Ku-ring-gai Development Control Plan 2021 Assessment		
Development Control	**Compliance**	**Planning Assessment**
Part 4 Dwelling Houses		
4A Site Design		
4A.1 Local Character and Streetscape		
Visual Character		
1 Design components of new development are to be based on the existing predominant and high quality visual character of the local neighbourhood.	**YES**	The State Design Review Panel (SDRP) has stated that "*The new building has a clear formal relationship with the interior character of the site and its historic buildings*." The choice of form and materials that are featured in the design of the building, respond and connect with the surrounding built and natural environment including the use of ceramic fins in a warm sandstone colour which looks to "reference the verticality and colour of the Blue Gum tree trunks which will form a buffer between residential properties and the school". See **Attachment A and B.**
2 The appearance of the dwelling is to maintain the local visual character by considering the following elements: i) visibility of on-site development when viewed from the street, public reserves and adjacent properties; and ii) relationship to the scale, layout and character of the tree dominated streetscape of Ku-ring-gai.	**YES**	The building looks to reduce the scale of the continuous tallest portion of the building through the use of the brick base materials predominately on the south elevation which reference the other existing school buildings across the site. See **Attachment A and B.**
3 The prominent and high quality characteristics of the neighbourhood are to be identified and considered as part of the site analysis. Note: Visual character or streetscape is created by many features including: lot sizes, fencing, kerbs, setbacks, building separation and spaces between buildings, separation, access arrangements, street tree planting, tall tree canopy backdrop to the horizon, native vegetation and private gardens, as well the architecture of individual residences and their associated structures.	**YES**	The Architectural Design Report provides extensive site analysis of the site's location as well as the architectural and urban context including specific neighbouring dwellings. See **Attachment B**.
Public Domain and Communal Space		

Ku-ring-gai Development Control Plan 2021 Assessment		
Development Control	**Compliance**	**Planning Assessment**
4. Development is to integrate with surrounding sites by: i) being of an appropriate scale retaining consistency with the surrounds when viewed from the street, public domain or adjoining development and not exceeding two storeys; ii) minimising overshadowing; and iii) integrating built form and soft landscaping (gardens and trees) within the tree canopy that links the public and private domain throughout Ku-ring-gai.	**YES**	The building is of a scale that responds to the needs of the school and the surrounding context. The topography of the site which slopes downwards to the southeast towards neighbouring properties, was taken into consideration throughout the design process to ensure that the built form minimized overshadowing, and integrated where possible into the landscape. The proposed landscaping ensures a response to the local and native vegetation. Detailed planting schedules have been included at **Appendix 17** which assist in softening the built form and maximising visual privacy.
Tree Retention		
1. Landscape proposals are to retain existing trees, where possible. This may be achieved by: i) minimising changes to existing ground levels; ii) confining building works where appropriate to pre-existing building footprints	**YES**	The landscaping plan and arborists report outline that there will be 29 trees that will have to be removed due to their current size and the extent of their root systems which will impact the construction of the proposed development. Of these trees only 2 are considered to have high retention value. Substantial planting will be provided to offset this loss.
Tree replenishment and planting		
2 Landscaping is to include tall trees, small trees, shrubs and ground covers.	**YES**	Landscaping plans have incorporated tall trees, small trees, shrubs and ground covers. See **Appendix 17** for further landscaping details.
3 Landscape designs are to reflect the prevailing landscape character of the area and relate to the existing streetscape in terms of scale and planting style.	**YES**	The Landscaping Plans look to reinstate the existing Blue Gum Forest while incorporating native and nonnative planting to reflect the landscape character of the Pymble area as well as the school grounds.
4 All lots are to support a minimum number of trees capable of attaining a minimum height of 13m on shale and transitional soils and 10m on sandstone derived soils as per the table below. Council may in special circumstances, consider the reduction of this standard.	**YES**	The school grounds contain a large number of mature trees that will not be affected by this proposal. Large trees are proposed to be planted on the site to replace any removed trees.

Ku-ring-gai Development Control Plan 2021 Assessment		
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4C.1 Building Envelopes		
2. The following matters are to be considered with regard to the potential impact on neighbouring properties and local character: i) opportunities to minimise overshadowing of living and private open space areas and solar panels; ii) opportunities to minimise overlooking of living and private open space areas; iii) opportunities to minimise adverse impacts on any significant bushland, or distant views; iv) the relationship with the streetscape.		The building has been designed to ensure there is adequate solar access to the key living and open space of the adjoining buildings. The proposed built form is setback at the upper level and allows solar access into the adjoining residences. It is noted that these residences open space are already overshadowed by the existing retaining wall and the individual residential built form due to their orientation. The proposal has limited sightlines as demonstrated in Attachment A, with minimal opportunity for overlooking to the adjoining properties. There are no significant views that would be impacted by the proposed development.
3. Development is to avoid the creation of an overbearing effect upon adjoining development by: i) ensuring appropriate side setbacks and landscaping are incorporated in the design; ii) ensuring all built structures are within the building height plane as illustrated in Figure 4C.1-2; iii) the relationship with the streetscape.		The proposal has approximately 19m minimum setback from the boundary. There are no height limits on the site and the proposal will not impact on the streetscape character of Pymble Avenue, as it does not directly adjoin the street and has minimal opportunity of views from the street.
4C.2 Building Facades		
1 Extensive blank or unarticulated walls to street frontages will not be permitted	**YES**	Each façade is extensively articulated through materials, depth changes and façade details. The building is not located along a street frontage.
2 All external facades are to be articulated to reduce the apparent building mass and present a human scale. This may be achieved through the use of bay window openings, window awnings, chimney and alcove features, verandas, pergolas, balconies, entry porches, staggered wall planes, a combination of materials and finishes, decorative architectural elements including brick corbelling, banding and recesses.	**YES**	The proposed development has been articulated to reduce any impacts on building bulk and mass, with various elements of recessed windows, fins, horizontal and vertical detailing, with additional landscaping elements both on the building façade and surrounding the development. A strong brick base is incorporated into the design linking to the surrounding residential character and the rest of the school.
4C.5 Solar Access		

Ku-ring-gai Development Control Plan 2021 Assessment		
Development Control	**Compliance**	**Planning Assessment**
1. Solar access to habitable areas, recreational space and solar collectors on the site and on neighbouring sites is to be preserved by: i) consideration of siting and orientation of buildings; ii) use of setbacks which increase with building heights; iii) landscape design and location of vegetation including deciduous or tall trees; iv) consideration of window locations and size.	**YES**	There is a 19.5m separation between the upper levels of the building and the property boundaries, and 12m between the lower levels. This alongside the detailing at the upper levels of the building including the extend of the scalloping and the cutout on level 5 of the structure, will increase solar access for adjoining residents. Extensive landscaping is proposed along the boundary to further screen the development and reduce impacts of privacy. Recessed picture windows and the fin articulation limits the line of sight from the building, with the topography of the site also limiting the opportunity for any direct overlooking. See **Attachment A and B** for Architectural Drawings.
2. A building is to be designed and sited to maintain solar access to adjoining properties of at least 4 hours between 9am and 3pm on 21st June to north facing windows and all living areas (family rooms, rumpus, lounge and kitchen) and the principal private open space recreational areas, such as swimming pools and patios	**APPROPRIATE ON MERIT**	Two adjoining properties are impacted by the proposed development, with each receiving nearly 4 hours of daylight to key private open space and internal living spaces. It is noted that due to the topography and orientation of these dwellings, their primary living space is towards Pymble Avenue. As demonstrated in the shadow diagrams at **Attachment A**, these dwellings receive ample solar access.
3. Development is to consider the use of sun protection devices that preserve internal amenity. These can include window shades and awnings, roof and eave overhangs, use of pergolas and landscaping for shading of openings.	**YES**	The development will utilise external louvres and picture windows alongside structural overhangs to reduce excess sunlight in the internal and external spaces of the development.
4. Professionally prepared Shadow Diagrams must accompany all applications for new dwellings and alterations/additions exceeding one storey. Refer to Council's DA Guide	**YES**	Shadow diagrams are provided at **Attachment A.**
4C.10 Materials and Finishes		

Ku-ring-gai Development Control Plan 2021 Assessment		
Development Control	**Compliance**	**Planning Assessment**
1. External walls must be constructed of high quality and durable materials and finishes. Note: Material and finishes selection is to be made in accordance with objectives and controls as stated in Part 23.4 of this DCP to ensure low environmental impact.	**YES**	A schedule of materials is provided at **Attachment A** within the Architectural Drawings which outline the choice of materials which is durable including brick cladding and ceramic shading fins with an insulated rainscreen.
2. Reuse or recycling of existing local materials such as sandstone and brick is encouraged.	**YES**	Recycled materials can be considered where practical.
3. Large, unbroken expanses of any single material and finish (rendered or not) to building facades must be avoided.	**YES**	There are no large expansive sections of the building that contain a single material. The window panels are broken up through the use of cladding and ceramic shading fins alongside brick.
4. New development is to avoid extensive use of highly reflective or gloss materials on the exterior of buildings.	**YES**	There is limited use of reflective materials on the design. The predominant building materials that have been carefully selected are the ceramic fins on the upper building section and the brick cladding which reduce the presence of extensive areas of highly reflective or gloss materials.
5. The exterior finish material (e.g. sandstone or brick) must be integral to the overall building façade design and must not appear to be cosmetic.	**YES**	The chosen materials including the brick cladding, link to the existing buildings located on the school grounds and are integral to the overall building façade.
6. Where louvres are used, they are to be an integral element in the building façade design.	**YES**	The use of the louvres on the exterior façade of the building creates visual interest as well as creates necessary sun shading. These louvres create greater visual privacy for neighbouring properties.
7. The selection of a colour scheme for new development and in the restoration of existing facades is to comply with the following guidelines: i) base colours for major areas of building façade are to be light in tone (e.g. earth tone) with minimal colour intensity (or hue) e.g. off white or grey colours. Larger expanses of bold colour, black and white must be avoided, as these detract from the prominence of other façade details. Contrasting tints, tones and shades are to be restricted to small areas. ii) highlight colours to window and door mouldings, string courses, parapet details and the like, are to be in sufficient contrast to the base colour. Strong colours to large sections of the building must be avoided. Details should be finished in a matt to semi-gloss range.	**YES**	The materials that are featured in the design of the building, respond and attempt to connect with the surrounding built and natural environment including the use of ceramic fins in a warm sandstone colour which looks to "Reference the verticality and colour of the Blue Gum tree trunks which will…form a buffer between residential properties and the school". See **Appendix 6, Attachment A and B.**

Ku-ring-gai Development Control Plan 2021 Assessment		
Development Control	**Compliance**	**Planning Assessment**
8. Natural earth tones are to be used on building facades in close proximity to bushland.	**YES**	As above.
Part 8 Mixed Use Development		
8A Site Design		
Visual Character		
2 Design components of new development are to be based on the existing predominant and high quality characteristics of the local neighbourhood.	**YES**	The State Design Review Panel (SDRP) has stated that "*The new building has a clear formal relationship with the interior character of the site and its historic buildings*." The choice of form and materials that are featured in the design of the building, respond and connect with the surrounding built and natural environment including the use of ceramic fins in a warm sandstone colour which looks to "reference the verticality and colour of the Blue Gum tree trunks which will form a buffer between residential properties and the school". See **Attachment A and B.**
3 The appearance of the development is to maintain the local visual character by considering the following elements: i) visibility of on-site development when viewed from the street, public reserves and adjacent properties; and ii) relationship to the scale, layout and character of the streetscape of Ku-ring-gai.	**YES**	The building is largely not visible from the closest Street (Pymble Avenue) and from longer views. The proposal is in keeping with its surrounding context being the existing school buildings and is compatible with the residential character of the adjoining streetscape. See **Attachment A and B.**
4 The predominant and high quality characteristics of the local neighbourhood are to be identified and considered as part of the site analysis at Part 2 of the DCP. Note: Local character and streetscape is created by many features including, but not limited to: kerbs, setbacks, footpath treatment, building separation and spaces between buildings, access arrangements, street tree planting, tall tree canopy backdrop to the horizon, native vegetation and gardens, topography, site and street geometry, as well the architecture.	**YES**	The Architectural Design Report provides extensive site analysis of the site's location as well as the architectural and urban context. The proposed design responds to and incorporates appropriate setbacks, access, planting to assist in ensuring a high quality built form. See **Attachment B**.
Public Domain and Communal Space		

Ku-ring-gai Development Control Plan 2021 Assessment		
Development Control	**Compliance**	**Planning Assessment**
5. Development is to integrate with surrounding sites by: i) being of an appropriate scale retaining consistency with the surrounds when viewed from the street, public domain or adjoining development; ii) minimising overshadowing; and iii) integrating built form and soft landscaping (gardens and trees) within the tree canopy that links the public and private domain throughout Ku-ring-gai.	**YES**	The building is of a scale that responds to the needs of the school and the surrounding context. The topography of the site which slopes downwards to the southeast towards neighbouring properties, was taken into consideration throughout the design process to ensure that the built form minimized overshadowing, and integrated where possible into the landscape. The proposed landscaping ensures a response to the local and native vegetation. Detailed planting schedules have been included at **Appendix 17** which assist in softening the built form and maximising visual privacy.
8A.4 Building Separation		
1. The minimum separation between a residential component of the building and any neighbouring building on the development site is to comply with the following controls: Buildings up to 4 storeys over the podium (see Figure 8A.4-2) i) 12m between habitable rooms/balconies; ii) 9m between habitable rooms/balconies and non-habitable rooms; iii) 6m between non-habitable rooms. Buildings of 5 to 8 storeys over the podium (see figure 8A.4-2) iv) 18m between habitable rooms / balconies; v) 13.5m between habitable room / balcony and non habitable room; vi) 9m between non-habitable rooms.	**YES**	A 19.5m separation between the upper levels of the building and the property boundaries, and 12m between the lower levels which will be heavily landscaped. See **Attachment A** Architectural Designs.
2. For all non-residential developments adjacent to residential developments: i) the retail, office and commercial balconies are to be treated as habitable rooms and provide the same building separation required in 8A.4(1); ii) ii) the service and plant areas are to be treated as non-habitable rooms and provide the same building separation required in 8A.4(1);	**N/A**	Not applicable.
8A.5 Wind Impact		
1. New buildings are to be located and designed to ensure public pedestrian areas, recreation facilities, podiums, terraces and communal open areas are protected from wind generation and strong wind speed caused by the development.	**YES**	The building has been designed to ensure there are negligible impacts with regards to wind generation, see **Appendix 32.**

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2 Developments are to integrate wind deflection features to preserve the useability and amenity of open spaces within and around the development. Methods of achieving wind impact mitigation include (see Figure 8A.3-1): i) Use of building facade design and stepbacks to deflect downwards drafts; ii) Awning and colannade design to deflect winds away from footpaths, podiums, terraces and communal open spaces; iii) Use of vegetation and tree canopy as buffer to the street level from winds.	**YES**	The building incorporates façade articulation, stepped building and an open atrium space, alongside various recesses and extensive vegetation planting to reduce wind impacts. See **Appendix 32**.
8C.1 Solar Access and Daylight		
Non-residential component		
1 Buildings are to be oriented to optimise the northern aspect.	**YES**	The buildings main façade and outdoor spaces are orientated to the north/ northeast, see **Attachment A** Architectural Designs.
5 Developments are to allow the retention of a minimum four hours direct sunlight between 9am and 3pm on 21st June to all existing solar collectors and solar hot water services on neighbouring buildings.	**YES**	There are no impacts to any surrounding solar panels or services on neighbouring developments.
6 Three hours of direct sunlight between 9am and 3pm on 21st June is to be maintained to the living rooms, primary private open spaces and any communal open spaces within residential developments on adjoining sites.	**YES**	Two adjoining properties are impacted by the proposed development, with each receiving nearly 4 hours of daylight to key private open space and internal living spaces. It is noted that due to the topography and orientation of these dwellings, their primary living space is towards Pymble Avenue. As demonstrated in the shadow diagrams at **Attachment A**, these dwellings receive ample solar access.
Sun shading		
8 All shading devices are to be integrated with building facade design (see Figure. 8C.1-2).	**YES**	Shading devices are integrated into the overall façade design as shown in **Attachment A** Architectural Designs.
9 Consideration is to be given to the integration of solar shading with solar energy collection technology (see Figure 8C.1-3).	**YES**	Solar voltaic cells are proposed on the roof of the proposed design see **Attachment A** Architectural Designs.
10 All developments are to utilise shading and glare control. Design solutions include: i) providing external horizontal shading to north-facing windows, such as eaves, overhangs, pergolas, awnings, colonnades, upper floor balconies, and/or deciduous vegetation; ii) ii) providing vertical shading to east and west windows, such as sliding screens, adjustable louvres, blinds and/or shutters; iii) iii) providing shading to glazed and transparent roofs;.	**YES**	External louvres, recessed windows and vertical and horizontal fins and other shading techniques are incorporated into the design, see **Attachment A** Architectural Designs.
8C.5 Building Entries		

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1 Access to and within both commercial and residential developments are to be in accordance with the Disability Discrimination Act 1992	**YES**	Access will be in accordance with the Disability Discrimination Act 1992 see **Appendix 16** for the BCA Report.
8C.13 Internal Ceiling Heights		
1 For all new buildings in the B2 Local Centre zone, the B4 Mixed Use zone, and sites within the R4 High Density Residential zone where commercial development is permitted under Schedule 1 of the KLEP, the minimum ceiling heights, measured from finished floor level (FFL) to finished ceiling level (FCL), are to be: i) 4.0m for ground floor cafe/restaraunt uses (or 4.4m from FFL to next floor FFL); i) 3.3m for ground floor and first floor retail or commercial uses (or 3.7m from FFL to next floor FFL); ii) 3m for non-residential uses on all other floors (or 3.4m from FFL to next floor FFL).	**YES**	The internal ceiling heights as demonstrated in **Attachment A** Architectural Drawings, outline the ground floor ceiling height will be 4.6m and the upper ceiling heights will be 3.9m.
2 Internal ceiling heights and slab levels must be coordinated with external height requirements and key datum lines. External building elements requiring coordination is to include: i) datum lines and parapet lines set by the context or the Built Form controls in Part 14 Urban Precincts and Sites; ii) the cornices and string courses of adjacent heritage buildings; and/or iii) existing exterior awning levels or colonnade heights	**YES**	Ceiling heights are coordinated with external height requirements
8C.14 Visual Privacy		
1 Buildings are to be designed to ensure privacy for residents of the development and of the neighbouring site. In addition to design options outlined in Section C Part 3.5 of this DCP, design measures may also include: i) off-setting balconies in relation to adjacent balconies; ii) using recessed balconies and/or vertical fins between adjacent private balconies; iii) using solid or semi-transparent balustrades to balconies (see Figure 8C.18-1); iv) using louvres/screen panels to windows and balconies (see Figure 8C.18-2); v) incorporating planter boxes into walls or balustrades to increase the visual separation between areas;	**YES**	Extensive window screening principles have been adopted as recommended in **Appendix 11** the Visual Impact Statement, including external louvres and sheltered picture windows.
3 Continuous transparent balustrades are not permitted to balconies or terraces for the lower 3 storeys.	**YES**	The chosen balustrades are not fully transparent.
8C.15 Acoustic Privacy		
1. Buildings are to be designed to minimise the impact of noise through planning, construction and materials in accordance with the relevant acoustic standards in relation to noise transmission between and within buildings, including AS2107-2000: Acoustics- Recommended design sound levels and reverberation for building interiors	**YES**	The design will be complaint with Australian standards, See **Appendix 15** for the Acoustic Report.
2. In addition to specific noise sources such as traffic or rail lines, proposed developments are to consider: i) the specific nature of the premises, (eg. pub, restaurant, hairdressers, laundromat; supermarket) and any associated outdoor areas;	**NOTED**	Noted. Relevant noise sources are considered in **Appendix 15**.

<table>
<tr><th colspan="3">Ku-ring-gai Development Control Plan 2021 Assessment</th></tr>
<tr><th>Development Control</th><th>Compliance</th><th>Planning Assessment</th></tr>
<tr><td>ii) the proposed hours of operation;
iii) the late night operation of equipment (such as coolrooms and generators) and services within premises (such as drycleaners, cafes, restaurants, entertainment facilities, etc);
iv) any tonal, low frequency, impulsive, or intermittent noise resulting from the development;
v) the existing hours of operation of surrounding business uses;
vi) the size and patron capacity of the premises;
vii) the cumulative impact of the premises on the mix, diversity and possible concentration of late night uses in the locality.</td><td></td><td></td></tr>
<tr><td>3. The maximum internal LAeq 15 minute noise levels of any development must not exceed the noise levels as set out in Figure 8C.15-1.
Note: Council requires an acoustic assessment be undertaken by a suitably qualified acoustic consultant to assess compliance with the above criteria. Recommended noise attenuation measures must be included in this report where applicable.
<table><tr><th colspan="3">Amenity Criteria</th></tr><tr><td></td><td colspan="2">Reccommended LAeq Noise Level, dB(A)</td></tr><tr><td>Time of day[1]</td><td>Maximum noise level -Windows open</td><td>Maximum noise level -Windows closed</td></tr><tr><td>Day</td><td>60</td><td>50</td></tr><tr><td>Evening</td><td>50</td><td>40</td></tr><tr><td>Night</td><td>45</td><td>35</td></tr></table></td><td>YES</td><td>The design will be complaint with Australian standards and the standards deemed relevant by a qualified acoustic consultant, See Appendix 15 for the Acoustic Report.</td></tr>
<tr><td>4. For requirements on noise levels associated with air conditioning, kitchen, bathroom, laundry ventilation, or other mechanical ventilation systems and other plant refer to Part 23.8 of this DCP.</td><td>YES</td><td>The proposed development has considered mechanical ventilation required. See Appendix 15 for the Acoustic Report.</td></tr>
<tr><td>5. Noise reduction measures to achieve these outcomes may include, but are not limited to the following design criteria:
i) incorporating appropriate noise shielding or attenuation techniques into the design and construction of the building. In particular, noise shielding will be required between uses, walls and floors;
ii) using noise barrier planning principles such as using the building mass to shield noise (eg using podiums to shield noise from below); and locating non-habitable rooms towards the noise source and habitable rooms oriented to quieter areas on the site; minimising the size and number of windows and balconies oriented to the noise source. Note: Refer to Part 20 Development Near Rail Corridors and Busy Roads.</td><td>YES</td><td>Noise attenuation measures have been incorporated into the design. For example, music would be shut off should the doors be opened onto terrace spaces. See Appendix 15 for the Acoustic Report.</td></tr>
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iii) enclosing plant rooms; iv) locating plant in basements; v) minimising the amount of shared walls between apartments, commercial occupancies and/or plant; vi) locating building services (laundries/ storage areas) and circulation zone apartment entries away from noise sensitive areas (ie. bedrooms) to provide a buffer from noise generators, such as traffic, mechanical plant equipment, and service and loading vehicle entries (see Figure 8C.15-2); vii) recessing balconies and fitting sound absorption materials (see Figure 8C.15-3); viii) fitting out building services, (including plant, piping and ducting) with appropriate acoustic insulation; (comment delete as it is required by BCA); ix) replacing conventional roof design with eaves by a flat roof with parapets where requirements for weather protection are otherwise achieved; x) using solid core doors, thicker window glass, double glazing, baffles to openable windows.		