4. Health & Safety I

The success of the Lake Cathie Public School masterplan has been the spatial organisation of built form and fenestration to address the following health & safety principles in order to provide a safe, supportive environment for students. SHAC have emphasized the need for passive surveillance and student safety throughout all phases of design to ensure students needs are accommodated in all areas of the school, students and vehicles do not mix and the masterplan assists with Crime Prevention.

a) Locate buildings and design facades that optimise fresh air intake and access to daylight
b) Prioritise pedestrians and avoid conflicts between vehicles and people
c) Provide covered areas for protection from sun and rain
d) 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
e) Support passive surveillance, including through the location of toilets and areas for communal use outside of school hours
f) Incorporate Crime Prevention Through Environmental Design (CPTED) principles
g) Clearly define access arrangements for after school hours
h) Consider location and number of toilet facilities to allow safe use by different age groups and genders.
4. Health & Safety II

Design Solutions

a) External walls of each GPLA are 50% glazed and incorporate operable louvres optimising natural daylighting and cross ventilation.

Refer to DR5212.

b) The previous development application required the removal of the temporary road access from Ocean Drive and relocation of the vehicular access off the new collector road on the eastern boundary. This separates pedestrian and vehicular access and traffic, minimising the opportunity of conflicts and accidents.

c) Each neighbourhood includes three C.O.L.As.

d) The main pedestrian entry adjacent to the eastern boundary provides direct & safe access to the surrounding subdivision for bicycle & pedestrian journeys separate from vehicles.

Provision is made on site for bicycle parking. Staff shower facilities are provided for end of trip usage.

e) Windows and glazed doors facilitate passive surveillance to the internal and external school areas.

Toilets are arranged individually, rather than in banks to maximise supervision and minimise opportunities for undesirable behaviour. They are also visible from the main areas of the school.

f) Bottleneck points were incorporated into the masterplan to enable secure entry and exit points which staff can supervise.

g) As the hall is located adjacent to the carpark to provide after hours access.

Toilets have been spread equally throughout the school in each learning neighbourhood to enable easy, safe, and age appropriate access.
5. Amenity I

Lake Cathie Public School masterplan has integrated the following sustainability principles in order to provide an informative environment; social and economic outcomes. SHAC have emphasized sustainability throughout all phases of design to ensure the school is durable, resilient and adaptable to meet future learning and environmental requirements:

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

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

c) Facilitate flexible learning by providing access to technology

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

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

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

g) 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.

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

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

j) 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 Solutions

a) Each GPLA has direct access to covered outdoor learning and the natural environment blurring the lines between inside & out in addition to providing the ability to team-teach multiple classes at once.

b) External walls of each GPLA are 50% glazed and incorporate operable louvres optimising natural daylighting and cross ventilation.

c) Each GPLA & learning common has direct access to interactive AV display to ensure a 21st century learning environments achieved. Additionally printer stations, mobile technology stations and wireless connectivity will also be implemented throughout the school.

d) The vegetation rehabilitation area provides unique play environment, and opportunities to learn about ecosystems, biodiversity and conservation. Colour coded rainwater tanks educate students about the water cycle. The vegetable garden provides an opportunity for students to learn about where food comes from, about ecosystems and the life cycling of plants, and gain gardening, planting, and harvesting skills. Individual monitoring and custom signage allows students to see a direct relationship between A/C use and power consumption. This is further enhanced by monitoring energy production via the solar panels.

e) Each neighbourhood includes formal GPLAs and a shared learning common for informal use. Each neighbourhood also includes C.O.L.As which provide soft indoor-outdoor transitions. Landscaping includes formally landscaped play areas, and informal open play areas, and vegetation rehabilitation zone.

f) The existing fence line on the eastern boundary is softened by the vegetation rehabilitation area. Existing palisade fencing along the street frontage has been redesigned and softened by incorporating the school's motto and soft landscaping.

g) N/A

5. Amenity II

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5. Amenity II
Lake Cathie Public School
1240 Ocean Drive, Bonny Hills