Attachment A - Detailed response to all agency submissions including DPIE

Issues Raised by Agency Submissions

Proponent's Response

Department of Planning Industry and Environment (DPIE)

General

The Department wishes to emphasise the importance of consistency and accuracy in terminology and naming throughout all documentation.

There are several instances where items are incorrectly named (e.g. Belmont, Belmond, Elmont) throughout the report and figures do not add up (e.g. Table 4 (56+34=90, however the total presented is 88) and these generate confusion.

The Department recommends a thorough review be undertaken of all documentation prior to formal lodgement.

It is acknowledged that there are two spelling errors (Belmond Road and Elmont Road) in the spelling of a street name in the EIS. The correct street name is 'Belmont Road'.

It is also acknowledged that the calculation of total trees in Table 4 in the EIS is incorrect. The total trees on site under this SSDA should be 90. Note. This does not account for additional one (1) tree to be removed, which has been approved under separate REF approval. Refer to Table below.

Tree Statistics	Numbers
Existing	76
Removed	20
Retained	56
Additional	34
Total trees	90

As such, the total tree count on site under the SSD is 90 trees, or 89 trees when taking into consideration the additional (1) tree that will be removed under separate REF approval, as the landscape architects have detailed in their report.

These were the only errors / inconsistencies we are aware of which required correcting in the EIS.

Figures in Table 16 in the EIS – 'Summary of Tree Retention Value and Proposed Action' remains unchanged.

A summary of works approved as part of the REF, particularly in relation to the ongoing use of the school for both school and community purposes.

Early works are sought under a separate REF approval, dated 19 August 2020. A summary of the works sought under the REF is provided below.

The proposed activity comprises:

- Internal refurbishment of Building D (existing classroom building adjoining Gladstone Avenue frontage);
- Installation of two (2) temporary portable classrooms (single storey) to Gladstone Avenue frontage; and
- Utility services infrastructure and associated removal of one (1) small tree within the site.

Clarification on the number of permanent buildings at the site and the number of demountable buildings (current and anticipated during construction). These should be clearly labelled on a diagram.

Permanent Buildings

Mosman High School currently contains five (5) permanent buildings on site, referred to Buildings A through to E. Refer to Site Plan below.

Demolition of Building B and Building C and part of E is proposed including a two storey roof overhang and separated amenities block and the existing elevated walkway that links Buildings B and C.

Buildings A and D will be retained due to their heritage value and significance to the site.

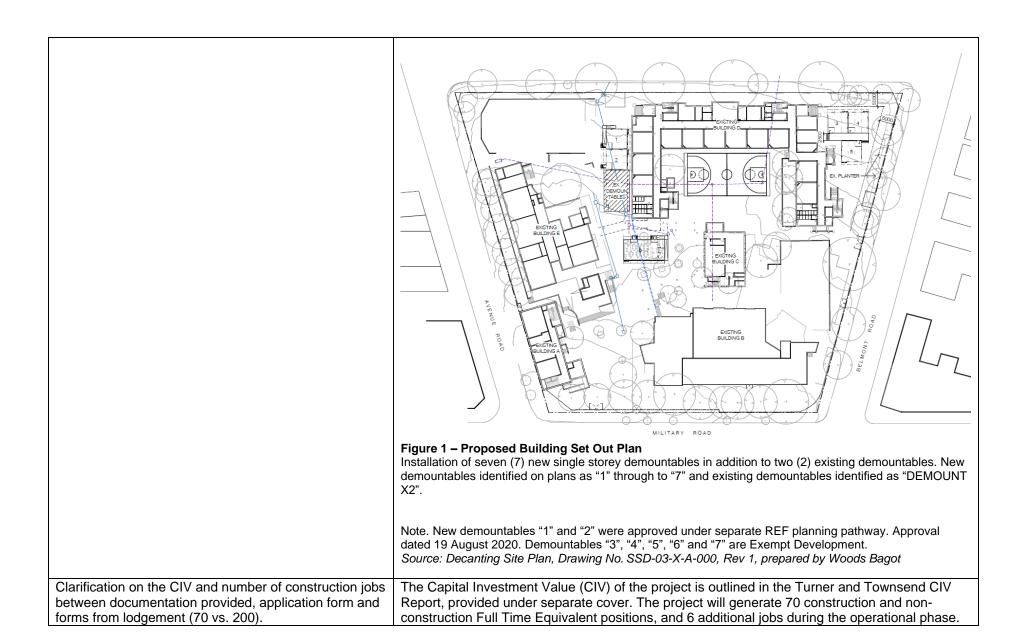
Demountable buildings

Mosman High School currently contains two (2) single storey demountables on site, located on the southern side of Building D.

As the school is required to remain operational during construction works, separate early works are being carried out in advance of the main works to install seven (7) temporary single-storey demountables on site, in addition to the existing two (2) single storey demountables including:

- Retention of two (2) existing single storey demountables, located to the south of Building
 D:
- Installation of two (2) single storey demountables located to the south of Building D
 (adjacent to the west of existing demountables); and
- Installation of five (5) additional single storey demountables (including three (3) located in the north-west corner and two (2) centrally within the site), setback 5m from street boundaries (Gladstone Avenue and Belmont Roads);

In total, there will be nine (9) demountables on Site during the construction of the proposed development. Refer to Decant Site Plan, prepared by Woods Bagot at **Attachment C**, extract of plan also provided below (overleaf).



Depicted detail and specific numbers of bicycle parks (both existing and proposed) and end-of-trip facilities.	This project is proposing to provide a total of 60 bicycle spaces, which accounts for 5% of students, as well as 6 bicycle spaces and an end of trip facility for staff to promote active transport. The proposed development has revised the end of trip facility provision and is now proposing to provide 4 showers and change rooms. These are identified as 'STAFF WC' on the Architectural Drawings (Attachment H) located throughout the new building and considered acceptable in accordance with relevant Education Facilities Standards and Guidelines (EFSG).
Confirmation of all operational hours of the school premises, including for school purposes i.e. band and sporting practice and community uses, including on weekends.	School operational hours are 7:30am to 5:30pm Monday to Friday. Current arrangements see the school used for out of hours functions circa 3 days per weeks up to 3.5 hours out the standard operational hours. Use post completion is to be determined via an operational management plan.
There are trees along Belmont Road that have been identified for removal in architectural drawings (e.g. Demolition Plan) which differs from those presented within the Arboricultural report. Given that no works are occurring in the immediate vicinity of these trees, justification for the removal of the trees is required. Additionally, consistency across all drawings and diagrams must be presented.	Trees 25 and 27 are the only trees being removed on Belmont Road, in order to accommodate the electrical substation and hydrant booster pump respectively. Refer to extract below from Arboricultural Impact Assessment Report, prepared by Birds Tree Consultancy. The tree's identified for removal in the Demolition Plan, prepared by Woods Bagot are reflective of those identified for removal outlined in the Arboricultural Impact Assessment Report, prepared by Birds Tree Consultancy are consistent. Refer to extract from the latter report below. The Tree Protection Zone (TPZ) of Tree 25 is encroached by the electrical substation location. The required excavation will encroach within the Structural Root Zone of this tree. This tree will not be viable to be retained. The Tree Protection Zone (TPZ) of Tree 27 is encroached by the booster pump location. The required excavation will encroach within the Structural Root Zone of this tree. This tree will not be viable to be retained. For clarity purposes, an updated Tree Location Plan in updated Arboricultural Assessment, prepared by Birds Tree Consultancy at Attachment D which shows that Trees 25 and 27 are identified for removal, i.e. "Tree Not Viable to be Retained due to Proposed Development" (highlighted yellow).

Traffic

Mitigation of the temporary removal of parking spaces during construction must be addressed.

PTC consultants provide the following response (as per traffic response at **Attachment M**):

School staff will be advised to adopt alternative transport modes for the duration of the construction including carpooling and public transport utilisation.

The contractor will put their usual processes in place to reduce car usage among construction staff. These measures include delivering all tools and equipment required to the site in the morning and removing it in the afternoon so that construction workers are not reliant on a car. As discussed in the CCTMP the workers will be instructed during the inception meeting to use public transport whenever applicable.

The traffic surveys and written surveys were undertaken following the completion of year 12. Given the frequency of senior students driving to school, please provide justification as to how the survey undertaken provides a wholistic view of the existing modal split generated by the existing development and the anticipated changes as a result of increased student numbers.

New online surveys have been undertaken in May 2021, to include Year 12 Students. These results are incorporated into the updated Traffic Impact Assessment (**Attachment E**) and the Green Travel Plan (**Attachment F**), also summarised below.

The results shown in the existing mode share table below highlight that there was a decrease in bus usage by 11% over 2019 to 2021. However, walking, car usage and other (including a combination of travel mode) all experienced a slight increase. The decrease of public transport use is likely to be attributed to the impact that COVID-19 has had on travel behaviour. The increase in "car as driver" responses by 2% is likely to be attributed to Year 12 students being included in the recent survey.

Table 1 Extract of existing mode share table (based on updated survey data)Source: Green Travel Plan, PTC Consultants

Mode	Students (average)		Staff (average)
	2019	2021	
Walk	37%	40%	4.3%
Bicycle	2%	2%	-
Bus	44%	33%	11.4%
Car Passenger	13%	16%	1.4%
Car Driver	1%	3%	71.4%
Other (motorcycle, taxi, car	3% (incl. combination of	6% (incl. combination of	11.4%
share)	modes)	modes)	

As part of the redevelopment of the school, there will be an influx in new students and staff travelling to and from the site on a daily basis.

It is anticipated that the new commuters will adopt a similar travel mode split to the existing staff and students. As such, PTC have provided mode share targets for both students and teachers, refer to the below:

Table 2 Extract of future mode share target

Source: Green Travel Plan, PTC Consultants

Mode	Students (average)			rage)	Staff (average)		
	2019 actual		As the Crow Flies Catchment		Proposed mode split		
	mode split	mode split	All Students	Within Enrolment Catchment		Current mode split	Proposed mode split
Walk	37%	40%	32%	42%	47%	4.3%	10%
Bicycle	2%	2%	48%	58%	5%	-	5%
Bus	44%	33%	2%	-	40%	11.4%	36%
Car Passenger	13%	16%	18%	-	6%	1.4%	16%**
Car Driver	1%	3%		-	1%	71.4%	28%
Other (motorcycle, taxi, car share)	3%*	6%*	-	-	1%	11.4%*	5%

^{*}Note: within surveys "Other" refers to a combination of modes rather than motorcycle / taxi / car share.

Within 6 months of completion of the redevelopment, a new survey will be conducted to assess whether the abovementioned targets have been met or if they need to be adjusted. It is not possible to guarantee that these modal split targets will be achieved as it is beyond the control of any Advisory Committee or TP coordinator, since staff and students are subject to free choice. Nevertheless, it is important that sustainable travel options and strategies are communicated and reviewed consistently to ensure a trend towards the set targets.

For further information refer to updated Traffic Impact Assessment (**Attachment E**) and the Green Travel Plan (**Attachment F**).

Parking surveys should take into consideration year 12 students driving to the school.

As above. New online surveys have been undertaken in May 2021, to include Year 12 Students. These results are incorporated into the updated Traffic Impact Assessment (**Attachment E**) and the Green Travel Plan (**Attachment F**), also detailed above.

Note. Year 12 students were not included initially due to timing of the project.

^{**}Note: Car passenger target for staff includes car-pooling with colleagues.

As observed during the traffic survey, multiple buses were observed to arrive simultaneously and queue at the Bus Zone along Gladstone Avenue, which can accommodate two buses only (with five scheduled to arrive simultaneously, which blocks a travel lane). Please provide detail of potential solutions to the queuing and/or justification for the existing operation, particularly given other pick-up/drop-off congestion occurring along Gladstone Avenue.

PTC consultants provides the following response (as per traffic response at **Attachment L**):

The queuing of the buses is an existing issue and its resolution is not part of this development application. It is noted that the proposed development is largely an asset replacement project, which is not expected to exacerbate the bus queuing issue. However, it is currently being investigated to stagger bus arrival times to address the issue of buses queuing along Gladstone Avenue. Consultation with TfNSW and the bus operator has been initiated and will be followed through alongside this submission. Alternatively, the bus zone can be extended to accommodate additional buses. Consultation with Council will be undertaken in due course.

Additionally, the capacity of Gladstone Avenue is modelled as LoS A. If the lane is periodically blocked by buses, additional justification of a LoS A is requested.

PTC consultants provides the following response (as per traffic response at **Attachment L**):

The video footage and site observation indicated that during the afternoon peak there is a queue of buses arriving at the same time at the bus stop located in Gladstone Avenue between Keston Avenue and Avenue Road; however, the queue does not extend to the intersection, which may be one of the reasons why the intersection is shown to be operating with a LoS A.

Further, the original SIDRA model was undertaken using default settings including the peak flow factor, which simulates the highest concentration of traffic within the peak hour. With a default factor of 0.95qp, the model increases traffic volume by 5% during the default 30-minute peak period. This time period is considered appropriate for the purpose of pick-up and drop-off; however, in order to simulate the potentially higher traffic demand due to the school operation, the SIDRA model has been rerun for the Gladstone Avenue / Keston Avenue intersection with a modified peak flow factor of 0.75qp, increasing the peak volume by 25%. The SIDRA results with the default parameters and the results of the modified model are presented in Figure 2 and Figure 3 at **Attachment L**.

The SIDRA results obtained by reducing the peak flow factor do not significantly differ from the results obtained with the default SIDRA parameters.

While the SIDRA modelling shows that the intersection has the capacity to accommodate the existing traffic, the issue of buses queuing is acknowledged, and the project is currently in discussions with TfNSW and the bus operator to try to resolve this by staggering the bus arrival times. Should this not be possible, an alternative will be to extend the existing bus zone, which would be discussed further with Council.

Noting that Military Road is often congested, clarification on the level of service outputs provided by modelling should be further justified and the existing congestion in the local area should be acknowledged. This should include detail of the contribution of the existing school operation to the congestion and the anticipated changes to this both during construction and operation or the proposed development.

PTC consultants provide the following response (as per traffic response at **Attachment L**):

It is acknowledged that Mosman area, and Military Road in particular, often experience high traffic volumes, which is noted to be an existing condition. The congestion is likely related to the wider road network, i.e., the Spit Junction, which is known to be oversaturated.

The following is noted in relation to traffic flows in roads surrounding the school (also shown in Figure 4 overleaf):

- Military Road is congested throughout the peak period, not only during the school drop-off, pick-up hours (refer to the red line in Figure 4 of Attachment L, extract also shown below);
- The congestion on Military Road results in periodic queueing along Belmont Road and Avenue Road due to vehicles trying to enter Military Road (refer to the orange dotted line in Figure 4 of **Attachment L**, extract also shown below);
- Queues on Military Road / Avenue Road intersection were noted due to vehicles waiting to give way to pedestrians on the zebra crossing, particularly during the school peak hours (refer to the green circle in the figure);
- Increased vehicular / pedestrian activity was noted on Gladstone Avenue during the school peak hours; however, this does not result in significant changes to the adjacent intersections.



Figure 2 - Traffic in the roads surrounding Mosman High School Source: PTC Response to Submissions (Attachment L)

The SIDRA modelling indicates that the intersections are able to process the demand flows in isolation of other influencing factors, e.g., a down-stream congested intersection (Spit Junction). What this tells us is that the intersections around the school do not need to be upgraded to increase capacity, as this does not address the broader issue of congestion along Military Road. Furthermore, the slight increase of traffic associated with the school does not alter this outcome, i.e. the modelled intersection can accommodate the additional volumes within the capacity.

In regard to the future traffic conditions, the proposed school expansion is expected to generate 19 and 9 additional trips during the AM and PM peak hours respectively, which lies within daily traffic fluctuation (refer to the Traffic Impact Assessment at **Attachment E**).

As outlined in the Concept Construction Management Traffic Plan (CCMTP) at Attachment G, it is expected that up to 10 vehicles will need to access the work zone per day, resulting is approximately 2-4 trips per hour. Noise Provide justification for the location of the loggers and JHA Services provide the following response (as per **Attachment N**): explanation as to why the attended and unattended loggers were not consistently placed at the most The noise surveys were undertaken in accordance with relevant standards and affected sensitive receiver. quidelines (which are referenced in the WSP's SSDA Acoustic Report and JHA's SSDA Acoustic Report) and the recommendations from these references were used to nominate the noise surveys locations as representative of the typical ambient and background noise levels around the site. As per the new building footprint, noise logger were located close to nearest sensitive receivers and are representative of noise levels in the catchment area of Military Road and Belmont Road (L2) and the residential catchment area to the West (L1). Values obtained on these locations have been used to establish the noise level criteria at the noise sensitive receivers. Attended measurements have been used to obtain octave band values of the ambient and background noise levels and verify the unattended noise levels measured.

The EIS states that normal construction works are expected to exceed the limits for highly noise affected receivers within standard hours, however compliance can be achieved through specific noise mitigation measures. The detail of the measures that would mitigate noise levels has not been provided. The Department requests detail on the measures to be implemented to reduce construction noise impacts and ensure compliance with noise guidelines.

When the preliminary CNVMP was produced for the Acoustic Report for SSD, this was at the early planning stage, and specific details of the construction methodologies, staging and plant were unknown or not defined.

Now that a contractor has come on board, JHA have undertaken a new assessment for construction plant, which highlight 3 items of equipment that will exceed the highly sensitive noise criteria. Refer to Table in **Attachment N**, extract also provided below.

Table 3 Updated assessment of updated construction plant, prepared by JHA, dated 04/06/21

ltem	Typical Power Noise Level L _{Aeq} (dB ref 1pW)	Predicted Noise Level L _{Aeq,15m} at nearest residential receiver	Complies with Highly Noise Affected Criteria?
Circular saw	112	67-75	No
Piling rig	117	72-80	No
10-40t Excavator	114	69-77	No
Concrete pump	108	63-71	Yes

JHA Services have proposed the following mitigation measure for the three (3) items of equipment that exceed the highly sensitive noise criteria:

when the aforementioned equipment is used, they shall be carried out continuously and not exceeding a maximum of 3 hours, with a minimum respite period of one hour. These high noise generating activities must be avoided during weekdays early hours of day-time period (7am to 8am) and late hours of day-time period (5pm to 6pm).

The above measure is considered acceptable due to the nature of the activities being in an open space (i.e. not outside) and is consistent with guidance in the NSW EPA Draft Construction Noise Guidelines, which states:

"Where noise is above the highly noise affected management level, all feasible and reasonable mitigation shall be applied as well as engagement with the consent authority or regulator to identify other measures to manage the noise impacts.

	Where appropriate, engagement with the community is encouraged to determine the preferred mitigation approach, such as: - Negotiated agreements and/or respite periods to restrict noise activity Identification of times when the community is less sensitive to noise, including options for long periods of construction in exchange for restrictions on construction times." Refer to Attachment N for further detail.
The technical noise assessment (Appendix AD) needs to include further consideration of recommendations and strategies for the mitigation of construction noise. The impacts are anticipated to be significant and measures must be proposed – consultation with the community is not considered sufficient.	As above.
The detail provided on operational noise is lacking, particularly considering the school is an operational site. Please include further detail of the noise impacts upon sensitive receivers anticipated with out of hours use of the site, as well as with public address and school bell systems. This detail should include comparison of the existing operational noise levels to the predicated operational noise levels of the proposed development.	The operational noise generated by the additional population is considered minor. As stated in the Response to Submissions Report, prepared by JHA Services (Attachment N), the additional population represents a 0.4dB increase of the operational noise levels. This difference cannot be discerned by any average listener as 1dB represents the 'Just Noticeable Difference'. The noise impact assessment of the use of School facilities during Out of School Hours have been carried out for evening-time period (6pm to 10pm). Any event at the school beyond the Out of School Hours shall be subject to an Out of School Hours Noise Management Plan. Regarding the Public Address and School Bells, the design of the systems would be carried out as part of the Detailed Design phase so there is no specification or acoustic data available at this stage. JHA have further stated that: "It is proposed that all new loudspeakers would be integrated with the existing systems as appropriate and not facing noise sensitive receivers around the School. The new loudspeaker locations will be selected to cover both internal and external areas and it is not anticipated that the addition of these loudspeakers would result in any increase of PA system noise at the residential receivers around School."
Department of Planning Industry and Environment (I	
No comment	l N/A

Government Architect NSW

The proposed tree canopy cover is 23.5% which falls below the minimum target of 30% recommended in the advice letter dated 09.02.21. It is recommended that additional tree planting to achieve a canopy cover of 28%, as stated in Section 8.0 of the Landscape Report be pursued.

Despite site constraints, the proposal seeks to maximise tree canopy across the site by maintaining existing trees where possible and providing additional canopy where practical and appropriate.

The Draft NSW Greener Places Design Guide sets indicative target of greater than 25 per cent tree canopy cover in urban residential (medium- to high-density) and light commercial areas.

Given the urban nature of the site, proposed building footprint and already highly programmed open spaces the further addition of trees across the site would impact the circulation and activities in the open space.

As such, the proposed development seeks to increase tree canopy from 21.2% (existing) to 24.6%.

A CPTED analysis has been provided as required in the advice letter dated 09.02.21. It is unclear how the external spaces designated as 'out of bounds' areas, due to their opportunity for concealment, will restrict access to students. It is recommended that further detail clarifying how access will be restricted to the out of bounds areas be provided.

Black Beetle provide the following response (as per response at **Attachment O**):

Areas of the school designated as out of bounds in the new design scheme are generally maintained in line with current 'out of bounds' areas. As such, these areas (including additional areas along the northern boundary) will be managed operationally by the school in line with their current management practices for these areas.

Built form

It appears that the level 4 roof court and stair core 3 will obstruct sightlines from the footpath on the east side of Military Road.

In addition to this, the height of the netting is identified as a minimum, which leaves open the possibility that the net height may be increased. This represents a departure from one of the commended elements of the architectural design strategy: that the stepped massing provided unobstructed sightlines from the footpath on the east side of Military Road.

It is recommended that the design be reconfigured to achieve the unobstructed sightlines.

Woods Bagot Architects provide the following response (as per ${f Attachment}\ {f M}$):

The annotation of the netting has been updated to "Max. 8.5m Height" on both SSD-2206 and 3201 at **Attachment H**.

The roof top play court is an important part of meeting the outdoor space requirements for the school. The netting material is visually permeable and will be recessive with sky and light penetrating through and making it recede with minimal visual impact.

The stair core is positioned to maximise roof space and building efficiency and required for egress and access. It has been sculpted with a scooped roof to minimise impact as much possible and is proposed to be clad in a metal that will recede visually and reflect the sky. In both cases, the predominant visual experience from the east side of Military Road will be that of the mature existing trees that will remain.

The façade design has responded to the built form recommendations by introducing colour and varied window reveals to express a more playful quality. While the playful quality is commended the irregular treatment and application of colour, window size, height, proportion and reveal treatment lacks an underlying logic and does not relate to the internal program.

It is recommended that the façade composition provide more disciplined approach to the application of the playful façade elements and articulation, to achieve a balance between its playful qualities and civic presence. Woods Bagot Architects provide the following response (as per **Attachment M**):

Playfulness of the varied window size and colours contribute to the façade articulation along Military Road. The value proposition for the window arrangement was not to relate directly to the room use but for any use now or in the future. The brief requirement was for "flexibility for the future" and the response therefore was to create the building as a vessel for many learning environments. These will change in the future depending on pedagogy shifts and school curriculum requirements.

A clear design logic has been followed for both colour selection and sizing.

The variety of colour originates from both the natural and built landscape of Mosman. Being located in an area of vibrant native Australian nature and historic buildings, a wide range of colour has been pulled from the context to create a palette for the façade. Refer to image 1 below. (Note. Refer to **Attachment M** for high resolution of façade palette).



Figure 2 – Façade Palette Source: Woods Bagot

Using the colours from the surrounding context, they have been applied to the window frames in a continuous way that changes hue as it wraps around the building. The experience of the building will vary depending on the location being observed. Further detail has been added by using a gradient to fade out the colour as it climbs up towards the top level of the building.

The colours have been adjusted, muting them further to decrease the intensity while retaining the colour scheme and its playful nature.

Refer to updated render at Attachment I and Figure 3 below.



Figure 3 Facade Detail Source: Woods Bagot

The variety of window sizes reflect and reinterpret the local heritage, where a variety of window articulation can be found. The protrusions aid in solar shading. The window sizes have been rationalised to a few types for ease of buildability. A datum locates the centreline (red line), and sill height (blue line) to ensure that the coloured metal panel is consistent across the façade. Refer to image 2 below at **Attachment M**.

No change has been made in relation to the sustainability recommendations, and the advice provided 09.02.21 still applies.

Extract of sustainability recommendations from Government Architectus NSW is provided below.

Sustainability

The proposal adopts a compliance-based approach to sustainability that lacks ambition and has failed to address the comments from the first SDRP session. To achieve a supportable outcome the following is strongly recommended:

- The demonstration of leadership in sustainability; acknowledging that Woods Bagot is a founding signatory of Architect's Declare Australia.
- An ambitious sustainability strategy.
- Details of the proposed ESD initiatives.
- Details of the proposed passive design strategies to ensure that access to natural light and ventilation are maximised for all internal spaces.
- Demonstration of how the sustainability initiatives optimise the school's pedagogical approach.

Woods Bagot Architects provide the following response (as per **Attachment M**):

The scheme meets the SINSW current directives for 4 star green star equivalency and renewable energy. Passive measures have been implemented, including good daylight and ventilation measures, solar shading and good thermal insulation design to BCA 2019.

The external brick façade has been designed to achieve adequate thermal performance by providing thermal mass shaded by preserved trees for sun control and thermal management. The amount, location, size, glazing and thermal performance of windows are conducive to best practice outcomes for daylighting, natural ventilation and thermal performance.

The underlying principles used for optimisation of window openings are:

- To provide adequate openings that enable a natural ventilation strategy in line with requirements of the Educational Facilities Standards and Guidelines for natural ventilation.
- To maximise daylight penetration in general learning spaces
- To ensure compliance with NCC 2019 Section J

An arboricultural study has been undertaken to outline the health, condition, and stability of existing trees as well as the viability for retention within the context of proposed development works.

Tree preservation has been established as a high project priority and most trees will be retained. New trees and vegetation will also be planted as part of the landscaping strategy to increase tree canopy cover and improve ecological value. Most existing trees on Military Rd and Belmont Rd will be preserved to help cool the building façade and the school grounds in hotter days.

The landscaping strategy includes deciduous tree plantings to the west to block direct sun light in summer and allow it in winter. The landscape strategy not only contributes to shading of building facades, but also provides a comfortable micro-climate both within the building and on school grounds.

Roof vegetation will assist with management of solar thermal loads on roof and will provide shade for open play spaces included in the landscape strategy.

The landscaping strategy includes deciduous tree plantings to the west to block direct sun light in summer and allow it in winter. The landscape strategy not only contributes to shading of building facades, but also provides a comfortable micro-climate both within the building and on school grounds.

Roof vegetation will assist with management of solar thermal loads on roof and will provide shade for open play spaces included in the landscape strategy.

Mosman Council

General

Council supports the redevelopment of Mosman High School as this provides positive public benefits including improved teaching and supporting facilities for the school community. However, there are some issues of concerns and recommendations that Council would like to make and these are discussed below.

Noted.

Height

Having a new 4/5 level building with a rooftop play court and an overall height of 24m is a concern as this would be visible from Military Road/Belmont Road and the height and form of the upper levels of the proposed building are not consistent with the existing streetscape pattern in the Military Road Heritage Conservation Area. Further the proposed building may be seen as setting an undesirable precedent for future development in this area.

The proposed Building G reads as a part 3/ part 4 storey building plus lift overrun and multi-court enclosure to both Belmont Road and Military Road, with the fourth storey mostly recessed back from view.

The effective proposed building height is part 4 / part 5 storey building as the fifth storey is for lift overrun (maximum RL 9855), plus the height of the rooftop playcourt enclosure which represents the maximum proposed building height (RL 102260 / approximately 24.26 metres above existing ground level).

The proposed building height has been established to respond to the existing heritage Buildings A and D and surrounding built form along the existing streetscape and the Military Road Heritage Conservation Area.

The proposed 3-storey street frontage height has been established by the height of the parapet of the adjacent heritage Building A on site. The proposed fourth storey is recessed and set back from Military Road and Belmont Road to limit its visibility.

Further, the part removal of Building E and demolition of Building C improves views into and out of the site which improves the overall appearance of site density.

Visual Impacts

Visual impacts have been assessed from key vantage points including along Military Road and Belmont Road. These are evaluated in the EIS, Architectural Design Statement (**Appendix G**) and Heritage Impact Statement (**Appendix J**).

Whilst the upper levels and rooftop play area are visible from certain vantage points along Military Road, the overall visual impact is acceptable given that:

- Existing trees along Military and Belmont Road will screen the proposed building;
- The proposed new building in scale with existing trees on Military Road;
- The topmost floor level of the building has been set back from the facade so as to limit its visibility, particularly when viewed directly from the east of Military Road;
- The multi-court enclosure is set back from the street and consists of a mesh netting material that is transparent in nature, rather than solid mass which will thereby minimise overall visual impact;
- The use of finer grain, lightweight materials have been adopted for the upper level of the building to reduce overall visual appearance.

Overall, the visual impact of the proposal is considered acceptable.

Height, building form and precedent for future development

The site has long been used as a school and its redevelopment will ensure its longevity as a school is maintained, whilst keeping its heritage significance and integrity of the Military Road Conservation Area intact.

There are existing precedents in the Military Road Conservation Area both within the site and elsewhere in the streetscape for large footprint buildings and over two storeys in height including:

- Three (3) storey developments at 645, 647, 706, 732, 748, 762, 770, 774, 786, 790, 806, 814, 822, 830 Military Road;
- Four (4) storey developments at 696, 700, 701, 705, 719, 778 Military Road and 5 Mandolong Road;
- A five (5) storey development at 710 Military Road;
- An eight (8) storey development at 695 Military Road; and
- A nine (9) storey development at 667 Military Road.

The proposed new building has been designed to sensitively respond to Military Road Conservation Area context through building form, scaling it down to surroundings, and in its use of compatible materials and finishes. In addition to the above, given the physical features of the site and its context, it would be unreasonable to expect that development must respond with only two storeys (and fine grain-built form), particularly to the Military Road frontage. This is because of the following reasons: - The subject site is large, with large existing buildings and is therefore an anomaly in the streetscape and the Conservation Area. The site is zoned for infrastructure purposes (SP2 Educational Establishment), unlike other zoning patterns along the streetscape which are zoned B2 Local Centre, R2 Low Density Residential and R3 Medium Density Residential, and will therefore not set a precedent for future development for non-school purposes. The site does not form part of the Mosman Junction Business Centre, as mapped in the Mosman DCP 2012 and is therefore not subject to the same DCP development controls unlike the remainder of the Military Road Conservation Area. One of the existing buildings on site (known as Building A) is a heritage item, constructed in 1904 and is situated in the Military Road Conservation Area. Building A is a key physical element along the Military Road streetscape and is built to a larger scale than most of the streetscape and with no setback. The proposed height strategy for the site has the fourth storey largely outside of the Military Road Conservation Area boundary. Buildings that are effectively three storeys in height are not uncommon, particularly on large, corner sites, as well as other examples of multi storey buildings between 3 and 9 storeys along the Military Road streetscape and within the Military Road Heritage Conservation Area (refer to list of properties above). The street setback of the existing Building A will be maintained, including part of the line of existing trees to provide a natural landscape screening / buffer along Military Road. Overall, the proposed development will deliver a significant public benefit, for the purposes of important public social/educational infrastructure that will benefit the needs of the local community. Underground facilities are not proposed as part of this proposal as it is not a viable outcome for Consideration should be given to providing some underground facilities to reduce the bulk and scale of the site, nor is it in line with EFSG requirements. the development or distribute it around the site.

Horitago	
Heritage	Noted Defeate the holes.
It is not clear how comfortably the brightly colour	Noted. Refer to the below.
projecting bay windows of the building will sit in the	
Heritage Conservation Area. In this regard, Council's	
Heritage Advisor has reviewed the plans and raises no	
objection on heritage grounds but makes the following	
comments:	
An archival recording should be made of the	Agreed and noted.
buildings proposed to be demolished and lodged	
with Council's Local History Library	
2. In terms of the colours facing the Military Road	Further detail has been added by using a gradient to fade out the colour as it climbs up towards
Heritage Conservation Area, it is recommended	the top level of the building.
that the window surrounds facing Military Road be	
more muted. Brighter colours facing away from	Refer to updated Architectural Drawings (Attachment H) and updated render (Attachment I).
Military Road may be acceptable.	
Parking and Traffic	
Council's Traffic Engineer has reviewed the proposal	Refer to the below.
and makes the following comments:	
Parking – Council	PTC consultants provide the following response (as per Attachment L):
Council receives regular feedback from the local	
community regarding the high demand of parking in	Mosman High School is an existing facility and the proposed population increase is minor
the area, generally attributed to staff and students of	with only approximately 100 additional students across different year groups.
Mosman High. Council recommends that provision	
should be made for on-site basement level car parking	SINSW has deployed a process of school upgrades which involves a holistic review of
to cater for the existing and increased demand for	measures that would help decrease the use of private vehicles and instead increase
parking associated with the use of the site.	walking, cycling and public transport use to commute to and from the school.
	This project is proposing to provide a total of 60 bicycle spaces, which accounts for 5% of
	students, as well as 6 bicycle spaces and an end of trip facility for staff to promote active
	transport. From the online surveys, it is known that some staff members are likely to take
	up walking or cycling with the provision of an end of trip facility, which in turn will reduce
	parking demand.
	A Green Travel Plan has been prepared outlining measures to promote active and public
	transport and carpooling. SINSW is committed to implementing these plans across all
	new developments; A travel plan coordinator will be employed to coordinate the
	implementation of these measures and monitor the mode shift.

	Further, the school is committed to enforce the enrolment catchment boundaries more strictly, which will reduce the travel distance and therefore potential car dependency for students. Lastly, while not part of this development application, SINSW is investigating the installation of a pedestrian crossing facility across Gladstone Avenue at the intersection with Avenue Road. This will increase safety and therefore the likelihood that more students chose to walk or cycle to school. Considering all the above, it is anticipated that the parking demand will not increase with the proposed development, and therefore, no additional on-site parking spaces should be required.
2. Disabled car parking The proposal to rely on street disabled parking is not supported and a disabled car parking space should be provided off street.	PTC consultants provide the following response (as per Attachment L): There is currently an on-street disabled parking bay that services the schools' requirements and the project is proposing to maintain this arrangement. This is deemed an equitable solution and has been deemed as the preferential outcome to ensure maximum on-site space is maintained.
3. Bicycle Parking Facilities The provision of only a single shower and change room for a large co-ed school is considered counterintuitive to the stated objectives, not meeting Austroads guidance and Council DCP requirements. A lack of end of trip facilities will certainly constrain the School's ability to promote and enable cycling for staff and students.	PTC consultants provide the following response (as per Attachment L): The development has revised the end of trip facility provision and is now proposing to provide 4 showers and change rooms.
4. Pedestrian facilities Council supports the installation of a pedestrian crossing facility across Gladstone Avenue at the intersection with Avenue Road and would be open to discussion with SINSW.	SINSW is willing to investigate this matter with Council; however, it is noted that this work lies outside the scope of this SSDA. Further discussions should be held parallel to this submission.
 5. Construction Traffic Management Plan Should be referred to Council's Traffic Committee for approval Council would prefer that construction vehicles are kept on arterial roads 	PTC consultants provide the following response (as per response at Attachment L): The project is willing to work with Council and the community to agree on a construction program and transport routes acceptable for all user groups.

The CTMP has been revised to provide a detailed construction program which takes into consideration Council's and TfNSW's concerns in relation to construction traffic impact on both local and state roads. The construction program proposes to disperse the construction vehicle traffic so that the impact is reduced on any particular road.

Tree Protection

To ensure that trees identified are retained and protected, it is recommended that conditions be imposed to ensure effective tree protection measures are provided prior to any works commencing.

Noted.

Pre-Construction and During Construction Tree Protection measures are outlined in Sections 9 and 11 of the Arboricultural Impact Assessment (**Attachment D**).

Transport for NSW

Construction Traffic Management Plan (CTMP)

Comment

In Section 5.8 of the preliminary CTMP the applicant proposes the relocation of the existing stop line on Belmont Road approach at Military Road. The applicant previously consulted TfNSW regarding this measure when the EIS being prepared. TfNSW raised and reiterated the serious concern of relocating the stop line at this location, due to the significant impact on the Traffic Signal Control (TCS) infrastructure, including

underground loop detectors, traffic signal post, pedestrian crossing, access ramps, signage, pavement marking and kerb side parking post and signage.

Recommendation

It is requested that the Proponent:

- Investigates alternate measures for heavy vehicle access.
- Alternatively, if this measure proceed, proper TCS and intersection design with a supportive comprehensive Traffic and Transport Assessment should be submitted to TfNSW for review and approval.

PTC consultants provide the following response (as per **Attachment L**):

The project is no longer proposing to relocate the stop line at the Military Road / Belmont Road intersection. Instead, the CTMP has been revised to provide a detailed construction program which takes into consideration Council's and TfNSW's concerns in relation to construction traffic impact on both local and state roads. The construction program proposes to disperse the construction vehicle traffic so that the impact is reduced on any particular road.

Comment

The swept path diagrams within the CTMP are not clear enough for TfNSW to complete the assessment and provide comment.

Refer to attached swept path diagrams provided by PTC consultants in DWG format for TfNSW's assessment, provided under separate cover.

Recommendation

It is requested that the Proponent to submit the swept path diagrams in DWG format to TfNSW for review.

Active Transport

Comments

Current NSW policies state the importance of walking and cycling to increase access to local centres and integrating transport with land use as part of the whole customer journey. Future Transport 2056 emphasises the importance of walking and cycling for short trips and reinforces the importance of walking and cycling to increase the catchment of public transport as part of the whole customer journey.

Building Momentum - State Infrastructure Strategy 2018-2038 includes recommendations related to walking and cycling, including integrating transport with land use; managing travel demand; unlocking capacity in existing assets; and improving population health outcomes through more active transport.

Recommendation

It is requested that prior to the issue of the first Occupancy Certificate, the applicant be conditioned to provide bicycle parking and end of trip facilities for staff, students and visitors in accordance with Australian Standard AS1742.9:2018 Manual of Uniform Traffic Control Devices - Bicycle Facilities, and Cycling Aspects of Austroads Guides including:

PTC consultants provide the following response (as per **Attachment L**):

SINSW has deployed a process of school upgrades which involves a holistic review of measures that would help decrease the use of private vehicles and instead increase walking, cycling and public transport use to commute to and from the school.

A Green Travel Plan has been prepared outlining measures to promote active and public transport and carpooling. SINSW is committed to implementing these plans across all new developments; A travel plan coordinator will be employed to coordinate the implementation of these measures and monitor the mode shift.

As part of the above, this project proposes to provide bicycle spaces for students and bicycle spaces and an end of trip facilities for staff to promote active transport. Bicycle racks for students are accessible via Avenue Road and Gladstone Avenue. Cycling facilities are shown in Attachment 1 in the TIA.

It is noted that while the proposed development is Crown Development, and as such, Occupancy Certificates do not apply. Despite this, the Applicant accepts the recommended condition of consent.

 Locate bicycle parking and storage facilities in secure, convenient, accessible areas close to the main entries incorporating adequate lighting and passive surveillance and in accordance with Austroads guidelines.

Public Transport Considerations

Comment

Details of current transport networks and current daily and peak hour services in both the TIA and Green Travel Plan are outdated and need to be revised.

Green Travel Plan:

- Figure 8 shows an outdated network map:
- On page 21 (document page 17) of the routes listed in the 1st paragraph, only the 228 is still operating and the previous route 230 (missing), is also still operating:
- Figure 9 is no longer current. The route shown on Avenue Rd as the 244 is the 230;
- Table 1 Summary of Bus Services needs to be updated, as most of the routes no longer exist; and
- Figure 10 Summary of School Bus Services, the 575n no longer operates and is replaced by additional frequency on 100, 114 and 230.

Recommendation

The TIA and GTP need to be updated to reflect accurate public transport information. The most current Bus Network Maps may be found at:

https://transportnsw.info/travelinfo/ways-to-get-around/bus/bus-operator-maps

The bus routes and timetables have been amended in the updated Traffic Impact Assessment (**Attachment E**), Green Travel Plan (**Attachment F**), and Concept Construction Management Traffic Plan (**Attachment G**).

Green Travel Plan

Comment

TfNSW notes the Green Travel Plan prepared by ptc; the Plan includes some measures to encourage mode The bus routes and timetables have been amended in the updated Traffic Impact Assessment (**Attachment E**), Green Travel Plan (**Attachment F**), and Concept Construction Management Traffic Plan (**Attachment G**).

shift and mode share targets. Some information in the GTP needs to be updated including bus map please review

(https://transportnsw.info/document/5202/region-8-map-january-2021.pdf) and School Term Bus pass eligibility

(https://apps.transport.nsw.gov.au/ssts/#/termBusPass).

Recommendation

The applicant shall prepare an updated Green Travel Plan in consultation with TfNSW. The applicant shall submit a copy of the final plan to TfNSW for endorsement at

development.sco@transport.nsw.gov.au, prior to the issue of the first occupation certificate. The Green Travel Plan should include, but not be limited to:

- analysis of current travel survey data and school postcode data and discussion of how this data has informed the mode share targets and actions of the GTP:
- identifying the number of staff and students within reasonable walking / cycling distance;
- staged mode share targets for staff, students and visitors which reflect a commitment to increase non-car mode share for travel to and from the site;
- implementation strategy that commits to specific actions (including operational procedures to be implemented along with timeframes) to encourage the use of public and active transport and discourage the use of single occupant car travel to access the site;
- details of bicycle parking and dedicated end of trip facilities including but not limited to lockers, showers and change rooms and e-bike charging station(s) for staff and students to support an increase in the non-car mode share for travel to and from the site;

A Green Travel Plan has been submitted as part of the SSDA. Apart from the above, no comments have been received from TfNSW.

All of the points made by TfNSW have been addressed in the Green Travel Plan (**Attachment F**). Below is a reference of sections in which the individual points have been addressed:

- 1. Refer to Section 6.1
- 2. Refer to Section 6.2
- 3. Refer to Section 6.2 a staged approach is not seen as required for this school, as active and public transport are already strongly represented.
- 4. Refer to Section 8
- 5. Refer to Section 7.2.2
- 6. This will be provided as part of the operational GTP
- 7. Refer Section 8.1
- 8. Refer Section 7.3 and Section 8.4
- 9. Refer Section 4.1. Section 7.3 and Section 8

- a Transport Access Guide for staff, students and visitors providing information about the range of travel modes, access arrangements and supporting facilities that service the site;
- a communication strategy for engaging with students, staff and visitors regarding public and active transport use to the site and the promotion of the health and wellbeing benefits of active and non-car travel to the site:
- include a mechanism to monitor the effectiveness of the measures of the plan; and
- the appointment of a Travel Plan Coordinator responsible for implementing the plan and its ongoing monitoring and review, including the delivery of actions and associated mode share targets.

The plan shall be reviewed annually for at least the first five years and involve surveys, evaluation and review.

Transport for NSW has developed a Travel Plan Toolkit designed for the person or group responsible for developing and implementing a Travel Plan. This toolkit provides the steps, templates and resources for developing a comprehensive Travel Plan and may be accessed at:

https://www.mysydney.nsw.gov.au/travelchoices/tdm

Heritage NSW - Aboriginal Cultural Heritage

The ACHAR provided is incomplete and does not comply with the project SEARs. A complete and finalised ACHAR is required to inform the project approval. A preliminary review of the current ACHAR has identified the below recommendations:

 The current ACHAR states that the "Further comments are expected on the completion of Stage 4 of the Consultation Requirements" An updated Aboriginal Cultural Heritage Assessment Report (ACHAR) (**Attachment J**) and Aboriginal Archaeological Report (AAR) (**Attachment K**) has been prepared by Austral Archaeology, dated 2 June 2021.

The ACHAR includes evidence of a complete and finalised consultation process both within the report and in the appendices. All missing appendices have been attached and an unexpected finds procedure has been included for the unlikely event that an intact soil profile is identified containing Aboriginal cultural material.

(Section 5.2.4), indicating that the consultation of the Registered Aboriginal Parties (RAPs) has not been completed. As per Section 11.3 of the project SEARs, Heritage NSW requires a complete and finalised consultation process.

- Any comments received from the RAPs must be collated and incorporated into Section 3 the report (as per Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW 2010, DECCW) as well as the cultural significance assessment, impact assessment, and management and mitigation measures.
- Appendices C-F are missing from the current ACHAR. Both Appendices E and F are noted in the ACHAR but not included
- There is a need to consider the potential to uncover intact soil profiles during the Historical Archaeological excavations which may contain Aboriginal Heritage and contact archaeology. While it is noted in the ACHAR (Sections 2.2 and 4.30 that artefact bearing horizons are generally constrained to the top 300 mm, there is potential for remnant soil profiles within the development area. Variable levels of fill (200-900 mm) were identified in the Geotechnical Report (Appendix R of the EIS) with residual soil identified below. A methodology is required that outlines that process that will be undertaken if Aboriginal Objects are identified during the Historical Archaeological excavations.

It is recommended that the unexpected finds procedure be included as a proposed mitigation measure.

Heritage NSW - Heritage Council of NSW

The following archaeological Conditions are recommended to be included in any approval of the SSD proposal:

- 1. Before excavation that may disturb archaeological 'relics', the Proponent must nominate a suitably qualified Excavation Director who complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (2019) to oversee and advise on matters associated with historic archaeology and advise the Department and Heritage NSW as necessary during the course of the project works.
- The Excavation Director must be present to oversee the excavation and advise on archaeological issues. The Excavation Director must be given the authority to advise on the duration and extent of oversight required to ensure that archaeological 'relics' are recorded to an adequate standard.
- 3. A final archaeological report must be submitted to the Department, and to the Heritage Council of NSW, within one year of the completion of archaeological excavation on the project. That report must comply with and respond to the Archaeological Research Design provided by Austral Archaeology in March 2021.
- 4. The Proponent must ensure that if substantial intact archaeological deposits and/or State Significant relics not identified in the Archaeological Assessment prepared for the project are discovered, work must cease in the affected area(s) and the Heritage Council of NSW must be notified in accordance with s.146 of the Heritage Act 1977. Additional assessment and approval from the Department may be required prior to works

Agreed and noted.

Agreed and noted.		
Noted.		
Agreed and noted.		
Agreed and noted		
Agreed and noted.		
NSW Environmental Protection Authority (EPA)		
N/A		