

2013 Exhibition of School Planning and Architecture

Northern School for Autism

Indianapolis, Indiana

Northern School for Autism



Northern School for Autism Main Site Diagram



Locality

Community Environment Narrative

Public entrance to the school



Engagement with the Community/creating a sense of ownership: This is a new school for 144 students with Autism Spectrum Disorder. Socially this school elevates opportunities for disabled students. It is a school offering contact with a full range of support such as social worker, psychologists, trained teachers and specialist art therapists. Its multipurpose space can be used as a teacher training facility, parent or community learning space. Its influence will spread across hundreds of schools.

Celebrates the unique needs and attributes of the community: The brief required students to be in separate sub schools, accessed separately for safety between junior and senior and positioned to give small learning environments with outside access for calming and separated play. The students can be very influenced by environmental factors so distractions are kept to a minimum and an subdued colour scheme was selected, air-conditioning is available but the sustainable natural model is highly accessible to teachers and students. The students understand its zoning and external form.

Took advantage of the assets available within the community: This school re-used a former school site to build a new purpose built school for students with Autism Spectrum Disorder.

Reflects the unique needs of the community and local workforce/Connects students to their community: Research suggests that the incidence of ASD is increasing. This school supports students with ASD, it also supports the general community with its outreach program and provides education in supporting students with ASD.

Community Environment (cont)

The new building replaced an old school in an existing community and enlivened it

Fostering community use/partnerships: The multipurpose space is designed to have a future stage and break up for seminars for parents, teachers, community education about Autism.

Celebrates the unique attributes of the community:
Provides an avenue to economic/community development: The school is an interface for autism for the North of the State. It will spread its influence as its purpose built building will assist the better pursuit of its pedagogy.

Fostering community use/partnerships: By training teachers, parents and paraprofessionals it influences schools in the region lifting capacity in normal settings and leading to the capacity for students with ASD to stay in normal settings. The building puts into form a collective educational philosophy that can benefit the whole school and further the development of education environments for students with ASD.

Serves as a centre of their community: The students understand the schools zoning, its external form and the planning. This school is designed around the student, their needs and the schools pedagogy. It will guide the design of adult environments for students when they move into community .



Learning Environment :

Reflects the desired learning program: With a large range of ages, learning skills and behaviours, the brief required the students to be in separate sub schools. These were to be accessed separately for safety between junior and senior and positioned to give small learning environments.

Supports a 'Learning anytime, anywhere' philosophy: The school offers outside access for calming and separated play/ learning, limited distraction, and learning areas with a smaller quiet room, and a larger learning space. The student learning areas, all with north sun access, are attached to the access arms with separated roofs leaning off the major arms and cut to allow northern light penetration. Pushed out withdrawals are colour coded for students to easily understand.

Relates to the existing site: The design evolved to the current form to enable north light to all learning and play areas.

Inspires both internally and externally: Learning environments are separated between junior and senior and are colour coded to develop student independence. These environments can be broken down to smaller spaces or remain as a whole for larger group work. Easy access to outside for calming and play assists with self management of behaviours and development of independent learning.

Successfully achieves the vision and goals: The educational principles and pedagogy of this school is expressed in its architectural planning and resultant form. The schools for autism here in Victoria give students opportunities to learn to use indoor and outdoor spaces as a means of controlling their moods and anxieties. The schools design enables 3 totally different orientations towards 3 separate play spaces while obtaining north sun access to all learning areas. The building responds to the brief and lets that dominate its language.



External View

Intermediate Learning and direct play access



Internal View

Image: Internal Connecting Passage with Outlook to Play Space

Learning Environment (Cont)

Supports a variety of learning styles and methods for delivering instruction: The building has a form that builds on the students learning requirements. Internally classrooms have limited windows aimed at the outside, limited internal distractions and subdued earthy colour. The design reflects a unique brief and creates a living building that breaks down for students into smaller, calmer, separated zones, dynamic interplay between its external spaces and internal arteries.

Enables all learners to be successful: The design of this school enables students to develop skills in self calming and behaviour management through the provision of small learning environments and access to the outside. This is an essential component to the success of the overall learning program.

Supports future changes in the educational delivery systems: The learning spaces are designed to be flexible and can be used as one large space or broken up into smaller groups for discreet learning to occur. The teacher training institute on site will also offer the latest knowledge on teaching students with Autism Spectrum Disorder and this can be incorporated as needed.



Physical Environment

Supports the learning environment/activities: This school groups the student learning spaces around a central courtyard and provides individual access direct to play for all learning areas. Learning areas are assembled around strong curved circulation routes that are purposely non-interactive with learning areas to reduce distractions.

Relates to the user: These routes are defined in the building for students to understand. The building provides an integrated connected group of subschools in a community yet gives all student learning an individual controlled outlook breaking the learning down to calm, small group spaces for 6-8 students. Winged roofs reach out to the bus drop off to give covered separate secure access for senior and junior students from the bus area. The changes between sub-schools assisted in the students sense of progress as they progress through the school.

Demonstrates sustainability: Passive solar design is adopted throughout together with a VRU air conditioning system, water recycling and a full night purge system. In passive design it makes a stronger statement in orientating every learning area to obtain north light exposure and direct secure play access. This will enable a naturally ventilated learning environment to potentially be the common situation. These students can be very influenced by environmental factors so air-conditioning is available but the sustainable natural model is highly accessible to teachers and students

Appropriate use of materials, systems: Bike trails and sand pits were provided in all play areas as these elements are highly regarded by students with ASD. The colour scheme selected used earthy, subdued colours as students are very sensitive to environmental factors. The school offers secure play areas providing safety and independence .

Internal Junior Protected Play



Middle School Play



Planning Process

Who was involved in the process

1st Meeting with initial Principal - Initial briefing Feb, 2009
Meeting with Acting Principal - Schematic Design May 2009
Meeting with leading teachers, therapists etc - Schematic Design May 2009
Meeting with leading teachers, therapists etc – Design Development June 2010

How did the process affect the learning environment:

In developing the early brief for this project we worked with 10 leading teachers. This unique situation occurred as a permanent Principal had not been appointed and 3 different Principals were acting in the role until the appointment of the new Principal. This led to a large group to consult with during the development of the brief and design but resulted in some successful outcomes. For example, we worked with DEECD, staff from the school and Occupational Health and Safety specialists to develop a safe escape route for all Students and staff. This resulted from video footage of students exhibiting challenging behaviours enabling a better understanding of how a building can assist in the self management and calming of behaviour but also assist in providing a safer workplace for staff and students when a situation becomes out of control. The school quickly became operational due to the range of staff involved in its design. The staff and students understand its design rationale.

Methods used throughout the process ensuring alignment with visions and goals:

A continual process of checking the design with the client group led to the success of the building.

How did the planning team continue to be involved throughout the design, construction and post occupancy phases: The planning team consisted of the Principal, Assistant Principal, Leading Teachers, Psychologist, Social Worker and Occupational Therapists. This team continued to be involved and consulted on a monthly basis during team meetings and reconvened during construction to modify areas where required.



Planning Process

Timeline of the planning process:

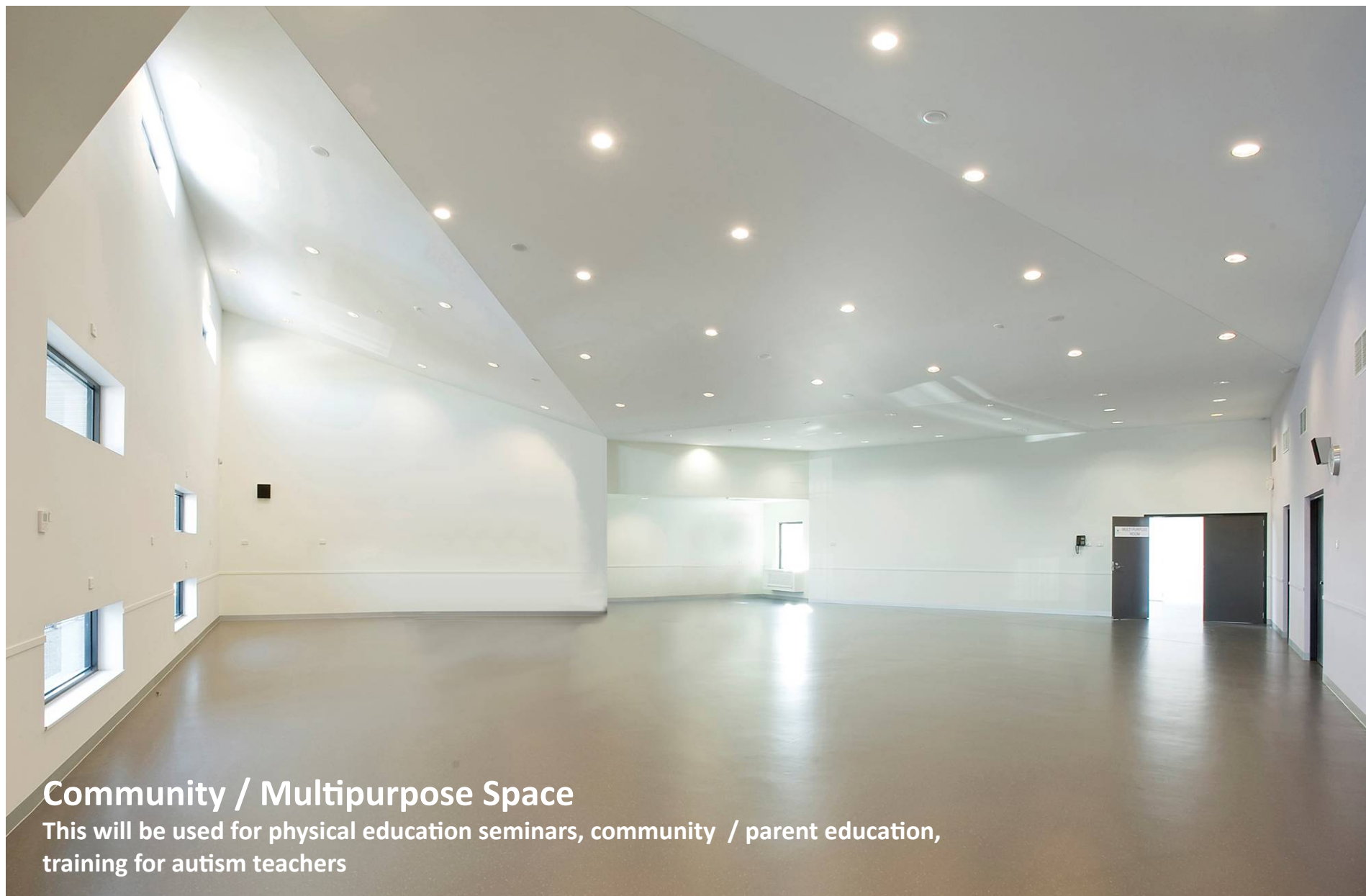
- Project Initiated 10th December 2008
- Education Specification
February 2009
- Master Plan Completed April 2009
- Schematic Design Completed
June 2009
- Design Development Completed
November 2009
- Construction Documents Completed
September 2010
- Construction Started July 2011
- Tender Acceptance 25th May 2011
- Construction Completed
21st December 2012
- Occupancy 21st January, 2013
- Post Occupancy Evaluation
To be completed



Staff room



View back to intermediate school



Community / Multipurpose Space

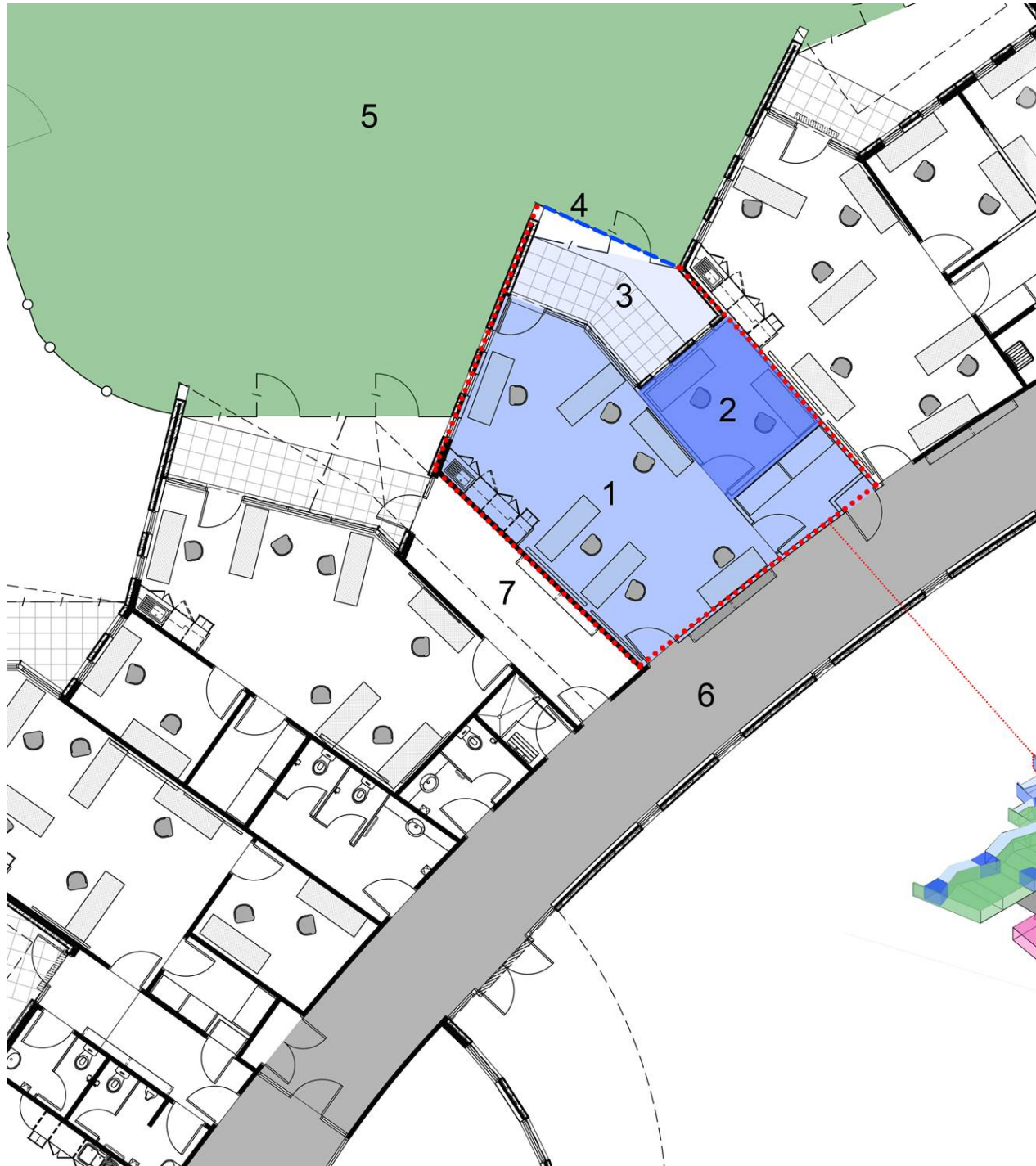
This will be used for physical education seminars, community / parent education, training for autism teachers



External view showing water tanks for water recycling within the school's toilets



Junior Courtyard
View of projecting color coded withdrawal rooms



EACH LEARNING AREA HAS THE FOLLOWING CHARACTERISTICS

1. MAIN LEARNING AREA (INTERMEDIATE)

A learning space with a store to enable the amount of furniture and equipment to be controlled by teachers. (Students can use objects aggressively)

2. WITHDRAWAL ROOM (QUIET LEARNING)

A withdrawal room which could be for quieter learning by 1 or 2 students or alternatively a calming room for an agitated or anxious student.

3. OUTDOOR WITHDRAWAL ZONE

The learning area has access direct to an outside space for self calming

4. UNDERCOVER AREA (ROOFLINE)

Under cover but with north sun access and access to the subschool space.

5. OUTDOOR PLAY AREA

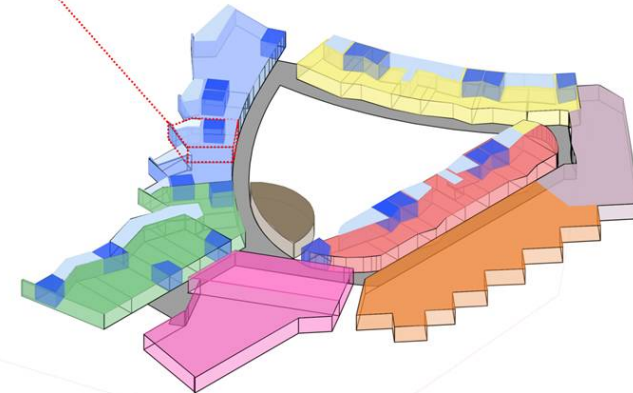
The outdoor spaces were deliberately free from trees and landscaping due to student's propensity to eat/destroy them. However bike riding, climbing and sand play are highly enjoyed by students. The play directly connects to each learning area as well as central toilets and passages.

6. CIRCULATION

Little distraction from the access passage. However the design of all learning areas had alternative means of escape for staff and students from all rooms.

7. INDEPENDENT ACCESS AND PLAN

Access to toilets for students/staff from building independent of learning areas



Floor plan

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Project Data

Submitting Firm :	Hede Architects Pty Ltd
Project Role	Designer
Project Contact	Paul Hede
Title	Director
Address	114 Moray Street, South Melbourne
City, State or Province, Country	Victoria, Australia
Phone	(03) 9682 0621
Joint Partner Firm:	N/A
Project Role	
Project Contact	
Title	
Address	
City, State or Province, Country	
Phone	
Other Firm:	N/A
Project Role	
Project Contact	
Title	
Address	
City, State or Province, Country	
Phone	
Construction Firm:	2 Construct Pty Ltd
Project Role	Building Construction
Project Contact	Duncan McPherson
Title	Project Manager
Address	Level 2, 36 Carpenter Street, Brighton 3186
City, State or Province, Country	Victoria, Australia
Phone	(03) 9519-0333

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Project Details

Project Name	Northern School for Autism
City	Reservoir, Melbourne Australia
State	Victoria
District Name	Northern Region of Victoria
Supt/President	Ms. Anna Rigoni
Occupancy Date	22 nd December, 2012
Grades Housed	P - 12
Capacity(Students)	144
Site Size (acres)	5.047
Gross Area (sq. ft.)	219885
Per Occupant(pupil)	152.6
gross/net please indicate	
Design and Build?	No
If yes, Total Cost:	
Includes:	
If no,	
Site Development:	\$1.1 million
Building Construction:	\$5.6 million
Fixed Equipment:	\$2.9 million
Other:	\$2.165 million
Total:	\$11,765,000