Design Verification Control
Smalls Road Public School

For: NSW Department of Education

Conrad Gargett

Documentation Control

Revision	Description	Issue date	Prepared by	Reviewed by
A	Design Verification Statement		JM	LDT

Table of Contents

1.0 Project Overview 4
1.1 Description of the Project 4
1.2 Design Process Undertaken 4
1.3 Key Design Considerations 5
2.0 Response to Education SEPP Design Quality Principles 5
2.1 Context, built form and landscape 5
2.2 Sustainable, efficient and durable 7
2.3 Accessible and inclusive 8
2.4 Health and Safety 9
2.5 Amenity 10
2.6 Whole of life, flexible and adaptive 12
2.7 Aesthetics 13

1.0 Project Overview

Project Name:	Smalls Road Public School
Project Address:	3b Smalls Road, Ryde
Architect's Name:	Lawrence Toaldo
Registration No:	10255

I confirm responsibility for designing the proposed development and have applied the Education SEPP Design Quality Principles.

Signature of Architect:

Architect's Name: Lawrence Toaldo

1.1 Description of the Project

The new Public School at Smalls Rd, Ryde is a landmark education project for both the NSW Department of Education and the Ryde community. The project will deliver accommodation for up to 1000 students on the site of the former Ryde High School. As a new school, this project represents a rare opportunity to deliver an integrated, future-focused learning environment for students and the design has been informed by 21st century education principles.

1.2 Design Process Undertaken

The design team has undertaken a rigorous process to workshop and review the design from the earliest stages of the project. Early engagement with the Department of Education and its technical stakeholders, established the brief for the new school. Opportunities for specialist facilities on site, future expansion and shared community uses were workshopped and outcomes informed the finalised accommodations.

Regular meetings are held with the Project Reference Group (PRG), consisting of key representatives from the Department of Education. Typically, the PRG would draw representatives from the existing school community (Principal, teachers, parent rep) to participate in the advisory group. As the new school at Smalls Road does not yet have an established school community, we were able to draw on the experiences of the Kent Road Public School Principal to advise and collaborate on the development of the design. We were also able to hold workshops with the teaching staff of Kent Road PS to establish the planning diagrams of the school and teaching landscapes that will support the establishment of new 21st Century pedagogical methods.

Meetings have been held with the local Ryde Council to inform the design of the site's infrastructure (particularly traffic related) and review current and the possible future shared facilities that will benefit both the school and the wider community.

1.3 Key Design Considerations

The design takes advantage of the strengths and opportunities of the existing campus setting, maximising the retention of existing mature trees, both within the courtyard and across the wider site. The design nestles into the slope of the existing topography, offering level access to the outdoors from the level one Kinder and Special Education learning spaces on the western side. The landscape design explores themes of Australian identity, creating a variety of outdoor settings for learning and play.

Clusters of flexible classrooms provide diverse learning settings for individuals, small groups and whole class activities. The column-free spaces maximise the potential for reconfiguration, offering the flexibility to adapt and change over time. A generous covered play area on the east creates an opportunity for the future expansion of the school.

In addition to general learning spaces, the project includes administration and staff areas, a communal hall, library, special program rooms, special education learning spaces, a canteen and outdoor learning spaces. In order to foster a sense of local community, the planning arrangement offers a separate, after-hours access point to the playing fields, communal hall and library.

2.0 Response to Education SEPP Design Quality Principles

2.1 Context, built form and landscape

New school development should:

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

Considered

The architecture takes its cues from traditional examples of the defended terrain such as Chinese Tulou housing where an unadorned exterior protective skin gives way to a surprising and vibrant interior. Responding to the context the external façade comprises rectangular fibre cement panels that are arranged in a brick bond pattern, creating an over-scaled reference to the bricks that define the domestic character of the surrounding suburb. The rich, warm tone of the facade panels have been selected to compliment the variety of tones of brick in the surrounding streetscape. The interior façade takes its cues from the carefully selected plant species inspired by iconic Australian landscape settings. This distinguishes the courtyard as a vibrant and colourful place for children. A continuous roof physically and symbolically unites the school as a connected whole.

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

Not applicable

The site was not identified as significant to the local community.

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

Considered

The scale of the development is tempered by the preservation of a large portion of the existing mature vegetation on the site; being careful to respect the existing mixture of residential and parkland character in the streetscape whilst also allowing the new school to establish a presence worthy of its place in the community.

The planning of the building takes advantage of existing grade changes on site allowing direct access to natural ground from two levels of the school. The central courtyard of the new building opens up generously towards the north, allowing direct access and views out to the existing playing fields.

Retain existing built form and vegetation where significant.

Considered

Refer to landscape plans for extent of existing vegetation to be retained.

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

Considered

The overarching concept for the landscape design demonstrates the local Sydney landscape as a learning environment. By creating a journey through three distinct Sydney landscapes, the school grounds become a rich outdoor educational and play environment.

The *Sydney Basin* landscape explores the rugged sandstone earth; the *Forests and Woodlands* bring gentle silver foliage and native flowers; and the *Grasslands* bring textures and open space.

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

Considered

The formal landscaping and play areas have been confined to the southern portion of the site so as leave intact the existing playing fields and maintain their community use.

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

Not applicable

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

Considered

Please refer to Transport and Accessibility Impact Assessment.

Drawing:	**Report:**
Appendix C_Architectural Plans	Appendix D_Landscape Architecture
	Appendix Q_Transport and Accessiblility Impact Assessment
	Appendix U_Arboricultural Impact Assessment Report

2.2 Sustainable, efficient and durable

New school development should:

Be responsive to local climate including sun, wind and aspect.

Considered
The design responds to the local climate by providing deep reveals to windows inside the classrooms that allow for the integration of shading louvers to the exterior of the building, responding to the specific aspect of the openings around the circle. Covered walkways are provided, connecting all classrooms, shared and administration spaces. A variety of covered outdoor spaces are provided at all levels of the building for both learning and play.

Select materials and approaches to detailing that are robust and durable.

Considered
The combination of brick and pre-finished fibre cement sheeting provides a robust and durable built environment.

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

Considered
The proposed planting consists of native species that relate to the geography of the Sydney Basin, and create a variety of landscape settings that enhance amenity and building performance: open/enclosed, exposed/intimate, informal and imaginative play, sports, tree canopy to address the building and create shade. The courtyard is c.45% shaded by trees which will assist with microclimatic control in terms of temperature, glare and breezes. WSUD is addressed by harvesting rainwater from roofs for reuse in the landscape.

Include deep soil zones for ground water recharge and planting.

Considered
All landscape planting will be installed in deep soil, all in the natural ground.

Minimise reliance on mechanical systems.

Considered
The school generally relies on natural ventilation. Placement of operable windows that allow for cross-ventilation and ceiling fans allow the occupants to control their environment directly. Mechanical cooling is limited to the Special Education Unit and specific requirements for cooling and ventilation of Comms rooms and the like.

The occupied spaces are equipped with heating for the cooler months.

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

Considered
Refer to ESD Report

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

Considered
Refer to Green Travel Plan.

Drawing:	Report:
Appendix C_Architectural Plans	**Appendix N_Site Services Infrastructure Report**
	Appendix O_Stormwater Management Plan
	Appendix P_Water Management Plan Report
	Appendix Q_Green Travel Plan
	Appendix S_Pedestrian Wind Environment Statement
	Appendix W_ESD Report

2.3 Accessible and inclusive

New school development should:

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

Considered
The security brief for the school was established in consultation with the Department of Education's Security team. The requirements for a clear line of security between the school facilities and the areas of the site that will be accessible to the public after hours determine the placement of fence lines. Allowance has been made in the design of the secure lines for future community uses of the sports ovals, library and hall facilities.

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

Considered
The extent of fencing has been established through consultation with the Department of Education, the Project Reference Group and the DoE's Security team.
Engage students, educators and the community in development of the vision and design brief for the school.

Considered
Refer to Community Consultation report.

Provide diverse, attractive and accessible spaces to learn, play and socialise.

Considered
The new school provides diversity of learning environments within the classrooms, common areas and landscaping that allows for choice, comfort and collaboration for teachers, students and the community.

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

Considered
The generous covered front entry of the school directly address Smalls Road. The main pedestrian and vehicle entries are clearly located and are adjacent to staff areas to maximize surveillance.

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

Considered
Please refer to Department of Education Community Use Policy.

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

Considered
Facilities such as the library, hall and OOSH have been clustered toward the front of the site to allow for easy wayfinding and establishment of secure lines during afterhours use.

Ensure accessibility for all users of the site.

Considered
The building and landscape design provides clear and easily traversable access for all students, staff, users and visitors, including people with differing needs and abilities. This is achieved through compliance with the requirements of AS1428.1, AS1428.2 (where applicable), accessible pathway grades and surfaces, clearances at door entries and centrally located lifts in the multi-storey building to allow easy access, assist wayfinding and circulation to the upper level facilities.

Engagement between the project managers, design consultants will continue to as the scheme progresses to ensure appropriate outcomes are achieved in building design and exterior planning and landscaping.

High rise schools should consider the impact of circulation times on timetables and pedagogical models, particularly when accessing core learning spaces. This may have design implications for spatial planning, lift and circulation requirements.

Not applicable

Drawing:	**Report:** **Appendix F_Access Review** **Appendix V_Consultation Outcomes Report** **Appendix X_Community Use DoE Policy**

2.4 Health and Safety

New school development should:

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

Considered
Classrooms, core facilities and administration spaces are designed to be naturally ventilated. Separating the classroom blocks with covered outdoor areas allows operable windows to be well placed to allow for natural ventilation.

Prioritise pedestrians and avoid conflicts between vehicles and people.

Considered
Vehicle and pedestrian circulation have been separated in the planning arrangement. Where required, fencing and landscape buffer zones will be employed to ensure a safe separation of vehicles and pedestrians.

Provide covered areas for protection from sun and rain.

Considered
Covered walkways are provided between all internal spaces. A large covered assembly area is provided to allow 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.

Considered
Bike parking is provided adjacent to the front entry of the school. A pedestrian access gate will be maintained to the back of the site, connecting to the Henry Durant Park, to encourage walking.

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

Considered
Facilities intended for use outside of school hours have been clustered together along the street frontage of the building. Access to the library, hall and OOSH facilities is provided at the same, secondary entry point off Smalls Road.

Incorporate Crime Prevention through Environmental Design (CPTED) principles.

Considered
Refer to CPTED principles outlined in Statement of Environmental Effects.

Clearly define access arrangements for after school hours.

Considered
OOSH facilities located adjacent to hall. Access is provided from the secondary entry on Smalls Road.

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

Considered
Toilet facilities are distributed around the school in locations that provide surveillance from walkways and common areas.

Drawing:	**Report:**

2.5 Amenity

New school development should:

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

Considered
Refer to landscaping concepts listed above.

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

Considered
All occupied spaces have access to natural light and ventilation.

Facilitate flexible learning by providing seamless access to technology.

Considered
All occupied spaces have access to natural light and ventilation.

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

Considered
Refer to landscaping concepts listed above.

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

Considered
Planning developments were workshopped with PRG and stakeholders to ensure that a diversity of uses can be accommodated in the new facility and grounds.

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

Considered
Homebase layouts were workshopped with PRG and stakeholders to ensure that a diversity of learning environments which cater to a range of learning styles and stages are provided.

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.

Considered
Homebase layouts provide for a variety of learning settings.

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

Considered
Refer to landscape design report.

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.

Not applicable.

Outdoor play ground space should be sufficient to accommodate the student population including future growth. It should also allow for passive and dynamic play of different age groups.

Considered
Refer to landscape design report.

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

Considered
The building takes advantage of the natural ground levels to reduce the appearance of the building height on the southern side of the site, closest to residential neighbours.

Wherever possible, seek to locate buildings away from noisy roads and other noise sources to ensure acoustic levels within teaching and learning spaces are acceptable.

Not applicable

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.

Not applicable

Drawing:	Report:
Appendix C_Architectural Plans	Appendix D_Landscape Architecture

2.6 Whole of life, flexible and adaptive

New school development should:

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

Considered
Engagement with the DoE was undertaken early in the design process to gain an understanding of the existing site context and to consider the future growth of the proposed school.

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

Considered
The school has been designed as a single form that allows much of the site to remain open for future needs. The covered assembly area has been sized to allow for the construction of additional classrooms in that location, should it ever be required.

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

Considered

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

Considered
The large, column free spaces in the classrooms allow flexibility for future replanning should the school's pedagogical needs change over time.

Respond to the findings of a site appraisal including (but not limited to) in-ground conditions, contamination, flora and fauna, flooding, drainage and erosion, noise and traffic generation.

Considered
Refer to specialist site investigation reports.

Understand the potential impacts of future local projected growth and respond to demand for facilities after hours.

Considered

Ensure school buildings and grounds are designed to be resilient to change, enabling them to be used for multiple purposes and to evolve over time to meet future requirements.

Considered

Drawing:	Report:

2.7 Aesthetics

New school development should:

Reflect a commitment to and investment in design excellence.

Considered

The current design proposal has been developed over 12 months of consultation with the school user group, the local community, Department of Education, representatives from the Technical Stakeholder Group / EFSG Group, Coffey (the Project Manager), Turner & Townsend (the Cost Planner) and the broader design team. The broader team accordingly are significantly invested in design excellence within the parameters defined by the TSG guidelines and the budget parameters of this project.

Create engaging and attractive environments.

Considered

The design proposal seeks to create a series of engaging external play spaces (a vibrant courtyard, intensely planned with a variety of spaces within and large outdoor landscaped play spaces) as well a series of bespoke learning spaces gathered within a cohesive and legible planning framework.

Achieve a purposeful composition of materials and elements through a rigorous design process.

Considered

The application of materials reflects the opportunities afforded by the TSG parameters and employs colours to develop a vibrant and engaging backdrop for learning and play.

Provide an engaging environment for pedestrians visually and materially along public street frontages.

Considered

The building form seeks to reduce its impact to Smalls Road however through this form and the glimpses offered into the courtyard, offers and engaging environment.

Seek opportunities to enhance public facing areas with landscaping and ensure landscape and building design are integrated.

Considered

Public facing areas of the school have significant planting areas and the planting design strategy strongly references endemic Sydney landscapes which are then translated into both exterior and internal complimentary colour schemes.

Integrate service elements with the building design.

Considered

Service elements have been integrated into the building design and will undergo further co-ordination during the current DD stage.

Balance internal spatial requirements with an external mass and scale that responds to its environment.

Considered

The single building form provides a strong wayfinding device which is then perforated with large portals offering glimpses into and from within. These large slots assist in reducing the overall building scale and bulk.

Avoid long stretches of security fencing to public facing areas through arrangement of building edges, landscaping, gates and other openings.

Considered

Where possible, the building perimeter is employed as the security line to reduce the impact of the perimeter security fence.

Look for opportunities to include public art.

Public art is not briefed or budget for this project however environmental graphics will be used as both wayfinding and playful elements.

Drawing:	**Report:**

Conrad Gargett

Conrad Gargett Pty Ltd
mail@conradgargett.com.au
conradgargett.com.au

Brisbane Studio
Level 26 / 240 Queen Street
Brisbane Qld 4000
GPO Box 170
Brisbane Qld 4001
t (07) 3229 3555
f (07 3221 7878

Townsville Studio
Level 1 / 45 Eyre Street North Ward
PO Box 770
Townsville Qld 4810
t (07) 4795 0200
f (07) 4724 1882

Sydney Studio
Suite C3.18, 22-36 Mountain Street
Ultimo NSW 2007
t (02) 8218 9100
f (02 8218 9199

Newcastle Studio
Level 1, 54 Union St
Cooks Hill Newcastle NSW 2300
t (02) 8218 9100
f (02) 8218 9199

Nominated Architect: Lawrence Toaldo NSW Reg. 10255 | ABN: 49 325 121 350