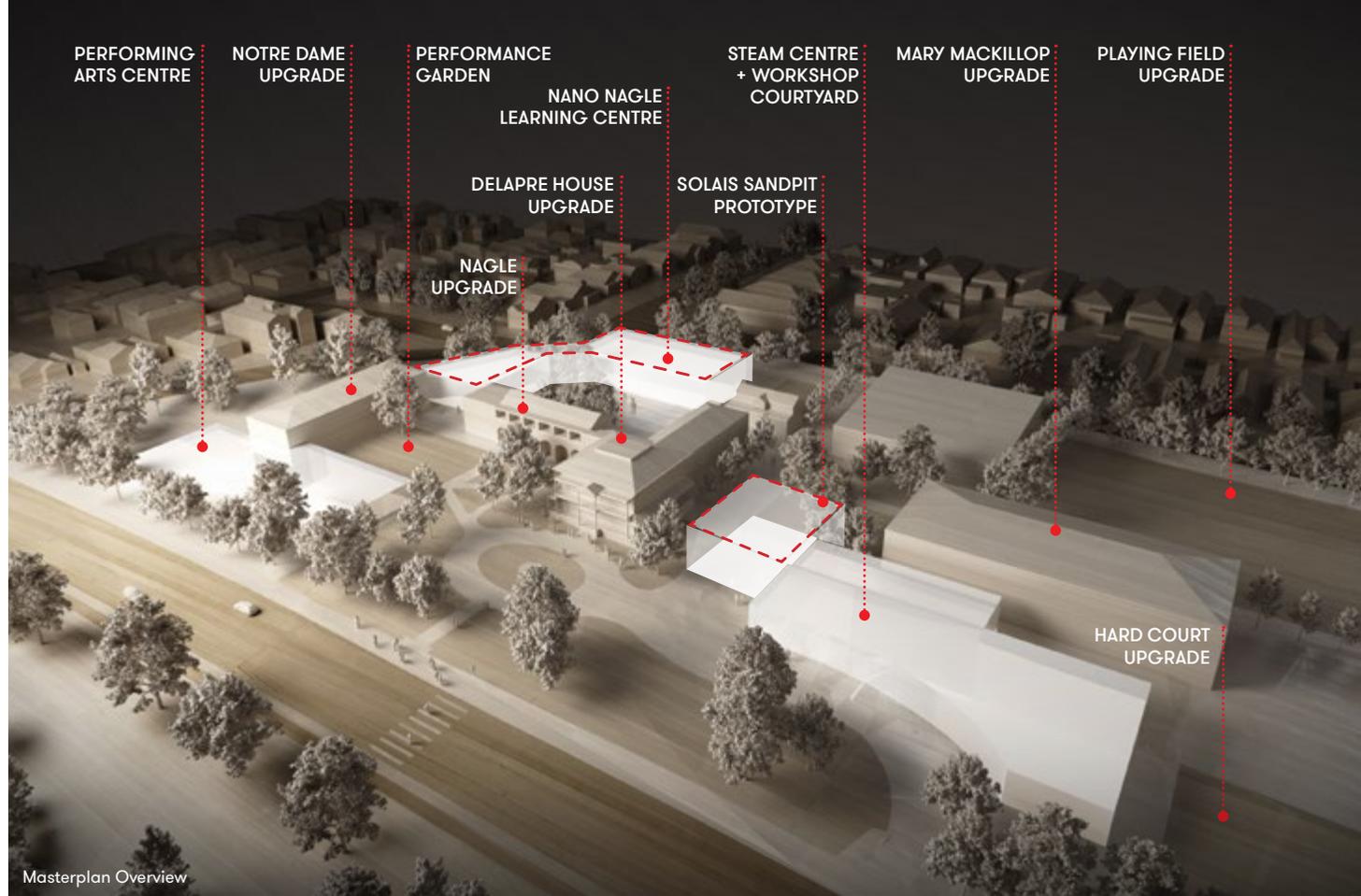
Domremy Catholic College is a Catholic systemic Girls College located in Sydney, Australia. The school has a long and rich history in education, originating from the South Presentation order, founded by Nano Nagle in Ireland in 1775. With the mission to provide education to the poor and needy around the world, the Presentation sisters established the school with 12 students in 1911 and over the past 112 years, enrolments have grown to 759.

In 2016, the school embarked on a master planning process to explore the opportunity to develop new facilities to accommodate ongoing growth and to enable a wider pedagogical repertoire to better support students to prepare for a rapidly evolving world. The vision was to upgrade the campus to deliver modern, new, and dynamic facilities and resources for students and teaching staff, and to enhance the student learning experience as they enter their next 21st-century tertiary education and working phases.

At the time, as their buildings solely comprised traditional classrooms, the original Principal astutely recognized that successfully inhabiting vastly different learning spaces in the future would require equipping and empowering staff in a process of pedagogical change.

The master planning process identified an opportunity for the school to refurbish an existing traditional classroom block into a prototype learning space, the Solais Sandpit. Through using the Sandpit, school personnel were able to experience new ways to teach and learn, helping to inform the design of a subsequent new building, the Nano Nagle Learning Centre.

The Domremy College story from the Solais Sandpit to the Nano Nagle Learning Centre is no ordinary building project. It is a story of how a design process involving research, co-design with users, prototyping and piloting has upskilled a school community with the knowledge to participate in conversations bridging pedagogy and space, and importantly, built staff capability to be able to collectively inhabit the vision which they co-created.



# Scope of Work and Budget

## SCOPE OF WORK - STAGES 1 & 2 OF THE MASTERPLAN

- Increase of students from 572 to 759 students
- Reorganisation of the campus towards paired year- level learning communities.
- Creation of new and reconfigured learning spaces that foster interdisciplinary learning.
- A new library and seniors space.
- New and reconfigured administration facilities including upgrade works to Delapre House and Stables
- New and reconfigured staff spaces
- Associated landscape works

TOTAL CONSTRUCTION COST

USD **\$8.28M**

SPACE PER STUDENT

**45.87ft<sup>2</sup>**

TOTAL PROJECT BUDGET

USD **\$10.28M**

COST PER SQUARE FOOT

USD **\$296**

# Scope of Work and Budget



# School and Community Research and /or Engagement

## The Community

Domremy College, an all-girls Year 7-12 secondary school in Sydney, Australia is one of 152 schools as part of the Sydney Catholic Schools system. Established in 1911 by the Presentation Sisters, the school has grown from originally 12 students to its current population of 759 students and 71 teachers.

While originally housed in the convent, the beautiful heritage Delapre House, and the stables, the College required new buildings as enrolments grew. A range of traditionally designed school buildings have been successively added over the years to accommodate the growth.

The school community is vibrant, dynamic and welcoming. There is a deep commitment to working with parents to develop in their girls a strength of character that enables them to embrace their future with confidence, determination, hope and compassion.

## The Stakeholders

Ongoing school and community engagement occurred through the design process from master planning through to completion of the Nano Nagle Learning Centre. Initially, a series of focus group workshops with the Project Reference Group (PRG) and other stakeholders took place to develop the brief. Workshops were developed in collaboration with Hayball and Educational Specialist, Dr Ben Cleveland. As the project progressed, the PRG reviewed design outcomes, made decisions on specific aspects of the design/brief and sought sign-offs and approvals. In tandem with the design process, teachers were engaged in a Participatory Action Research/Co-design process facilitated by Hayball Principal Fiona Young, and Monash academic Dion Tuckwell. The research methodology positioned participants (teachers) as researchers, empowering them in the process of change.

The key stakeholders included:

- Sydney Catholic Schools
- Vivienne Awad, (former) Principal
- Maryanne Sozou, Leader of Learning and Innovation
- Teaching and non-teaching staff
- Students
- Hayball

## The Challenges

There were two key challenges to overcome as part of this project. Firstly, there was a need to support the school in developing its educational model which would be foundational to any subsequent design work. This was facilitated by Dr Ben Cleveland from the Learning Environments Applied Research Network (LEaRN) at the University of Melbourne. Ben facilitated a series of school and community engagement workshops as part of the master planning phase of the project.

A vision emerged highlighting the need to enable more diverse pedagogical activities to better support students to prepare for a rapidly evolving world—one in which communication, collaboration, creativity, and critical thinking are core skills. This required new spaces to support a wider range of pedagogies, and these now form part of the school's strategic capital works plan.

Recognising that all existing learning spaces at the school comprised traditional classrooms, the second key challenge was the need to support staff and students to transition toward new pedagogical practices in innovative learning spaces. To assist the community to move towards a student-centred inquiry-based educational model, a prototype learning space was established to enable staff and students to experience a wider pedagogical repertoire. The school established a new learning vision and framework that embraced social

learning and was aligned with the new agile and collaborative spaces. To support this new framework, the College provided professional learning to staff in Problem-Based Learning and Collaborative Curriculum Design which provided a framework for student-centred learning.

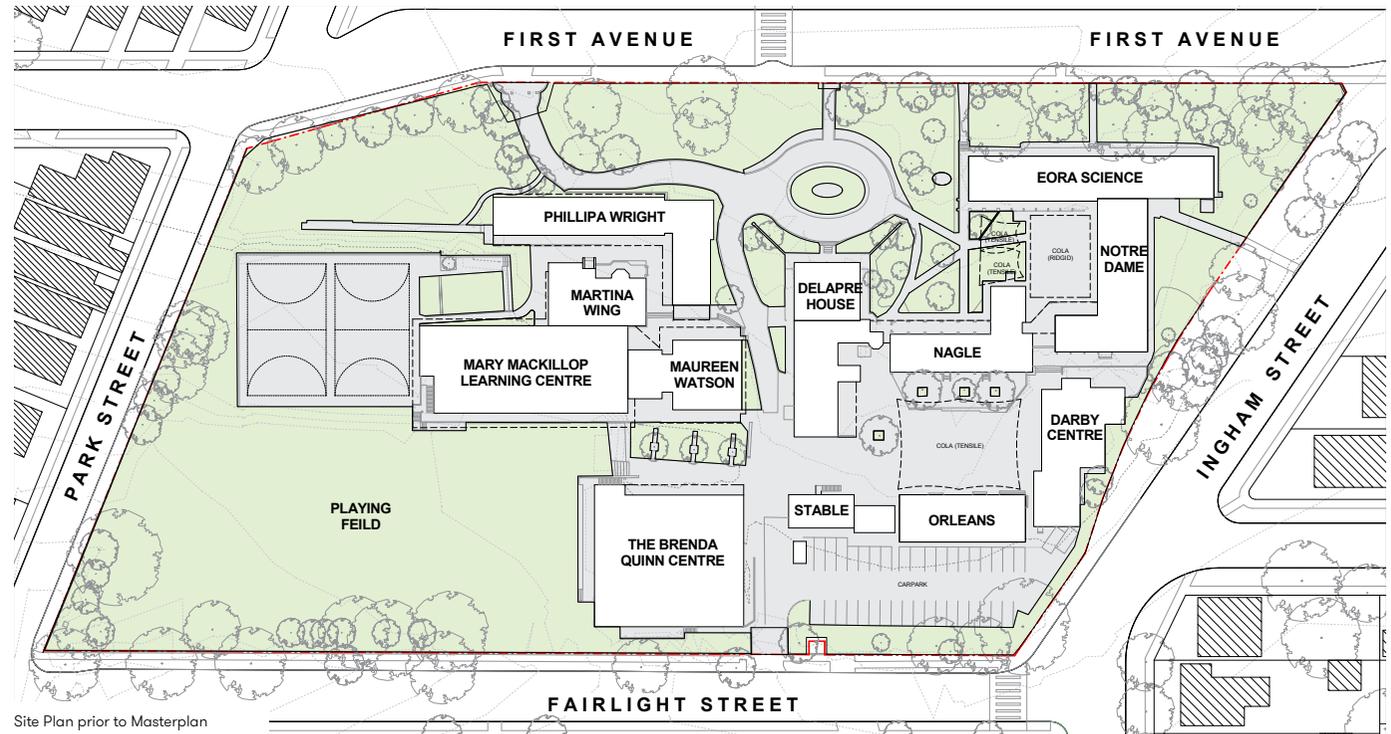


# School and Community Research and /or Engagement

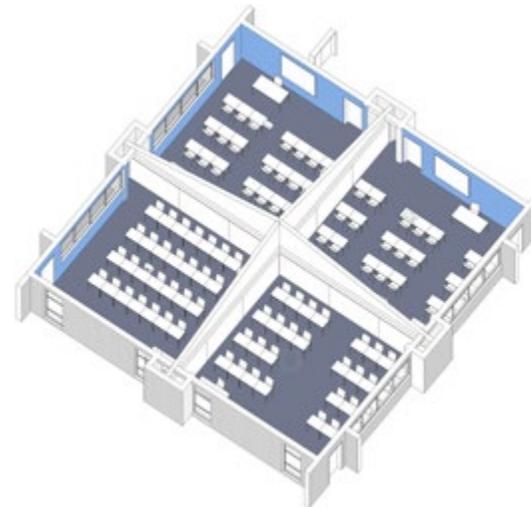
## Available Assets

The school site comprised a mixture of buildings from the historic 1876 Delapre House to the 2012 Brenda Quinn Hall. Several buildings on the site were considered under-utilised assets. One of these buildings, the Maureen Watson building, an existing 2153 square-foot (200sqm) traditional classroom block was identified as ideal to transform into a prototype learning space. Built in 1985, this simple brick building originally comprised four cellular classrooms with retractable walls separating each of the small 538 square-foot (200sqm) learning spaces. The building had limited connection to the outdoors and whilst external building fabric modifications were kept intentionally minimal, in one of the learning spaces windows were removed and replaced with new full height glass doors to improve external connectivity and natural light. Accessibility into the space was also enhanced via new ramps and external signage.

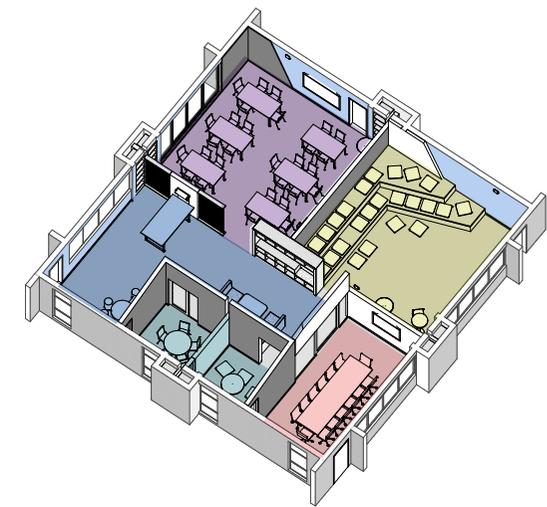
The new Nano Nagle Learning Centre is a considered response to place. Replacing underutilized assets, the building was sited adjacent a north south axis creating a new entry courtyard to the south of the campus counter to the school's primary entry point to the north. The new entrance improves accessibility into the school and the ability for out-of-hours access, enhancing opportunities for community use.



Site Plan prior to Masterplan



Existing traditional classrooms in the Maureen Watson Building



Proposed layout for the Solais Sandpit



# School and Community Research and /or Engagement

## Value of Process and Project to Community at Large

The success of the overall project results from the rigorous design and implementation process that took place. The new Nano Nagle Learning Centre has been a drawcard for the broader community, with demand on enrolments increasing since its opening.

The learning centre's success has been attributed to the process of piloting new practices within the Solais Sandpit, enabling staff to trial and test new ways of working, and build new capabilities in advance of the new building. As part of the year-long University of Melbourne interdisciplinary PhD research project, the deep, iterative, and robust structure of the Participatory Action Research (PAR)/Co-design process empowered teachers in the process of change.

Originally, the Maureen Watson building was “the most hated space in the school”. Transformed into the Solais Sandpit, teachers were encouraged to trial, test, and iterate in this space, enhancing their spatial literacy around space as a resource for teaching allowing teachers the opportunity to learn, grow and thrive. As a result, the Solais Sandpit along with the Nano Nagle Learning Centre are now the most loved spaces in the school.

Insights gained from these two spaces have given the school the impetus to further adapt their existing traditional classrooms in simple cost-effective ways, enabling more staff and students to be able to take advantage of the affordances offered through greater spatial diversity throughout the school.

Other initiatives enabled by the Solais Sandpit which have added value to the project and school are:

- Feedback generated through surveys and workshops with staff and students have allowed the architects to concurrently adjust and adapt the design of the Nano Nagle Learning Centre to align with the pedagogical shifts taking place.
- Hayball collaborated with the school to devise a Year 7 cross-disciplinary Acoustic Project combining teachers from maths and design disciplines. This was an engaging experience which exposed both staff and students to new understandings around the intersection of space, sound, and learning.
- School Leadership began holding their weekly meetings in the Solais Sandpit ‘Boardroom’ learning space. In doing so, staff were modelling collaborative behaviours to students using the Sandpit and as well, school leadership were able to observe the types of uses of the space.

Foundational to briefing and design from master planning through to building design has been the process of co-creation, ensuring that multiple voices were heard from the outset. Staff and students took part in user-group workshops providing them the opportunity to participate in the co-creation process and assist in the design of the educational settings and spaces. This has resulted in a greater sense of buy-in and ownership of both the projects and processes that took place.

The benefits of the Domremy College projects and processes continue to system level. Learnings from the prototyping and research process have shaped The Sophia Program, an integrated professional learning and research program for principals and teachers within Sydney Catholic Schools, developed in collaboration with the University of Melbourne. The program involves principals and teachers involved in new building projects to take part in professional learning aligned to the Australian Professional Standards for Teachers, action research, and community of practice mentoring to shape their teacher spatial literacy toward enabling the implementation of new learning spaces.

**“The success of the new building has been through the use of the prototype - building capability of staff who may not have used these types of spaces before”**

— Teacher



# Educational Environmental Design

## Educational Vision and Goals

The Educational Brief was developed in collaboration with Dr Ben Cleveland from The University of Melbourne. Key educational principles identified in the brief relate to connection and interaction, spatial variety, and agile and comfortable spaces. These aspects have been considered from macro to micro scale.

The school's educational vision focused on a student-centred environment with a greater range of learning settings to reflect diverse functionalities and pedagogical practices. These include team teaching, collaborative learning, large and small group work as well as direct instruction.

Domremy College staff recognised the need to shift the delivery of the Stage 4 (Year 7 and 8) Curriculum from the traditional teacher-centred approach to a more student-centred model. There was enthusiasm amongst the staff in building learning spaces that are varied and allow students greater choice to work where they feel they can learn best. Sometimes students might work independently, other times in small or larger groups harnessing the power of social learning.

The goal was to create a space that specifically supported teachers and students as they transition into ILEs. The spaces had to be agile with multiple modes of operation possible within any given area.

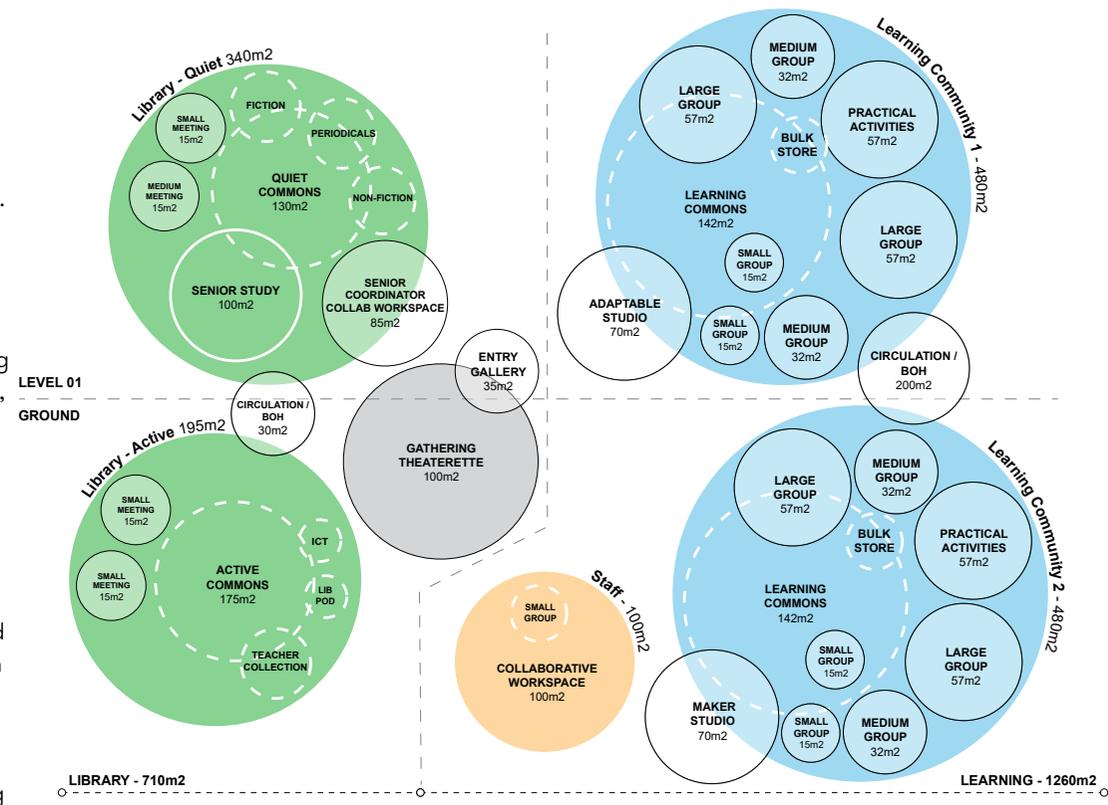
The development of the Solais Sandpit as a prototype has enabled staff and students to become familiar with new learning environment affordances. Professional learning and mentoring have supported teachers to work collaboratively to plan units of work that are authentic, interdisciplinary and take advantage of the student-centred learning spaces.

The scale of the Solais Sandpit, and range of purposeful settings enable teachers to team-teach, and students to engage in a range of different activities and group sizes from whole class to small group and independent. The tiered learning space equally enables student presentations, performance and teacher or visitor lectures or briefing sessions. Mobile furniture throughout enables learning settings to be changed dependent on the teachers' pedagogical intentions. The Solais Sandpit has encouraged staff to reflect on their individual teaching practices, facilitating student-centred learning that is collaborative, student-led, and inquiry-based.

The Nano Nagle Learning Centre forms a new heart to the school. Bridging students across stages, it accommodates a school library, a Senior Centre, co-located staff facilities, a Presentation Space accommodating two-year groups, and Learning Hub. The vision developed with the original Principal involved in the design was for a Year 7 and 8 Learning hub to provide a soft landing for new students. A new Principal was appointed in 2021 prior to the opening of the NNLC. A decision was made for the Learning

Hub to be used by a broader cross-section of the school enabling more students to experience the new facilities beyond Middle Years students.

The ability of the new spaces to be easily adapted to suit different uses than originally intended, and for a broader range of staff and students to make the transition to using these spaces is testament to the success of the design and prototyping process and initiatives implemented.



Organisational Diagram

# Educational Environment Design

## Supporting the Curriculum: Solais Sandpit

The purposeful settings within the Solais Sandpit include: a tiered presentation space for briefing, rehearsal and performance; a Boardroom for groups of up to 18 students for more focussed large group discussion; a Tutorial Room well-suited to explicit teaching or reconfigurable for hands on lessons; two smaller more contained 'incubator' spaces for withdrawal, retreat, filming or recording, and a Learning Commons supporting a range of settings from collaborative to independent learning.



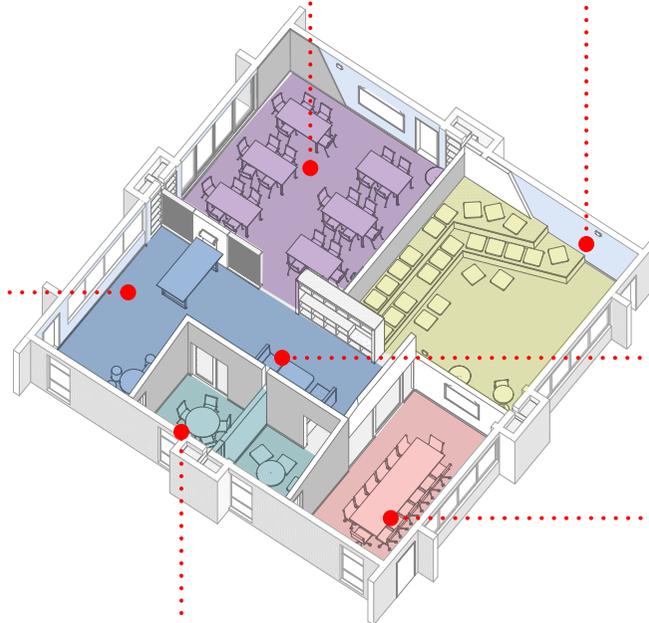
**Tutorial Room**  
Up to 30 students



**Presentation Space**  
Whole group



**Learning Commons**  
Groups of 4-6 students



**Meeting Booth**  
Up to 6 students



**Incubator Rooms**  
Groups of 4-6 students



**Boardroom**  
Up to 16 students

# Educational Environment Design

## Supporting the Curriculum: Nano Nagle Learning Centre Ground Floor

**Outdoor nooks**  
Shaded gathering spaces for social interaction.

**Central Courtyard**  
Communal plaza connecting with the adjacent arts precinct.

**Outdoor Learning Spaces**  
Purposeful covered outdoor learning spaces accessible from the contemporary cloister

**Kitchen**  
Taking influence from domestic informal learning spaces, a kitchen space was integrated as a learning hub.

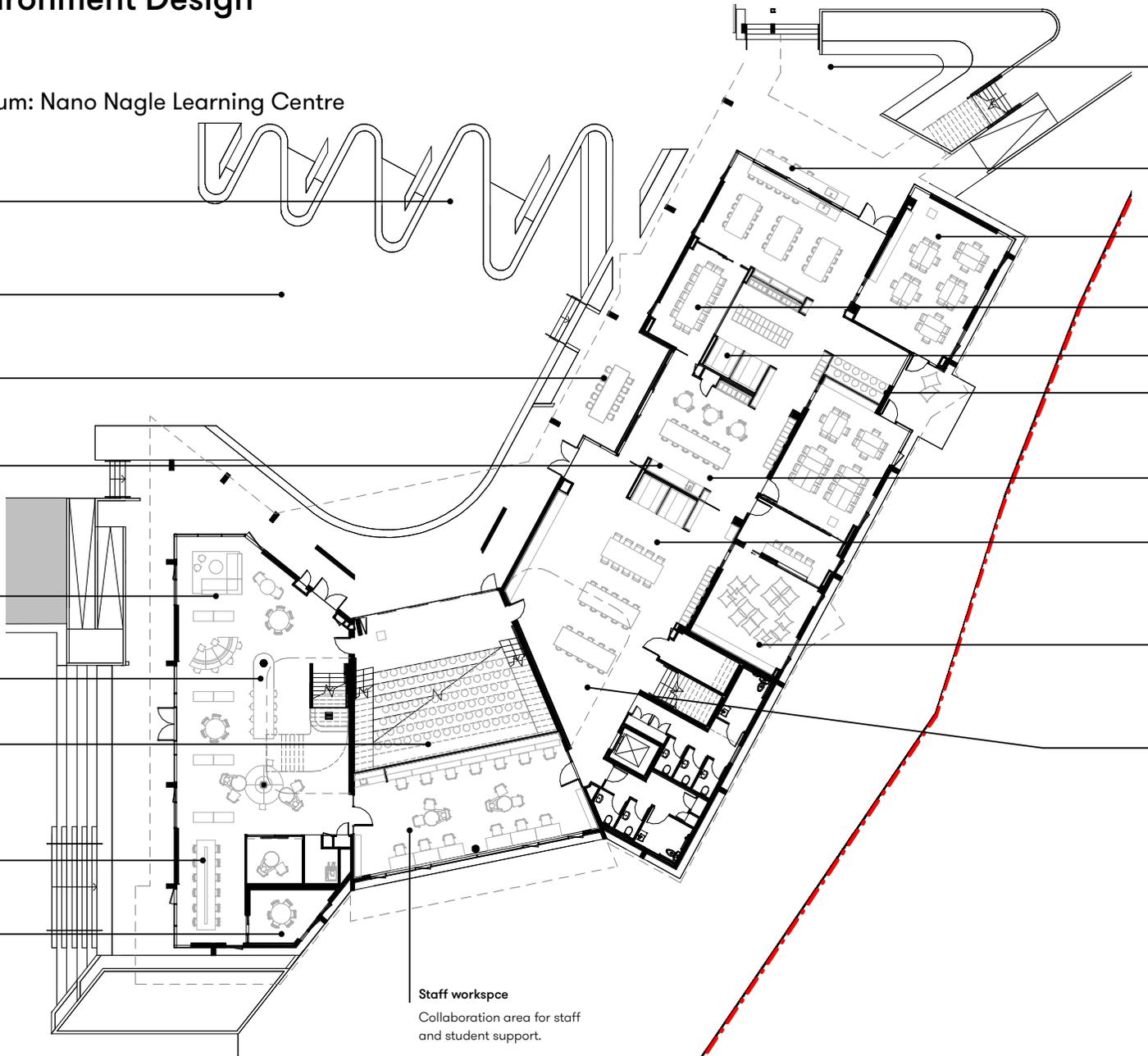
**Active Library**  
Permeable area with opportunities for social encounters, group work and collaboration.

**The Kitchen**  
A social meeting point for the whole school community.

**Theatrette**  
A multi-functional space which can be used for presentations, film screenings, performances and whole year group gatherings.

**Group spaces**  
Spaces for focused group work, meetings and video conferencing.

**Small Meeting Space**  
Meeting spaces shared between staff and students.



**Outdoor Learning**  
Allows practical learning activities to flow from inside to outside.

**Indoor outdoor wet bench for practical activities space**

**Large Group Tutorial**  
Acoustically sealed learning space for whole class groups.

**Boardroom**

**Collaboration booths**

**Small Group Gathering**  
Presentation space for small group gatherings.

**Learning Commons**  
A homebase for year groups to connect and collaborate.

**Variety of learning settings**  
Active and permeable paces for different groups sizes to enable team teaching and large and small group collaborative learning.

**Recording Studio & Control Room**  
This studio is acoustically sealed for flexible use as a learning setting for digital and creative media arts.

**Maker Space**  
A flexible space which encourages entrepreneurial activities in digital and creative media arts.

**Staff workspace**  
Collaboration area for staff and student support.

# Educational Environment Design

## Supporting the Curriculum: Nano Nagle Learning Centre Level 1

**The Small Lantern**  
Relaxation and reading nook

**Kitchen**  
Taking influence from domestic informal learning spaces, a kitchen space was integrated as a learning hub.

**Seniors Centre**  
Senior study area for independent study and self-directed learning.

**Theatrette**  
A multi-functional space which can be used for presentations, film screenings, performances and whole year group gatherings and informal circulation.

**Quiet Library**  
Focused area for quiet reading, study and relaxation.

**The Large Lantern**  
Informal relaxation zone.

**Group spaces**  
Spaces for focused group work, meetings and video conferencing.

**Theatrette Gallery**  
A break out zone for relaxation and social gatherings or as a spill over zone from the adjacent adaptable studio or the library

**Outdoor Learning**  
Allows practical learning activities to flow from inside to outside.

**Indoor outdoor wetbench to practical activities space**

**Large Group Tutorial**  
Acoustically sealed learning space for whole class groups.

**Boardroom**  
Active and permeable spaces for different groups sizes to enable team teaching and large and small group collaborative learning.

**Presentation Space**  
For small group presentations and brainstorming.

**Learning Commons**  
A homebase for year groups to connect and collaborate.

**Practical Activity Space**  
For technology based activities linked visually and physically to the maker studio below.

**Flat floor conference space**  
Adaptable learning studio which can be used as a seminar/function space for community gathering and professional learning outside of normal school hours.

**Integrated lockers**  
Covered with writable surfaces and providing close adjacency to student resources.

**Void to maker space below**

# Educational Environment Design

## Adaptable and Flexible

### Solais Sandpit

The diversity of purposeful spaces within the Sandpit enables a range of concurrent activities. Larger floor areas per student, as well as mobile furniture enable spaces to adapt dependent on need and interpretations of users. The large presentation space has been used for large group gatherings or for students to work independently.

The boardroom is loved by students as a 'serious working space' but this is also used by school leadership teams which in turn models collaborative behaviours to students passing by. The incubator spaces have been used by small groups of students; however, teachers have also found these spaces effective as support spaces to work with students particularly in team teaching contexts.

The use of this space as a tool for teachers to trial and test practices and reflect as a community on how they have been using it has been key to raising awareness of flexible uses and the latent potential of spaces within the Sandpit.

### Nano Nagle Learning Centre

#### Team Teaching Mode

In the Learning Hub, spacious and diversely configured zones provides the equivalence of five class groups across each floor. The combination of open and enclosed learning settings of varying sizes provides functional flexibility. These accommodate a variety of activities and group sizes in purposefully designed learning settings. Each learning setting enables technology rich learning with digital displays in each space enabling multimodal use. Movable furniture of varying heights and shapes allow for easy re-configuration of the open spaces.

The floorplates can be split into zones with similar learning settings within each zone. Class groups of two or three are supported. Within each zone are two defined studio spaces, access to water and resources, a practical activities space, outdoor learning space and small group collaboration booths. Close adjacency to the presentation space was also critical in enabling larger groups to come together, discuss and present.

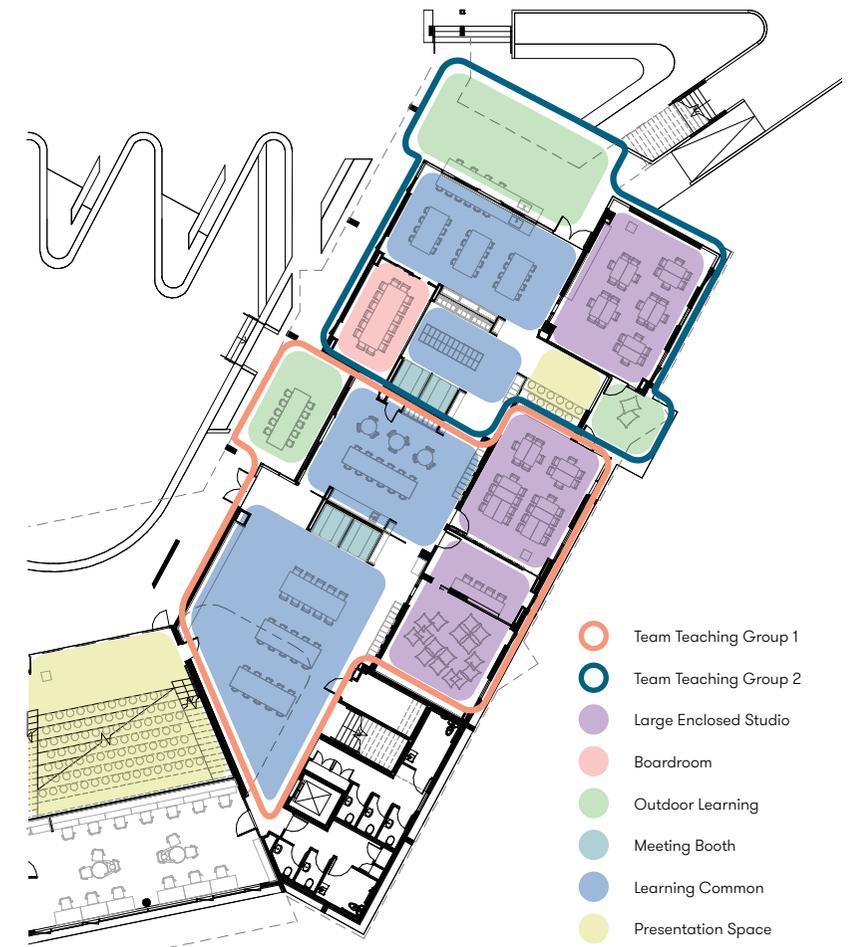
The agile and flexible design enables team teaching both on each floor as well as across the depth of the building.

#### Theatrette Performance Modes

The central theatrette is a multi-functional space which can be used for presentations, film screenings, performances and whole year group gatherings for the wider school community. It can also be used informally for students to work, read or eat their lunch. The break out zone on the upper level can also be used for relaxation and social gatherings, or as a spill over zone from the adjacent adaptable studio or the library. Together, this suite of spaces can also be used in conference or project-based mode.

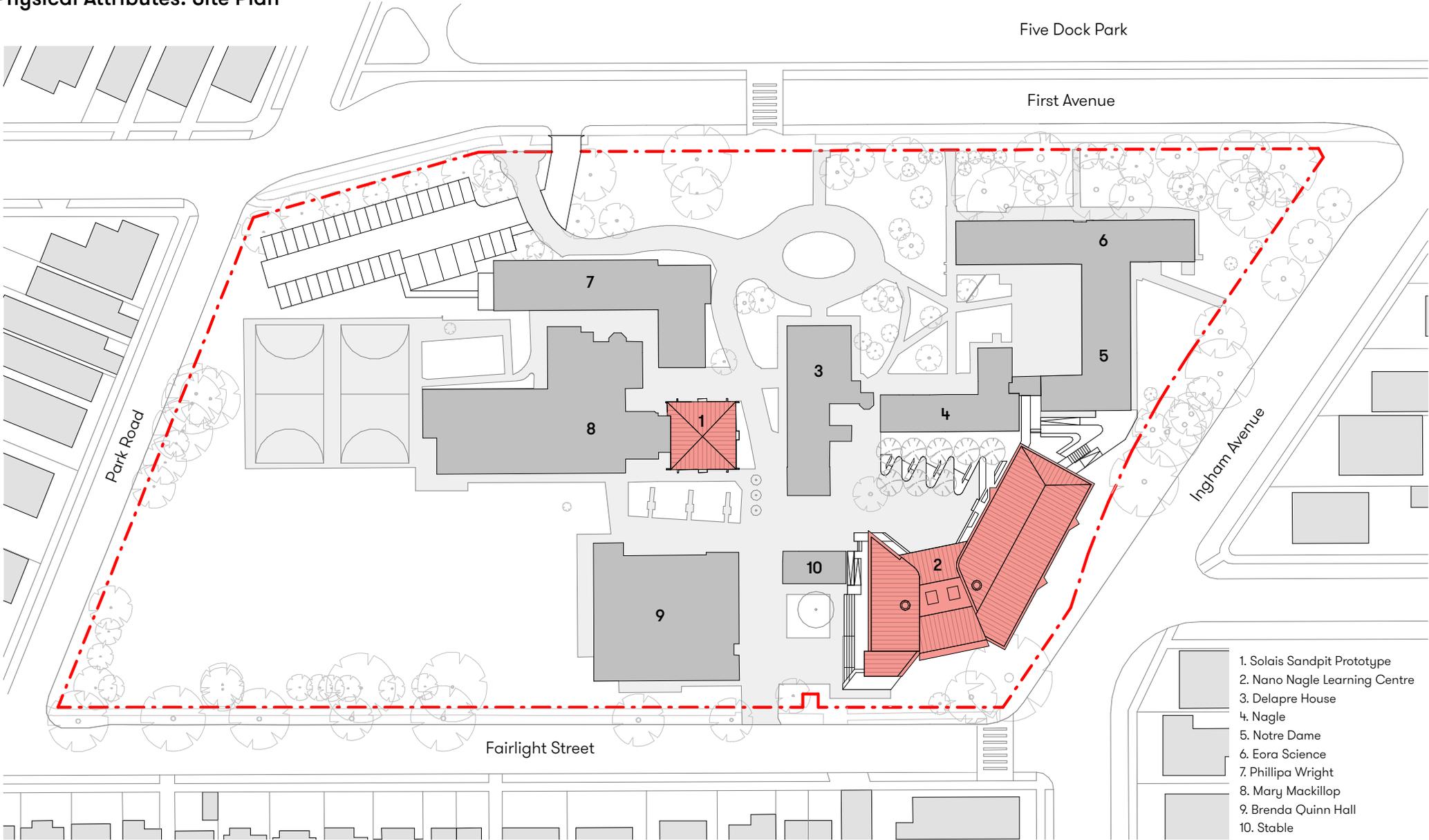
“The exciting part of the Sandpit is the way it will shape our teaching and learning, and I think it’s already started to provoke us to think about what we’re doing in the classroom, and to really think about our teaching and learning and how we’re developing our students for the workforce.”

— Teacher



# Physical Environment Design

## Physical Attributes: Site Plan



# Physical Environment Design

## Physical Attributes of the Environment

### Solais Sandpit

As a refurbishment, the Solais Sandpit effectively re-uses existing building assets to create more diverse learning spaces whilst maintaining visibility between zones and maximising natural light. The range of purposeful learning settings include: a tiered presentation space; a multi-modal tutorial space for a range of activities including direct explicit teaching; two incubator spaces for small group work, withdrawal, retreat and media; an enclosable Boardroom for a range of focussed group activities; and a central Learning Commons.

Importantly, the space has empowered teachers in the process of changing their practice and widening their pedagogical repertoire beyond what was possible in traditional classrooms.

**“I personally got more done when working in the Solais space than the traditional classroom. In the Solais I had less of a distraction from other groups and was able to work the way I wanted to, whereas in the classroom I didn’t have as much freedom.” — Student**

### Nano Nagle Learning Centre

The new two-storey building comprises three volumes: a Learning Hub; a library/senior study space; and a year group/staff gathering space. Shifts in materiality and detailing occur across the volumes at the upper floor, with a unifying off-form concrete and masonry cloister wrapping around the base of the building. Several double height volumes allow daylight deep into the plan and support physical connectivity between floors.

A zoned plan was developed in lieu of a more traditional classroom/learning common model to better enable team teaching and enquiry-based learning. Each learning zone can adapt to varying group sizes and accommodates a diverse range of purposeful learning settings such as boardroom, maker space, booths, threshold wet benches, multimedia rooms and studios. Physical connectivity between floors is provided by several double height volumes creating a greater sense of spaciousness and allowing daylight deep into the plan.



Nano Nagle Learning Centre Maker Space

# Physical Environment Design

## Community Context

The Solais Sandpit is an exemplar project highlighting how prototyping can bridge the critical link between space, pedagogy and practice change required for new learning spaces to be successful. Not only have the impacts of the prototype space been obvious to teachers and students actively using the space, but the effects flow on to all teachers at the school and the wider school community. As the space is central to the school site and acts as a thoroughfare to other areas of the school, teachers and students can observe the activities taking place in the space as they pass by. In addition, school leadership have begun using the space for their meetings to model collaborative working behaviors to students. In turn, school leaders can be part of the learning taking place in the Sandpit.

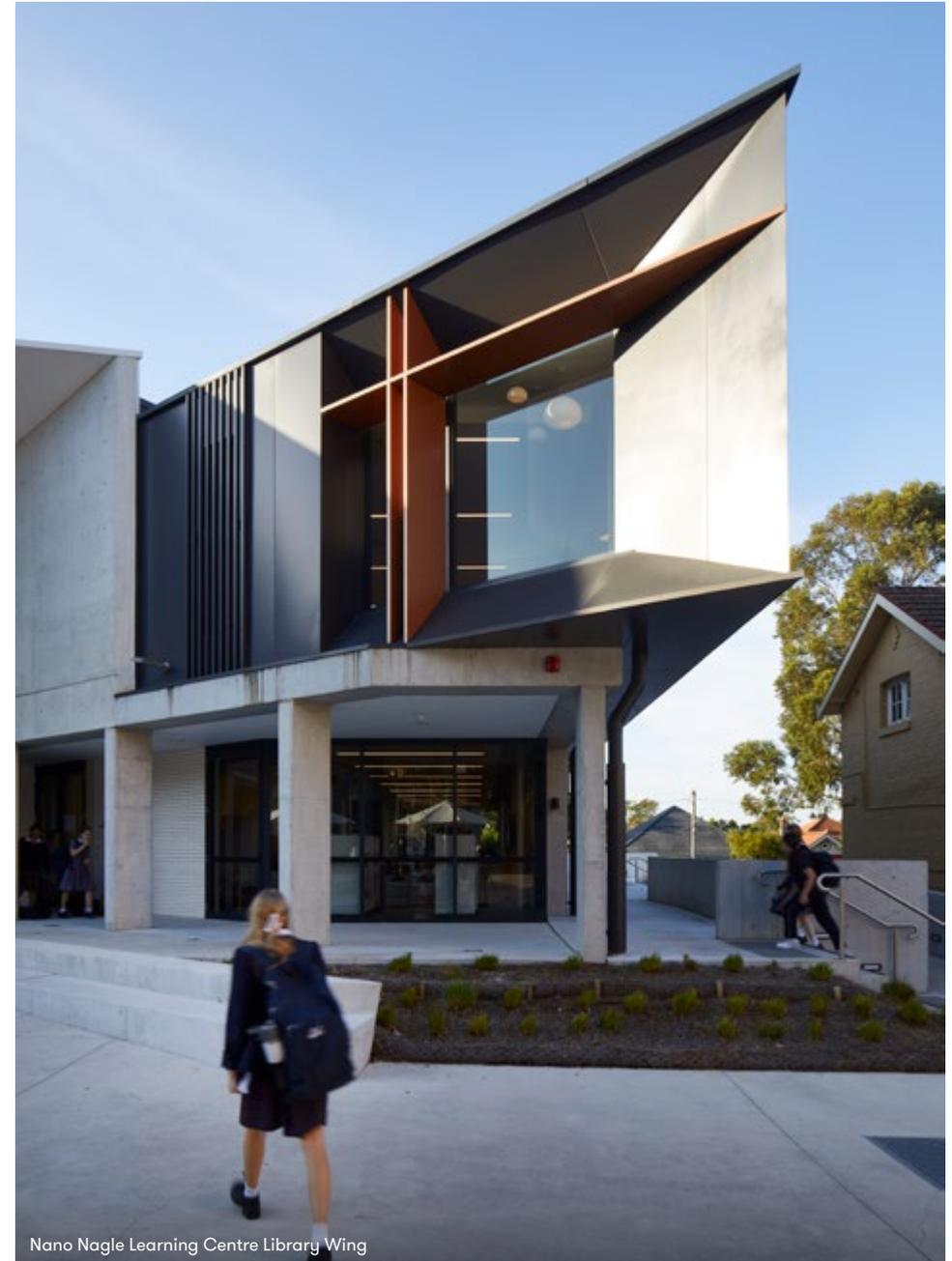
The space has also been used as a Third Teacher for collaborative interdisciplinary learning programs such as the [Year 7 Acoustic project](#), where students have learnt maths and design through the lens of improving the acoustics of the Sandpit space and raising student awareness of this aspect of the built environment.

**“It’s taught us to be so much more flexible, not just in the way we work, but also in the timetabling”**

— Teacher

Similarly, data from student surveys and the participatory action research project with teachers conducted as part of the Innovative Learning Environments and Teacher Change (ILETC) project at the University of Melbourne has been shared at a range of local and international conferences and will be published in a range of mediums. It has also informed the development of [The Sophia Program](#), an integrated professional learning and research program for principals and teachers within the Sydney Catholic Schools system. In this way, lessons learnt from the Solais Sandpit not only impact Domremy College, but also the wider Sydney Catholic Schools network and other learning institutions nationally and globally.

The Nano Nagle Learning Centre and forecourt has created a new heart to the school. It acts as a melting pot bringing together students from across stages. The design and implementation of this building has been recognised in both Australian architecture and Learning Environment Australasia awards. More importantly, its success has been a drawcard to the wider school community evidenced by anecdotal feedback and increasing enrolments.



Nano Nagle Learning Centre Library Wing

# Physical Environment Design

## How the project inspires and motivates?

The following client statement holistically addresses the outcomes of the NNLC as a result of the design and Solais Sandpit prototyping process.

*“The new Nano Nagle Learning Centre is an innovative, creative and agile space that has allowed staff and students to reimagine their teaching and learning. The space encourages teachers to evolve their practices and embrace a wider range of pedagogical approaches. Affordances such as technology and writable surfaces motivate students to make their thinking visible, empowering them to choose where and how they learn best.”*

*Throughout the prototyping process, staff were involved in participatory action research and their feedback on the prototype informed the design of the new Centre. Student voice was captured in an evaluation survey which also influenced the design of the building.*

*As a catalyst for change, the new building has inspired us to emulate similar learning settings in other spaces in the school allowing flexible and innovative pedagogical practices to take place everywhere across the whole school site.”*

**“As a catalyst for change, the new building has inspired us to emulate similar learning settings in other spaces in the school allowing flexible and innovative pedagogical practices to take place everywhere across the whole school site.”**

*— Domremy College Principal.*



Nano Nagle Learning Centre Presentation Space



Year 7 Acoustic Workshop

# Results of the Process & Project

## Educational goals and objectives.

### Solais Sandpit

Since its completion in November 2017, many teachers in the school and their students have had the opportunity to use the space. A rigorous research program involving staff and students has and continues to inform future design decisions and supports teacher practice in transitioning to ILEs.

### Nano Nagle Learning Centre

“The new Nano Nagle Learning Centre is an innovative, creative and agile space which has allowed staff and students to reimagine their teaching and learning. The space encourages teachers to evolve their practices and embrace a wider range of pedagogical approaches. Affordances such as technology and writable surfaces motivate students to make their thinking visible, empowering them to choose where and how they learn best. The school’s rich educational history is reflected through large distinctive windows which act as beacons, paying homage to Nano Nagle, ‘the Lady of the Lantern’ and founder of the South Presentation order.” — Antoinette McGahan, Principal of Domremy College



## Results of the Process & Project

### Achieving school district goals

The vision for Sydney Catholic Schools is for thriving Catholic Communities through excellent teaching and learning. One of the priorities of the system is to create places where every student excels in a multitude of ways, through personalised and self-paced learning. The diversity of learning settings offered in both the Solais Sandpit and the Nano Nagle Learning Centre offers a wide range of affordances for all students and teachers to engage in a variety of teaching and learning experiences.

One of the measures of success noted in Sydney Catholic Schools Strategic Plan are that their schools and students are known locally and nationally for their excellence and achievements. The Solais Sandpit and Nano Nagle Learning Centre have been recognised at State and National levels for both architecture and learning environment design . In addition, the innovative and unique approach to supporting teacher transition employed through this project has been documented as part of a PhD and published in academic papers.

Perhaps most importantly though, is that the prototyping and piloting processes developed through the Domremy College project has been formally developed in collaboration with the University of Melbourne, into a teacher practice transition program mandated at system level, for Principals and teachers of any school undergoing a new building design project. Not only has the project achieved school system goals, it has influenced how the system approaches school design more broadly across all of its 152 schools



An integrated professional learning and research program funded by Sydney Catholic Schools for one year from 2022 to 2023 and led by the University of Melbourne.

#### About

The Sophia Program is an integrated professional learning and research program for principals and teachers within the [Sydney Catholic Schools](#) in collaboration with the University of Melbourne. The program will involve principals and teachers taking professional learning aligned to the Australian Professional Standards for Teachers, action research, and a community of practice mentoring throughout the year-long project.

The overarching objective is to support principals and teachers in Sydney Catholic Schools to use space as a pedagogical tool and support their transition into new innovative learning environments. The project has dual aims: (1) to investigate the impact of learning environments on teachers and students; and (2) to investigate the effectiveness of an integrated professional learning program in enhancing teachers' self-efficacy and capacity regarding teaching in an innovative learning environment.

The Sophia Program Website

## Results of the Process & Project

### Achieving community goals

Community goals have been achieved at school level as well as informing the broader educational community. At school level, an interdisciplinary Participatory Action Research (PAR)/ Co-design process centred around the Solais Sandpit took place between August 2018 to September 2019. PhD researchers from the Innovative Learning Environments and Teacher Change (ILETC) project from the University of Melbourne worked with Domremy educators in a process which positioned ‘participants as researchers’ in exploring teacher spatial competency.

During this process teachers engaged in several workshops where they reflected on their current contexts, discussed their concerns about transitioning to new ILE spaces, and then developed and trialed a series of initiatives to test different ways of working. This was an iterative process where teachers collectively reflected on their experiences, adapted their initiatives in order to re-trial, and then further reflect.

Participants were interviewed and surveyed several times across the research revealing a series of key themes that supported teacher change. These included:

- Belonging to a community of practice specifically focused on exploring the relationship between pedagogy and space;
- Receiving two-way feedback through being observed and observing others practice;
- Having the opportunity and space to trial and test practice;

- The development of protocols to support collective practice within shared spaces;
- Obtaining student-voice around new practices and spaces; and
- The need for time and restructuring of timetables to enable teachers to plan lessons and co-teach within ILE spaces.

The research process resulted in teachers feeling less fearful of change and gaining greater appetite to take a risk and try new pedagogies. Through this process they learnt to release control and by doing so, become more empowered in their teaching practices within new spaces.

*“I’ve been supported in thinking that as a teacher you are evolving and don’t be afraid of change... and I feel far less afraid of change, I feel like I want to really embrace that change now”. — Teacher*

At a broader educational level, findings from this research has been shared amongst the teaching community and also developed into a set of tools to support change for teachers transitioning to ILEs. This has been disseminated through publications and conference presentations. The paper, [Actualising the affordances of innovative learning environments through co-creating practice change with teachers](#) which profiles the Participatory Action Research/Co-design process and outcomes was published in Australian Educational Researcher in 2021.



Domremy College Participatory Action Research Workshop



Domremy College Participatory Action Research Teacher Change Workshop

# Results of the Process & Project

## Unintended results and achievements

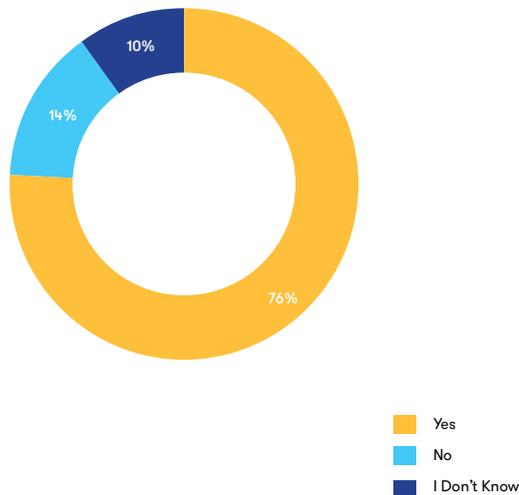
For a small, quick, and cost-effective project, the outcomes generated from Solais Sandpit have been enormous. The prototype learning space is housed in what was originally one of the most hated spaces in the school, however, it's transformation into the Solais Sandpit has now made it one of the most loved spaces.

Student survey responses reveal that they prefer to work in the Solais Sandpit over regular classrooms due to the choice of learning settings, ability to collaborate, greater spaciousness and sense of comfort. They noted that lessons in this space changed the way they learnt. Subsequently, they were more engaged with their learning.

Taking lessons from the Sandpit, the Nano Nagle Learning Centre similarly houses a wide range of learning settings for students to engage with. An unintended result of the success of the NNLC is the marked increase in enrolments since its opening. The agility and flexibility offered by the centre has enabled a wider cohort of students to be accommodated in this space in a multitude of ways.

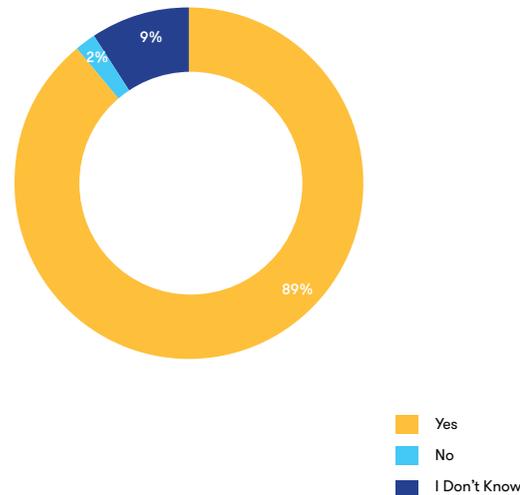
### Do you prefer working in the Solais Sandpit to a normal classroom?

The majority of student respondents working in the Solais Sandpit to traditional classrooms because they had more choice in where they learnt, were able to work more collaboratively and were more comfortable in their learning.



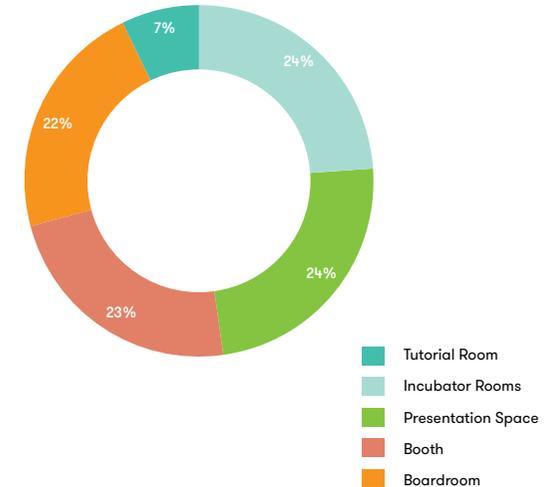
### Do you think having lessons in the Solais Sandpit changes the way you learn?

The majority of students felt the Solais Sandpit changed the way they learnt as they were more comfortable and engaged in this space.



### When given the choice, which area of the Solais Sandpit do you like to use most?

The least used space was the Tutorial room, the most traditionally configured space in the Solais Sandpit.



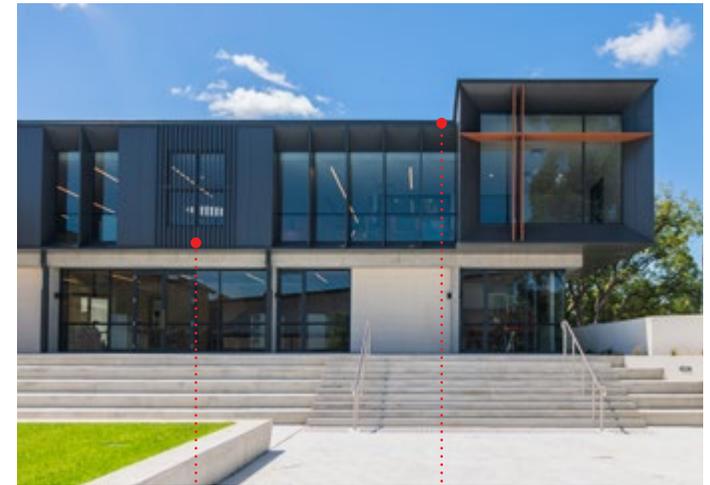
# Sustainability and Wellness

Through the act of adaptive reuse, the transformation of the existing Maureen Watson building to the Solais Sandpit prototype space offers sustainability both in relation to Environmentally Sustainable Design (ESD), as well as impacting on the social sustainability of the school. Using the Sandpit to empower staff and students in the use of new learning environments supports enhanced transition, optimal use of new learning environments and ultimately a more sustainable outcome bridging design and use.

The Nano Nagle Learning Centre balances environmental design aspirations and budget through cost effective passive design measures such as external shading devices, screens and building overhangs to minimise solar heat gain on the façade. A hybrid ventilation strategy and carefully placed glazing and skylights bring abundant natural light and fresh air into the interior. Timber is used throughout the building as a natural material. Improvements in water management are achieved through rainwater harvesting and passive stormwater treatment via bioswales and a rain garden. Energy harvesting from the photovoltaic system is digitally displayed in the learning centre and used as a learning tool to teach sustainable practices. Enhancing the role of the building as the Third Teacher, stories around the buildings educational vision and environmentally sustainable initiatives are being profiled via QR codes ensuring the legacy of Domremy College is shared broadly with school users and the wider school community.



Access to outdoor zones for relaxation and variety of learning settings promote choice and user wellbeing.



Maximised natural daylight through skylights and carefully designed openings shaded by screens, vertical blades and building overhangs.

Rainwater harvesting is used for landscape irrigation



Carefully placed glazing and skylights bring abundant natural light into the interior—where possible, materials with environmental product declarations have been selected for the internal fitout.



A hybrid ventilation strategy with natural ventilation to all spaces supplemented by a mechanical system with heat recovery ventilatorslades and building overhangs.

Timber is used throughout the building as a natural material to promote user health and well-being.

“The building has been such a  
drawcard and visitors have been in  
awe when they visit the building”

— Teacher

