

# Response to Design Quality Principles of the Education SEPP

## 4.4 Health and safety

The proposed Centenary Building is intended to be constructed on steeply sloping land with a predominantly northerly orientation. It is through this northern façade that provision has been made for natural cross ventilation to the assembly hall, facilitated by a stack effect that draws air into and through this large assembly space. Sun shading has been designed for this northern elevation to optimise access for daylighting while ameliorating the impacts of direct solar heat radiation on glass facades.

The proposed Aquatic and Fitness Centre is situated mostly beneath the surface of Hordern Oval however its northern façade is composed of a generous glazed elevation that optimises access to daylighting by positioning the length of the indoor swimming pool parallel to this orientation. Direct summer sun is shaded however the design has been developed such that either side of the winter solstice there will be direct daylighting of the pool’s surface.

Pedestrian access has been prioritised over vehicles in the proposed Hordern Oval Precinct Redevelopment with a new pedestrian gate designed for Rose Bay Avenue that will separate pedestrians from vehicles for the first time in this location on the campus. At the proposed Aquatic and Fitness Centre the design provides for clear separation between pedestrian and vehicle access.

Providing covered areas for protection from sun and rain is crucial for school environments. The proposed Centenary Building has been designed with cantilevering external terraces that are sheltered by the level above. These spaces are highly accessible, oriented towards northern light and offer significant protection from direct sunlight and rain.

The proposed Aquatic and Fitness Centre is accessed directly off the adjacent pedestrian path and roadway and has been designed to accommodate bicycle storage with associated end of journey facilities.

The design for the proposed Hordern Oval Precinct Development has been developed in accordance with the principles of CPTED to identify and quantify crime risks. Safer by Design principles have been incorporated to minimise the risk of crime and to enhance perceptions of safety.

The orientation and planning of the proposed new facilities is highly transparent and supports passive surveillance opportunities, including through the centralised locations of Housemaster offices in the Centenary Building, the prominent location of the reception and lifeguard facilities in the Aquatic and Fitness Centre, and in the location of toilet and change rooms in both complexes that may have community use outside of school timetabling. Separate toilet and change facilities for students and community have been designed into the proposed Aquatic and Fitness Centre.

After school hours access arrangements to the proposed Hordern Oval Precinct Development will be further developed during the detail design phase to ensure the safety of all users and the security of the School’s infrastructure.











1939  
TO THE GLORY OF GOD AND IN MEMORY OF  
WHO GAVE THEIR LIVES IN THE GREAT WAR  
1914-1918  
THE FOLLOWING NAMES ARE ENGRAVED ON THIS MONUMENT  
[List of names follows in small text]





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## 4.5 Amenity

The proposed Hordern Oval Precinct Development is embracing of the natural environment with turfed roofs, integrated planting on accessible terraces, deep soil planting on adjacent open space and the inclusion of an external Water Sensitive Urban Design water feature located adjacent to the proposed Chapel. These initiatives have functional and aesthetic drivers that also deliver positive outcomes for learning and play.

The proposed Centenary Building is oriented to the north with excellent access to sunlight and the integrated provision of a natural ventilation strategy. Visual outlook from all levels is focussed on the open space of the Oval with exceptional views of the harbour and distant landscapes available from the upper levels, culminating in the Centenary Lawn which will provide a significant new external and accessible surface of approximately 1000 square metres. This new external space will provide opportunity for passive and dynamic play as well be the focus for formal activities such a Remembrance Day services.

The proposed Aquatic and Fitness Centre is also oriented to the north and, as described previously, will optimise access to daylight into its internal swimming pool environment, with direct sunlight reaching the swimming pool's surface during mid-winter. The restoration of the Hordern Oval turf surface will re-establish this significant outdoor playing field as one of Sydney's best sporting amenities.

The proposed Hordern Oval Precinct Development will incorporate integrated wireless technology to facilitate seamless access to technology and associated flexible learning practices.

The opportunity for the proposed buildings and outdoor spaces to be learning tools themselves has been addressed in the initial design phases with structural clarity and the integration of passive environmental control principles finding expression in the architectural and landscape design solutions. Further development of this approach will enable more detailed elements such as building energy use monitoring stations to be incorporated in the fit-out.

A process of focussed stakeholder engagement comprising Cranbrook School students and educators has informed the development of a suite of learning modalities for the proposed Centenary Building. This diversity of indoor and outdoor spaces will facilitate multiple formal and informal uses of varied population and setting so as to cater for a range of learning styles and group sizes. This process is continuing to undergo refinement in coordination with the School's needs across the whole campus.

The landscape architecture for the proposed Centenary Building includes the integration of buffer planting to reduce the physical impact of the development on its surrounding landscape and to generate a human scale to the multi-storey development. Additionally buffer planting is integrated into the forecourt of the proposed Aquatic and Fitness Centre to provide physical and psychological separation from the busy traffic corridor of New South Head Road with the aim of positively transforming the amenity of this currently underwhelming area of the campus.

Situated on a school campus within a residential context, the proposed Centenary Building is conceived as a series of terraced platforms that follow the topography of the sloping bank to Hordern Oval, stepping down from a single storey at its upper level interface to Rose Bay Avenue the development retains an appropriate height and scale with respect to the residential properties on the opposite side of Rose Bay Avenue. The proposed Centenary Building remains below the parapet level of the adjacent Perkins Building and Cranbrook House.

The proposed Centenary Building accommodates learning spaces and as such is sensitive to acoustic intrusion. Fortunately the building as designed is located on the south-eastern side of Hordern Oval and a significant distance away from the vehicle traffic corridor of New South Head Road. However the building will incorporate significant insulation in its wall fabric, double glazing in its external elevations and a turf roof at its upper level – all of which will contribute positively to its overall acoustic performance and suitability as place for learning.



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### 4.6 Whole of life, flexible and adaptive

The proposed Centenary Building is designed to accommodate future-focussed learning spaces of varied modality. It is expected that as learning and teaching pedagogy evolves to meet a rapidly developing society driven by technological and social change that there will be the need to allow for future adaptation. The structure of the proposed Centenary Building is designed such that the floor levels for the learning spaces can be “churned” over time with the interiors fitted out with non-structural partitions and adapted as educational needs arise. In order to inform the initial fit-out of these spaces a comprehensive stakeholder engagement process has been conducted with the School’s educators and cross-referenced with the School’s timetabling requirements across the whole campus and aligns with the School’s anticipated decanting requirements.

The strategy for specifying building materials is to be supportive of a whole-of lifecycle approach and will be further refined during the design development phase. In principle, low energy embodied materials of robust quality and long life span will be sourced from local suppliers wherever practical.

The proposed Hordern Oval Precinct Development has been subject to intense site appraisal inclusive of extensive geotechnical investigation, sub-surface water monitoring and analysis, arboreal investigation, drainage studies, noise monitoring and traffic studies. The recommendations arising out of these appraisals have and will continue to inform the detailed design of the proposed Hordern Oval Precinct Development.













# Response to Design Quality Principles of the Education SEPP

## 4.7 Aesthetics

Through analysis and appreciative inquiry the design team has developed a deep understanding of the School’s unique social character, its siting, its topographical challenges and opportunities, the heritage-rich nature of the original buildings and associated landscaped grounds, and the aesthetic vision that the Headmaster and Executive has articulated to ensure Cranbrook’s vitality and success into its second century of service.

The built solutions proposed for the Hordern Oval Precinct Development are appropriately scaled and articulated to respond positively to the cascading nature of the site, to its immediate context of existing built forms and to the surrounding context of the residential neighbourhood. Materials such as locally sourced Hawkesbury sandstone , sheet copper and high visible light transmittance glass have been selected to be harmonious to the valued legacy of heritage buildings to, be aesthetically and physically enduring and to be environmentally responsible.

Cranbrook’s legacy has been shaped by its distinctive landscape setting, its heritage architecture and its enduring values and beliefs.

### Landscape

Cranbrook School was founded on Hawkesbury sandstone. A landscape characterised by an underlying geology of silica-rich sedimentary rock that has weathered and oxidised over hundreds of millions of years to form outcrops of stratified bedding planes overlain with sandy deposits. Located on the northern slopes of Bellevue Hill, with both north-westerly and north-easterly aspects over the Harbour, the elevated position of the School

occupies a privileged vantage point with spectacular views, favourable orientation to sunlight and cooling summer breezes, and the challenge of a steep fall across its narrower margins. Flora has been selected that is aesthetically pleasing and suited to the free draining sandy soils of the place.

**To begin with then, the sloping landscape and its elevated position above the harbour generates a remarkable and distinctive physical legacy for the School.**

### Architecture

It was perhaps inevitable that this attractive site would be first developed as a significant estate with a correspondingly dignified house designed and built in the Georgian style of the time. Carefully sited with sweeping views towards the colony of Sydney and over Port Jackson towards the Heads - the passage through which all contact with the outside world was initially made - the foundation building of Cranbrook captured in its genesis some of the School’s present Vision as a place that is connected with its local community yet is equally engaged with a global context.

At the time of commissioning the original Cranbrook House in 1859 the colony of Sydney had an evolving craft of constructing substantial buildings in “yellow block” sandstone quarried from local sources and erected by workers skilled in the English tradition of masonry architecture. The physical quality of “yellow block” became well regarded for its workability and durability. It was used in the main buildings of the University of Sydney and in the governing

administration’s significant buildings in Sydney Town. In the eastern suburbs some of the earliest privately developed buildings of merit were constructed in this same material – including the nearby residences of Lindesay(1834) and Carthona (1841).

**The use of sandstone in Sydney’s built environment has been described as ‘a kind of base note, an ever-present reminder of its Georgian beginnings and its more ancient past’.**

Cranbrook House is distinguished by its sturdy sandstone base and its finer detailing on its upper level. The building exhibits the characteristics of permanence, calm order, warmth, elegance, human scale, and of belonging to Sydney’s sandstone environment. While there are other buildings of heritage merit on the campus, Cranbrook House is the centrepiece of the School’s architectural legacy. It is recognised that all future developments on the Bellevue Hill campus are to be progressed in a manner that is respectful of this legacy and that they contribute positively towards a

harmonious sense of architectural continuity across the campus. The materials specified for the Hordern Oval Precinct Development are consistent with this aesthetic intent.

### Values and beliefs

Cranbrook School has its origins in its foundations on Protestant beliefs and the values of the Church of England.

As with the School’s motto, “Esse Quam Videri”, future development of the campus is implicitly understood to be aligned with its values of authenticity and integrity.

The enduring social legacy since its foundations at the conclusion of the First World War has been to foster its responsibilities to the individual and to contribute to the greater good and the social welfare of the wider community.

The School aspires through the redevelopment of the Hordern Oval Precinct to provide for a series of facilities that add to the character and overall beauty of the Cranbrook site, that strive to achieve design excellence and high levels of amenity, and that also functionally provide utility and benefit to the wider community.









## 5 Appendix A

### Supporting Letter



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02 February 2018  
RECORD OF MEETING NOTES  
FOR ATTENDEES:  
Archtectus –  
Luke Johnson  
Gary Henigen  
John Whatmore  
Cranbrook School -  
David Hull  
Mark Flanagan  
GANSW -  
Olivia Hyde  
Lee Hillam  
Diana Snape  
DPE -  
Navdeep Singh Shergill

GANSW PRE-LODGEMENT MEETING - 30.01.18  
Department of Planning – 320 Pitt St, Sydney  
  
SSD 8812 - CRANBROOK SCHOOL – 5 Victoria Street, Bellevue Hill

The following notes summarise the discussion and comments provided to the project team by GANSW in relation to the preparation of an EIS for the above proposal.

Overall, GANSW commend the process undertaken to develop the proposal which included preparation of a masterplan and a design competition.

In preparation of the EIS submission, in accordance with the SEARs, GANSW note the following should be provided and incorporated into the required design report and structured to respond to the design quality principles of the Education SEPP:

- Further information and drawings that demonstrate an integrated landscape plan
- Further information to demonstrate active transport strategies and linkages with existing, proposed and potential footpaths and bicycle paths and public transport links. GANSW recommend greater emphasis on how the proposal will contribute to future modal shifts in transport options away from private vehicles.
- Site plans and operational statement demonstrating the afterhours and community use strategy including security implications such as fences or other secure lines and whether access is free or paid
- clarification as to material specifications in particular for the blade elements at level one
- further information to demonstrate the anticipated performance of proposed passive thermal control measures and/or hybrid strategy (natural ventilation; potential for photo-voltaic array)

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