planning consultants

Submissions Report

State Significant Development – SSD-41372302

Marsden Park New High School and Melonba New Primary School

20 Kaluta Avenue and 10 Swallowtail Street, Melonba
(Lot 30 DP 1237735)

Prepared for: School Infrastructure NSW
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The State-led strategic planning of the Marsden Park land release associated with the North West Growth Centre identified a six (6) hectare site at Elara Boulevard, Melonba to provide a new primary school and new high school to cater for the new population of the area.

The project involves the delivery of these two (2) new schools - Marsden Park High School and Melonba Primary - at 20 Kaluta Avenue and 10 Swallowtail Street, Melonba to cater for a combined total of 3,000 students, supported by 219 staff. As the works have a capital investment value exceeding $20 million, the project is deemed to be State Significant Development under *State Environmental Planning Policy (Planning Systems) 2021*.

The State Significant Development Application was exhibited between Tuesday 18 October 2022 and Monday 14 November 2022 in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).

A total of 20 submissions/agency advice were received including nine (9) from public authorities and 11 from individuals including one (1) local member of parliament.

Submissions were generally supportive of the proposal to provide a new primary and high school on site and stressed an urgency for the delivery of this infrastructure as soon as possible. The issues raised in the submissions primarily relate to transport and car parking, built form and local character, tree canopy and landscaping, ecologically sustainable development, flood risk assessment and mitigation, stormwater management and utility servicing.

Some submissions requested that consideration be given to the proposed scale and design of the built form. These submissions questioned the adequacy of building separation, suitability of the proposal in relation to local character, and layout and orientation of buildings. Concern has also been raised regarding the lack of differentiation between the proposed primary school and high school. The proposed design for the schools is a result of analysis of the site, consideration for the needs of the catchment, and extensive option testing, revision and consultation. Additional explanation and justification for design decisions has been provided in this report and its attachments.

Two (2) key questions arose from the submissions received in relation to potential traffic impacts. It was requested that additional modelling and investigations be undertaken to confirm base traffic assumptions and that further work be undertaken to confirm the anticipated mode share to quantify the anticipated additional vehicle trips. This additional modelling and analysis has been prepared and is provided in the revised Traffic and Accessibility Impact Assessment, Construction Traffic Management Plan, and School Travel Plan accompanying his report.

Submissions contained conflicting opinions in relation to optimal car parking provision on site. With consideration for the views of Transport for NSW (TfNSW) to reduce parking provision and of Blacktown City Council (Council) to increase parking provision, a balance has been struck to encourage alternative transport mode use as much as possible, while providing adequate parking provision for those staff who cannot be dissuaded from driving to site.

Questions have been raised regarding the analysis of potential flood impacts on the site. The Stormwater and Flooding Report has now been updated to incorporate the full range of flooding events based on the latest available data and is further supported by an addition precedent study of flood-effected schools in the local area. This information has been used to revise the Flood Evacuation Response Plan, developed in consultation with the NSW State Emergency Service to ensure the proposal does not result in an increase in risk to life, health or property of people living on the floodplain.

The Environmental Impact Statement (EIS) and supporting documentation responds in full to the SEARs. The potential impacts of the proposal have been documented, the views of public authorities and the public have been considered, and the DPE has sufficient information to be able to assess and determine the SSDA.

1 Introduction

1.1 Introduction

In September 2022, School Infrastructure NSW (SINSW) submitted State Significant Development Application (SSDA) No. 41372302 to the NSW Department of Planning and Environment (DPE) for the construction and operation of two (2) new schools being a new high school in Marsden Park and new primary school in Melonba, located at 20 Kaluta Avenue and 10 Swallowtail Street, Melonba (the site).

The SSDA was notified between Tuesday 18 October 2022 and Monday 14 November 2022 in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation). Submissions and agency advice was received from:

- DPE, Biodiversity and Conservation (**Table 1**);
- DPE, Heritage NSW (**Table 2**);
- DPE, Social and Infrastructure Assessments (**Table 3**);
- Government Architect (GA) NSW (**Table 4, Table 5** and **Table 6**);
- Transport for NSW (TfNSW) (**Table 7**);
- NSW State Emergency Service (SES) (**Table 8**);
- Blacktown City Council (Council) (**Table 9** and **Table 10**);
- Sydney Water (**Table 11**);
- Endeavour Energy (**Table 12**); and
- Eleven (11) public submissions (**Table 13**).

The project team has reviewed the submissions/agency advices and responded to each item raised. This report has been prepared in accordance with *State significant development guidelines – preparing a submissions report 2022*. It provides an analysis of submissions received, summary of responses and identifies where each item has been addressed.

1.2 Meetings and Further Consultation

The following consultation and community engagement will continue to be undertaken through the detailed design and construction stages of the proposal.

SINSW will continue to update the project webpages (for both the primary school and high school) and produce updates at key project stages for stakeholders and communities in accordance with the SSDA Engagement Report prepared by WSP (September 2022). In particular, the following additional consultation is anticipated:

- Council – regarding pedestrian crossing and public works design;
- TfNSW - regarding bus services;
- Indigenous community – further consultation to be undertaken with representatives of the local Indigenous community, to be facilitated by Comber; and
- OSHC provider - regarding detailed design of OSHC facility.

The following practices and procedures will be undertaken during construction:

- Provide information to neighbours before and during construction;
- Maintain good communication between the community and Project staff;
- Have a documented complaints process and keep register of any complaints;
- Give complaints a fair hearing and provide for a quick response; and
- Implement all feasible and reasonable measures to address the source of complaint.

2 Analysis of Submissions

2.1 Introduction

During and following the formal exhibition period which concluded on 14 November 2022, nine (9) public authorities and 11 individuals, including one (1) from a local member of parliament, made submissions regarding the proposal as listed in the Submissions Register at **Attachment A** of this report.

An analysis of all submissions and agency advice received reveals that comments range in their nature and matters of interest. Most submissions are supportive of the provision of additional schools in the area and highlight an urgency of their delivery to meet local demand. The general premise of the submissions is that they do not raise issue with development location or scale/capacity of the proposal, but they raise questions and make recommendations regarding design and technical details, and suggest potential improvements for consideration. They also raise some questions regarding some elements of the assessment undertaken.

The key issues raised by all submission authors are grouped and summarised in the subsections below.

2.2 Transport, Traffic and Parking

Issues related to transport, traffic and car parking were raised by DPE, Council, and TfNSW. A detailed breakdown of each submission is provided in **Section 4** of this report.

Submissions have questioned the mode share assumptions in the traffic assessment and request that these assumptions be revisited. Similarly, some questions have also been raised regarding the traffic modelling undertaken for the project including background traffic levels, impacts on the regional road network and key intersections, and the cumulative impacts of additional traffic movements.

Greater analysis of walking and cycling networks has been requested.

Council has raised questions regarding the proposed road and footpath widths.

Relevant authorities have provided technical requirements for school zones and parking/dropoff zones and bus stops.

It was suggested that further consultation be undertaken with TfNSW and bus operators to confirm that the anticipated bus demands can be accommodated.

Council was of the view that insufficient off-street parking has been included in the proposal. Conversely, TfNSW believes there is an overprovision of car parking on-site and recommends reducing the amount of carparking proposed to discourage car driving and encourage a modal shift.

Additional bicycle parking in appropriate locations across the two (2) schools is recommended.

Additional details have been requested regarding pedestrian crossing design and locations, including a request for sightline assessments and to investigate the level of demand for these proposed pedestrian crossings.

It was requested that particular elements of the School Travel Plan and the Transport and Accessibility Impact Assessment (TAIA) be revisited and that additional documentation be prepared including a Construction Traffic Management Plan, Operational Traffic Management Plan, Parking Management Strategy and a Transport Access Guide.

2.3 Design

Issues related to the proposed design and built form of the two (2) schools were raised by Council and GA NSW.

Key concerns raised in relation to the site layout and built form concentrate on perceived inadequacy of building separation, suitability of the proposal in relation to local character,

building height and bulk, and layout and orientation of buildings. Concern has also been raised regarding the lack of differentiation between the proposed primary school and high school.

Questions have been raised regarding the suitability of entry points and pedestrian circulation.

There is support for the inclusion of narratives related to Country in the landscape and façade design.

It is requested that sufficient weather protection be provided for students, staff and visitors using and traversing the site.

Submissions have made suggestions to improve passive design, further address heat island effects, increase renewable energy generation on site, and further encourage sustainable practices. Additional solar analysis and improved shade devices were requested.

2.4 Trees and Landscaping

GA NSW are supportive of the proposed planting of mature trees and supportive of the provision of shade they will provide for students. However, some questions were raised regarding the delivery of the proposed canopy target.

GA NSW are pleased that the proposal will deliver a sufficient quantum of open space. However, they have made suggestions regarding some open spaces to ensure their design and amenity supports better outcomes for student learning. They suggest some spaces might be broken up to create more intimately scaled spaces.

Questions have also been raised regarding the layout of some sporting facilities.

2.5 Heritage

Heritage NSW raised minor questions seeking clarity around the Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit.

2.6 Flooding

Issues relating to flood risks on site and appropriate management of these risks have been raised by the SES, Council, DPE (Biodiversity and Conservation team), and GA NSW.

Questions have been raised regarding the risk assessment undertaken and the adequacy of consideration for flood events that have potential to impact the site.

Concern was raised regarding details contained in the Flood Emergency Response Plan (FERP) and Council has questioned the suitability of evacuation routes proposed.

2.7 Stormwater

Council have provided technical stormwater management requirements.

2.8 Utilities

Sydney Water and Endeavour Energy have provided a series of standard conditions to comply with technical requirements and best practice.

3 Actions Taken Since Exhibition

3.1 Introduction

This section summarises the actions taken since the public exhibition to address issues raised in submissions.

3.2 Transport and Car parking

Travel assumptions

Two (2) key questions arose from the submissions received in relation to traffic impacts. It was requested that additional modelling and investigations be undertaken to confirm base traffic assumptions and that further work be undertaken to confirm the anticipated mode share to quantify the anticipated additional vehicle trips.

The traffic model outlined in the TAIA has been updated to include the background traffic growth increase of 135%, rather than the previously adopted 35%. The updated model also includes an analysis of the impacts on arterial and regional roads, including Richmond Road.

The latest modelling results show congestion at some locations in some scenarios (forecast through to 2032). However, the analysis also clearly demonstrates that the impact of the proposed development is generally minimal in comparison to the impacts of background growth, and that future congestion which may occur on some parts of the road network is not attributable to the school development and would occur regardless of this proposal.

The total assumed mode share of private vehicle use by staff is 80%, compared to other schools above 90%. While this is a noteworthy shift, it is considered reasonable and is necessary to achieve the sustainable transport goals of the project. Results from Glenwood High School and John Palmer Public School documented in the submitted SSDA reflect schools which do not have any school transport plan or sustainability strategies (e.g. car-pooling) in place. In response to agency advice, further case studies have been considered and are outlined in the amended TAIA (**Attachment D**). These include the recently opened Galungara Public School and Concord High School which are detailed in **Attachment M** and **Attachment N** respectively. At Galungara Public, a kiss and ride mode share of 51% has been achieved, showing that these scales of travel mode split are achievable. At Concord High School, a bus mode share of 57% has been achieved, exceeding the number of students living within 400 metre of a bus to school and demonstrating the willingness and ability of students to access bus services.

Public transport access to the site is already considered good, with 17 arrivals in the AM peak and 15 departures in the PM peak. This is forecast to increase in the future with additional public bus services to be provided by TfNSW (as confirmed in consultation with the agency), providing excellent opportunities for staff both in the short-term and longer-term.

A draft practice note to provide guidance on the SINSW School Transport Plan approach to deliver efficient, safe and sustainable access to school during the planning, delivery and operation of school assets has been provided as **Attachment L** to this report.

Car Parking

Submissions received range in their views, with Council requesting more parking be provided on site and TfNSW suggesting less parking should be provided. With consideration for both views and the associated reasoning provided, the project team believes that an appropriate balance has been struck and that an appropriate quantum of on-site parking has been provided to meet the needs of the school.

On-site parking has been designed and located to provide adequate parking on site while maintain sufficient space for other infrastructure including an appropriate level of open play space (minimum 10m^2 per student). Furthermore, multi storey car parking on site would have negative impacts on local views and would detract from the local character and streetscape. Importantly, a sustainable transport strategy has been prepared to support the proposed parking capacity.

3 Action Taken Since Exhibition

The transport strategy includes new bus infrastructure, new cycling infrastructure, new pedestrian infrastructure, and a School Transport Plan for ongoing management. The sustainable transport strategy for this development, which is aligned with State Government strategies and priorities, seeks to change travel behaviour rather than maintaining the status quo.

In the event of additional demands occurring, Section 4.9.3 of the amended TAIA (**Attachment D**) has demonstrated that at least 290 on-street car parking spaces exist in the local precinct, only counting non-residential street frontages (i.e. not counting parking spaces in front of any houses).

It is noted that Clause 2.10 of the Planning Systems SEPP and Clause 3.36(9) of SEPP TI exclude the application of DCPs to SSDAs. Notwithstanding, consideration for the DCP parking rates have included in the transport assessment. Even with no consideration of the sustainable transport strategy and in a worst case scenario applying the staff and student component rates of the DCP, approximately 40-50% of the on-street parking would be used, leaving 50-60% or around 150 on-street parking spaces, available along the non-residential frontages. This is a substantial parking availability which would not require any further mitigation measures.

On consideration of the sustainable transport strategy which reduces the car parking demand significantly lower than the DCP rates, as documented in the amended TAIA, mitigation measures are similarly not required. The sustainable transport strategy is the mitigation measure, including new bus infrastructure, new cycling infrastructure, new pedestrian infrastructure, and a School Transport Plan for ongoing management.

3.3 Built Form and Landscaping

The proposed design for the schools is a result of analysis of the site, consideration for the needs of the catchment, and extensive option testing, revision and consultation as outlined in the EIS and Appendix H to the EIS.

Many of the comments made in submissions by GA NSW and Council were also made in consultation through the design stage (as documented in Appendix D to the EIS) and have already been taken into consideration. No significant further changes to the layout and design are now proposed. No amendments to the Architectural Plans (Appendix B of the EIS) and Landscape Plans (Appendix N of the EIS) are deemed necessary.

Additional justification and supporting information have been provided in **Section 4** of this report.

Greater explanation has been provided as to the importance of creating a unified campus feel between the new high school and new primary school. It assists in creating a stronger civic presence within the community and provides for greater flexibility to adapt to future changes in the student population and programming.

Both schools will utilise a coloured wayfinding strategy throughout the campuses that will identify buildings and circulation and enable students and staff to navigate their way around. This strategy in conjunction with signage will assist all people with varying needs to navigate their way around the school campuses. The wayfinding strategy will apply to the internal courtyard exterior façades. Colour will be applied to façade panels, doors, balustrade panels, and stairwells and provides adequate differentiation between the new high school and the new primary school without compromising their unified design.

Greater details have been provided regarding maximising mature tree canopy cover across the site to provide appropriate shade and amenity improvements from the first day of operation.

3 Action Taken Since Exhibition

3.4 Flood Risk Management

Having regard for submissions made by the DPE, SES, GA NSW and Council, an amended Stormwater and Flooding Report (**Attachment E**) and an amended Flood Emergency Response Plan (**Attachment F**) have been prepared.

The original Stormwater and Flooding Report submitted with the SSDA considered flood risk posed in the PMF as well as the 1% AEP. It also considered flood information from the *Hawkesbury-Nepean Valley Regional Flood Study 2019* and the *J Wyndham Prince Precinct Water Cycle and Flood Management Strategy Report 2020*. To allow consideration of most recent available flood information, an amended Flood Report has been prepared that considers information from an ongoing Infrastructure NSW flood study.

The reports now includes assessment of, and a response to the latest available flooding data and full range of flooding scenarios including 0.5% Annual Exceedance Probability (AEP), 0.2% AEP, 0.1% AEP and the Probable Maximum Flood (PMF). Additional flood maps have been provided based on latest Infrastructure NSW (INSW) flood information received. The reports broadly confirm the expected flood scenarios for the site in the 1% AEP and PMF as outlined in the original reports submitted with the SSDA and do not materially impact the flood emergency response strategies agreed in consultation with the SES.

Impacts and risks of flooding on the proposed schools including 3,000 vulnerable children and the broader schools community has been assessed and addressed. The Flood Emergency Response Plan has been updated to reference the primary evacuation route across Abell Road. The SES recommended operation of a second evacuation point from site on Elara Boulevard.

4 Response To Submissions

4.1 Introduction

This section provides a detailed response to all submissions received.

4.2 Department of Planning and Environment, Biodiversity and Conservation Agency Advice

Table 1 DPE, Biodiversity and Conservation (advice dated 9 November 2022)

Item #	Issue	Response	Reference
1.1	**Flooding and Stormwater**		
1.1.1	The flood assessment does not accurately address existing flood behaviour, risk or constraints on the site. The report does not accurately outline or map existing flood behaviour, flood risk and flood constraints in the vicinity of the site from both the Hawkesbury-Nepean (HN) River regional flooding and Little Creek flooding (Catchment Simulation Solution, 2017). The report should provide this information for the full range of flooding including 0.2% AEP, 0.1 % AEP and the PMF. The report does not assess the appropriateness of the proposed development type, as it does not address the impacts of flooding for the full range of flooding on the proposed vulnerable development and its users.	The original Stormwater and Flooding Report submitted with the EIS and updated Stormwater and Flooding Report included with the RtS outlines the flood behaviour and mapping from HN Flood Study, refer to Section 2.2. The Little Creek flooding (Catchment Simulation Solution, 2017) does not cover the development site and stops south of Ropes Crossing and about 5km south of the site. Updated Flooding for the HN river regional flooding has been provided to TTW by Infrastructure NSW. To ensure that all available flooding information is considered, a Supplementary Flooding Report has been compiled to present this information and is to be read in conjunction with the Stormwater and Flooding Report. This document outlines the full range of flooding between the 1%AEP and PMF and includes the following flood events: • 0.5% AEP • 0.2% AEP • 0.1% AEP Location of site was planned and zoned for construction of a school development during precinct planning. The Flood Advice Letter in Appendix C of the Stormwater and Flooding Report provided by BCC states that the FPL for a school is the 1% AEP + 0.5m freeboard. Additional modelling for larger storm events provided in the Supplementary Flooding Report show that evacuation routes via Kaluta Avenue and Abell Road as requested by SES remain accessible for all storm events prior to the PMF.	**Attachment F**
1.1.2	Impacts of flooding on the proposed school for 3,000 vulnerable children has not been assessed nor the risks to the rest of the school community including parents and carers.	Development meets the flood planning requirements confirmed by Council and the FERP requirements agreed with SES. Lead times for evacuation at Windsor provided in Section 2.2 of the FERP is 15 hours for flood levels exceeding 13.7m. Provision of 12 hours' notice for school closure was therefore considered achievable and this approach was developed in consultation with Peter Cinque from SES on Monday 25 July to cover the evacuation plan for site. It is expected that the school will be evacuated prior to inundation by flood waters which was an approach supported by SES. The length of lead times will allow sufficient time to pick up students and staff by parents and caretakers should flood warnings be issued during operational school hours. This will not impact the evacuation strategy of the existing community. Location of site was planned and zoned for construction of a school development during precinct planning. The Flood Advice Letter in Appendix C of the Stormwater and Flooding Report provided by BCC states that the FPL for a school is the 1% AEP + 0.5m freeboard. Additional modelling for larger storm events provided in the Supplementary Flooding Report show that evacuation routes via Kaluta Avenue and Abell Road as requested by SES remain accessible for all storm events prior to the PMF. Flooding of site during storm events between the 1%AEP and PMF have been included as part of the Supplementary Flooding Report. This modelling demonstrates that evacuation of site is still possible during the 0.1% AEP and prior to the PMF via the south of site along Abell Road in line with Section 5.0 of the Flood Emergency Response Plan (FERP).	**Attachment F**
1.1.3	EHG notes that both the Stormwater and Flooding report and Section 6.8.1 of the EIS do not refer to the HN Regional Flood Study and instead rely on the J Wyndham Prince Precinct Wide Flood Plan (J Wyndham Prince, 2013) which was prepared for the development of the Marsden Park Precinct. EHG considers that the J Wyndham Prince study is not valid in addressing flood risk for the proposal for the following reasons: • the assessment is limited to local flooding from Little Creek and its tributary only. • it does not address local flooding behaviour which is relevant to the proposal as it doesn't account for the vulnerability of various users (students, staff and the community) to flooding, nor does it address the emergency management constraints for two schools due to the local flooding.	The report outlines the flood behaviour and mapping from HN Flood Study refer to Section 2.2. The J Wyndham Prince flood study was adopted for the design of site in addition to the HN Regional Flood Study as well as a Flood Advice Letter for site developed by Blacktown City Council. Flood levels from the J. Wyndham Prince study were originally adopted as the Flood Planning Level (FPL) of site as these exceeded levels provided by Blacktown City Council in their flood application letter. The report refers to both local flooding from Little Creek and Regional flooding from HN. Flood mapping provided by Infrastructure NSW has been modelled to show flooding from the wider HN basin for storms between the 1%AEP and PMF with particular reference on the 0.5% AEP, 0.2% AEP, and 0.1% AEP. This has been included in the Supplementary Flooding Report. Findings from this report show that the 1%AEP flood level for the HN regional basin align with the 1%AEP flood level provided in the J. Wynhan Prince study (17.50m vs 17.55m). These are satisfied by filling of site during precinct planning.	**Attachment F**

4 Response To Submissions

Table 1 DPE, Biodiversity and Conservation (advice dated 9 November 2022)			
Item #	**Issue**	**Response**	**Reference**
1.1.4	The emergency response plan is based on inaccurate assumptions, does not address emergency management constraints on the site. EHG considers that the Flood Emergency Response Plan (FERP) prepared by Taylor Thompson Whitting (16 September 2022) is inadequate to address emergency management during flood events for the following reasons: • As it relies on the J Wyndham Prince study it inaccurately describes the site as not being impacted by the 1% AEP + 0.5m freeboard and therefore does not present flood behaviour for the full range of flooding within the vicinity of the development site (Section 2.1.2). • Section 2.2 states: 'The site will remain unaffected by floodwaters during the 1% AEP and inundated during the PMF', which is an incomplete statement that indicates that the site is only inundated in the PMF event. As previously noted, the site is partially inundated in the 0.2% AEP flood and fully inundated in all flood events above the 0.2% AEP. • Inadequate consideration of emergency management constraints to ensure emergency management arrangements for the proposed development and its users. • Inadequate consideration of emergency management impacts to the existing community. • Overestimation of the time available for flood warning and response. EHG recommends that the FERP be revised in consultation with the NSW State Emergency Service (SES) to address the above.	Flooding of site during storm events between the 1%AEP and PMF has been modelled and included as part of the amended Flooding Report. The 1%AEP flood level from this model is 17.55m AHD and generally aligns with the J. Wyndham Prince value of 17.50m. As the minimum elevation of site is at approximately 19.20m AHD, the comment that the site is not affected by the 1%AEP + 500mm freeboard level of 18.05m due to filling of the subdivision remains true. Modelling for flood events between the 1%AEP and PMF have been included in the amended Flooding Report. The development only becomes impacted by floodwaters during the 0.2%AEP flood event and flooding is constrained to the north west of site. Evacuation via Kaluta Avenue and Abell Road is possible in all events up to the 0.1% AEP but excluding the PMF. Flood warning and evacuation response times presented in the Flood Emergency Response Plan were prepared in consultation with SES and based on their comments and recommendations.	**Attachment E** **Attachment F**
1.1.5	Specific comments on the FERP are as follows. Section 3.2 - 'Sufficient warning times will allow closure of the school prior to inundation of the site by floodwaters. It is therefore expected that students and staff will not be located on site during a PMF flood event'. This incorrectly assumes that firstly there will be sufficient warning time to close the school and evacuate students, and secondly that inundation of the site is limited to the PMF event. Regarding the first assumption, EHG understands that the Bureau of Meteorology can provide up to 15-hour flood level predictions for large flood events in the HN Valley. This short prediction time may force the closure of the school site and its evacuation based on an uncertain prediction. If the flood exceeds the prediction, lives could be at risk. Alternatively, if the flood does not reach the predicted level, the school community could be evacuated unnecessarily, which could mean they may be reluctant to follow future evacuation orders. Regarding the second assumption, access to and from the site is cut by HN regional flooding in events above the 0.5% AEP. The site is partially inundated in the 0.2% AEP flood and fully inundated in all flood events above the 0.2% AEP. In the PMF event the site is inundated by flow depth of up to 7m. Therefore, the arrangements should consider all HN flood events above the 0.5% AEP, not merely the PMF. In addition, rarer events of local flooding that cut access to the site must also be considered. Section 3.2, Table 3.1 - Staff Responsibilities: The responsibilities allocated in Table 3.1 related to the flood response indicate a lack of understanding of emergency management arrangements in NSW and current HN regional evacuation planning arrangements. For example, they allow the chief warden of the school to make the decision to evacuate prior to receiving warning from the SES. This approach may conflict with the responsibilities of the SES for the safety of the wider community. EHG recommends that the proponent clarify: • arrangements for circumstances where the SES and chief warden don't agree on whether the school should be evacuated consider whether a single chief warden is sufficient for the safety of 3,000 vulnerable students plus 219 staff, and provide for an alternative warden if the chief warden is absent from the site. • Address minimum training requirements for the chief warden. Section 4.4 - 'Peak flood levels occur after about 70 hours. This would allow sufficient time to organise the closure of the school site, thus removing all staff and visitors from flood risk associated with the development site'. This section demonstrates an over reliance on assumptions relating to the evacuation timeline that do not consider the realities of a flood event. Nor does it consider the application of SES timelines for emergency response and flood evacuation, and the uncertainties associated with each action within the timeline.	Flooding of site during storm events between the 1%AEP and PMF has been modelled and included as part of the Supplementary Flooding Report. The 1%AEP flood level from this model is 17.55m AHD and generally aligns with the J. Wyndham Prince value of 17.50m. As the minimum elevation of site is at approximately 19.20m AHD, the comment that the site is not affected by the 1%AEP + 500mm freeboard level of 18.05m due to filling of the subdivision remains true. Modelling for flood events between the 1%AEP and PMF have been included in the Supplementary Flooding Report. The development only becomes impacted by floodwaters during the 0.2%AEP flood event and flooding is constrained to the north west of site. Evacuation via Kaluta Avenue and Abell Road is possible in all events up to the 0.1% AEP but excluding the PMF. Flood warning and evacuation response times presented in the Flood Emergency Response Plan were prepared in consultation with SES and based on their comments and recommendations.	**Attachment F**

4 Response To Submissions

4.3 Department of Planning and Environment, Heritage NSW Agency Advice

Table 2 DPE, Heritage NSW (advice dated 21 October 2022)

Item #	Issue	Response	Reference
2.1	**Heritage**		
2.1.1	Provide an Aboriginal Cultural Heritage Assessment report prepared in accordance with relevant guidelines, identifying, describing, and assessing any impacts for any Aboriginal cultural heritage values of the site.	An Aboriginal Cultural Heritage Assessment (ACHAR) was prepared by AECOM for the Woorong Park – Marsden Park release area in 2016. The report documents an assessment undertaken in accordance with the NSW Office of Environment and Heritage's (OEH) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*. On 18 May 2016 an "all of area" Aboriginal Heritage Impact Permit (AHIP) was issued to permit harm to 19 specified Aboriginal objects to enable land clearing and bulk earthworks in the development release area (AHIP No. C0001857). AECOM have provided written clarification that provisions of AHIP C0001857 have been satisfied and that the SSD-41372303 area has been subject to prior earthworks/significant impact (as approved under AHIP C0001857) to the extent that there is little or no potential of Aboriginal object to remain extant.	**Attachment I** **Appendix CC of the EIS**
2.1.2	Heritage NSW recommend a map overlay be prepared to demonstrate that the area is contained within the area subject to AHIP C0001857.	A map overlay has been prepared demonstrate that the site is entirely contained within the area subject to AHIP C0001857.	**Attachment H**
2.1.3	Heritage NSW recommend written clarification be provided that all relevant provisions of AHIP C0001857 have been satisfied and that the SSD-41372303 area has been subject to prior earthworks/significant impact (as approved under AHIP C0001857) to the extent that there is little or no potential of Aboriginal object to remain extant.	AECOM have provided written clarification that provisions of AHIP C0001857 have been satisfied and that the SSD-41372303 area has been subject to prior earthworks/significant impact (as approved under AHIP C0001857) to the extent that there is little or no potential of Aboriginal object to remain extant.	**Attachment I**

4.4 Department of Planning and Environment, Social and Infrastructure Assessments Agency Advice

Table 3 DPE, Social and Infrastructure Assessments (advice dated 7 December 2022)

Item #	Issue	Response	Reference
3.1	**Transport and Parking**		
3.1.1	Provide an updated assessment that considers a realistic mode share of private vehicle use by staff. The assessment must also consider the implications for additional traffic movements and car parking requirements. The EIS assumes a very ambitious car mode share of 65%, given the limited public transport access to the site and notably in comparison to other schools located in the North West Growth Area (Glenwood High School - 92% and John Palmer Public School - 99%). This mode share reduction (on that observed at other related schools), relies upon a very high car passenger mode share of 15%, with surveys at the Glenwood High School indicating that no staff carpool, while at John Palmer this figure was 1%.	The total assumed mode share of private vehicle use by staff is 80%, compared to other schools above 90%. While this is a noteworthy shift, it is not considered unreasonable and is necessary in order to achieve the sustainable transport goals of the project. Results from Glenwood HS and John Palmer PS reflect schools which do not have any school transport plan or sustainability strategies (e.g. car-pooling) in place. In response to agency advice, further case studies have been undertaken at the recently opened Galungara Public School (within the City of Blacktown LGA) and Concord High School (within the Canada Bay LGA). At Galungara PS, a kiss & ride mode share of 51% has been achieved, demonstrating an excellent outcome in comparison to a 70% target and showing that these scales of travel mode split are achievable. At Concord HS, a bus mode share of 57% has been achieved, exceeding the number of students living within 400m of a bus to school and demonstrating the willingness and ability of students to access bus services. Public transport access to the Marsden Park site is already considered reasonably good (with 17 bus arrivals in the AM peak and 15 bus departures in the PM peak) and this is expected to increase in the future with additional public bus services to be provided by TfNSW (as advised to the project team during Transport Working Group consultation), providing excellent opportunities for staff and students both in the short-term and longer-term. For both staff and students, uptake of sustainable travel behaviour may be gradual, and the mode shift will take place over time. However, the student and staff populations will similarly grow gradually over time. During the early operating life of the school, mode shift may be above the target values, but for a reduced population.	**Appendix P of the EIS** **Attachment D** **Attachment L** **Attachment M** **Attachment N**
3.1.2	Provide updated student mode share assumptions that have been reassessed based on travel patterns of similar schools within the North West Growth Area and City of Blacktown LGA, to consider more realistic private vehicle mode share. The overall assessment of traffic impacts must be further updated based on these assumptions, with respect to traffic movements and drop-off/pick-up requirements.	As detailed in Section 4.2 of this report, mode share assumptions have been developed in the context of current habits at schools within the LGA such as John Palmer PS and also outside the LGA such as Cumberland HS and Carlingford West PS, with important differences relative to those existing sites. Within the City of Blacktown LGA, case studies have been undertaken at the recently opened Galungara Public School. These case studies show that even with a target kiss & ride mode share of 70%, an actual kiss & ride mode share of 51% has been demonstrated to be achieved. This achievement is significant for a highly car dependent LGA and demonstrates that reduced car usage and real mode shift is achievable in this area. It is important to note that the sustainable transport strategy for this development, which is aligned with State Government strategies and priorities, seeks to change travel behaviour rather than maintaining the status quo. Therefore, mode share assumptions for the future conditions are deliberately different to existing travel habits at other sites, either local or across the broader Sydney metro region. On this basis, the overall traffic assumptions and impacts remain unchanged in the current revision of this report.	**Appendix P of the EIS**

4 Response To Submissions

Table 3 DPE, Social and Infrastructure Assessments (advice dated 7 December 2022)			
Item #	**Issue**	**Response**	**Reference**
3.1.3	Demonstrate that on site parking is provided to meet the anticipated staff (but not limited to) car parking demands and would provide acceptable mitigations in relation to car parking impacts.	On-site parking has been provided to maintain an appropriate level of open play space, and a surrounding sustainable transport strategy has been prepared in order to support this available parking capacity. The sustainable transport strategy is the mitigation measure, including construction of: • A new indented bus bay with capacity for at least 5 (up to 6) buses • New pedestrian footpaths to the remaining three site frontages • Seven new wombat crossings (raised zebra crossings) at: o Galah Street, south of Elara Boulevard o Galah Street, north of Rakali Parade o Galah Street, north of Swallowtail Street o Swallowtail Street, west of Kaluta Avenue o Kaluta Avenue, south of Periwinkle Street o Kaluta Avenue, south of Elara Boulevard o Elara Boulevard, west of Kaluta Avenue • End-of-trip facilities for staff in the form of six showers with change areas, plus lockers • Bicycle storage for staff, comprising 40 spaces in an enclosed space collocated with the end-of-trip facilities • Bicycle storage for students, comprising 84 spaces for the primary school plus 60 spaces for the high school, distributed around the site In addition, a School Transport Plan has been prepared which outlines ongoing management procedures for the sustainable transport strategy. The schools will also be provided with 40km/hr School Zones to all frontages, enhancing the amenity and safety of pedestrians around the site. On consideration of this strategy which reduces the car parking demand significantly lower than the DCP rates, as documented in this report, mitigation measures are not required. The relevant open play space requirement of 10m$_2$ per student, as per the Department of Education's *Educational Facilities Standards & Guidelines*, is achievable through the proposed design but would not be achieved if car parking were increased. This is a mandatory requirement in the EFSG. In the event of additional parking demands occurring, Section 4.9.3 of this report has demonstrated that at least 290 on-street car parking spaces exist in the local precinct, only counting non-residential street frontages (i.e. not counting parking spaces in front of any houses). With no consideration of the sustainable transport strategy and in a worst-case scenario applying the staff and student component rates of the DCP, approximately 40-50% of the on-street parking would be used, leaving 50-60% or around 150 on-street parking spaces would still be available along the non-residential frontages. This is a substantial parking availability which similarly would not require any further mitigation measures.	**Appendix P of the EIS**
3.1.4	Provide an updated assessment with revised traffic modelling that includes the background traffic growth increase of 135%, rather than the adopted 35% in the EIS. The EIS utilises a growth factor of 1.35 derived from the Traffic and Transport Assessment for Marsden Park. Application of this growth factor is equivalent to a total growth of 135% rather than 35% and must be applied to revised SIDRA modelling accordingly.	The original traffic modelling submitted for the EIS has been reviewed and the DPE's review of the application of growth factors is agreed. All traffic models have been updated in the latest iteration of this report, reflected in the results presented at Section 2.10, Section 4.5, and Appendix C. Based on a detailed review of the original reference document (Traffic and Transport Assessment – Marsden Park Precinct, AECOM, April 2013) the growth factor of 135% has now been correctly applied to the precinct west of Richmond Road. For through traffic along Richmond Road itself, forecast traffic growth along this corridor is lower (as per the AECOM report) due to a higher proportion of pre-existing traffic and a growth factor of 20% for through traffic has been applied. Section 4.5 of this report details the application of the 20% and 135% growth factors to Richmond Road and the remainder of the precinct respectively. The latest modelling results do show congestion at some locations in some scenarios (forecast through to 2032). However, the analysis also clearly demonstrates that the impact of the proposed development is generally minimal in comparison to the impacts of background growth, and that future congestion which may occur on some parts of the road network is not attributable to the school development and would occur regardless of this SSD project. The most significant changes in traffic model performance and congestion occur between the 2022 and 2032 'nondevelopment' scenarios, with relatively minimal change for the comparable 'with development' scenarios.	**Attachment D**
3.1.5	Provide updated traffic modelling that analyses the impacts to arterial and regional roads, including Richmond Road. The updated analysis should consider the significant increase in school size proposed in the EIS, compared to the originally considered school size in the traffic modelling supporting the Marsden Park precinct.	The traffic modelling for both existing and future conditions has been extended to include Richmond Road, with intersections at both Elara Boulevard and Abell Road. Modelling results are provided in Section 2.10, Section 4.5, and Appendix C. All forecast traffic associated with this SSD application for the school has been treated as additional traffic, on top of existing traffic and the application of background growth factors. Therefore, the change in size of school compared to the original traffic modelling is irrelevant because (for the purposes of traffic modelling) this proposal assumes that the subject school is additional to anything previously assumed or identified. In any case, the earlier precinct traffic modelling did not identify (or at least did not publicly identify) an assumed capacity for this school site. A capacity of 840 students (K-12) was assumed for the Northbourne Drive school site, now the St Luke's Catholic College. In 2021, there were 810 primary school students and 418 high school students. While this enrolment exceeds the capacity originally assumed for the precinct traffic modelling, the traffic volumes associated with this level of enrolment would have been	**Attachment D**

4 Response To Submissions

Table 3 DPE, Social and Infrastructure Assessments (advice dated 7 December 2022)			
Item #	**Issue**	**Response**	**Reference**
		counted in the 2022 traffic counts undertaken for this SSD application. Therefore, no adjustments to the traffic modelling would be required, particularly when considering that the population growth factors are applied to the current traffic counts including that higher enrolment, rather than applying growth factors to any original traffic volume assumptions.	
3.1.6	Further consultation should be undertaken with TfNSW and bus operator(s) to confirm that the anticipated bus demands can be accommodated.	Consultation has been undertaken with TfNSW in May 2022, June 2022, and July 2022 through the Transport Working Group process, as detailed in Section 1.6 of this report. Consultation dates and details were also outlined in the Community Engagement report provided with the EIS (Appendix D). During consultation to-date, TfNSW provided feedback on the anticipated bus services and demands, and the outcome of these discussions is reflected in the level of bus services assumed in the EIS and RtS. Further consultation will take place during the operating life of the development to ensure that TfNSW is made aware of year-to-year enrolment intakes and is able to respond to the level of demand. No further consultation is required at this stage.	**Appendix D of the EIS**
3.1.7	Further analysis must be provided on the suitability of the walking/cycling network, including potential upgrades required to facilitate access to the site where sections of the expected route network remain incomplete.	Council has advised that the walking/cycling network will be provided as per the precinct master plan, which provides footpaths on both sides of all streets as a minimum, with collector roads providing a footpath and a shared path. The master plan was designed to accommodate access to a school site at this location. Completion of the broader pedestrian and cyclist network is the responsibility of Council and should be completed as early as possible. Council has indicated that the footpaths in any part of the developing precincts is typically undertaken once residential construction is approximately 80% complete, which appears to be the case in the local area. Therefore, footpaths are expected to be provided long before commencement of operation of the school in 2025. This project itself will provide 7 wombat crossings (raised zebra crossings) plus footpath upgrades to the 3 remaining site frontages in order to facilitate access to the site, which will be completed and opened prior to occupation of the schools.	n/a
3.2	**Flooding and Stormwater**		
3.2.1	Address the Blacktown City Council's submission to the EIS, dated 9 November 2022 to confirm the feasibility of the proposed stormwater management measures.	This matter has been addressed in item 9.4 in **Table 9** of this report.	n/a
3.2.2	The RtS must also be accompanied by an updated Flood Emergency Response Plan developed by a suitably qualified flood risk and emergency management consultant in consultation with NSW SES and be in accordance with current best practise flood emergency management. The Flood Emergency Management Plan must provide clear, quantifiable triggers for each emergency management action.	Site evacuation management solutions were coordinated with advice and recommendations made directly by SES. Quantifiable triggers are outlined in Section 4.0 of the FERP.	**Attachment F**
3.3	**Other**		
3.3.1	Address Government Architect NSW State Design Review Panel advice for the project dated 2 March and 1 August 2022	Refer to **Section 4.5** of this report.	n/a
3.3.2	Address the Energy and Heritage Group, Department of Planning and Environment (EHG) submission to the EIS, dated 9 November 2022	Refer to **Table 2** of this report.	n/a

4 Response To Submissions

4.5 Government Architect (GA) NSW Agency Advice

Table 4 GA NSW (advice dated 14 November 2022)

Item #	Issue	Response	Reference
4.1 Masterplan design			
4.1.1	The master plan typology of putting almost all building around the perimeter isn't achieving a good outcome for this project with very long and overwhelming façade lengths, especially for a residential suburban context. Also lots of west facing building that will receive lots of late sun. The long and large facades feel out of context and the significant impact is mainly caused by the decision to place the buildings along the road edge.	The current buildings arrangement and orientation provide optimum use of the internal courtyard space. A centralised master plan model had been considered and assessed during the master plan phase. However, stakeholder engagement with the school community identified the preference of the perimeter model as it increased the continuous open play space and allowed the inclusion of playing fields. The consolidation of the free play area together with the playing fields allows the compliance with the EFSG requirement of $10m^2$ of play area per student, a total of $30,000m^2$ required for this campus which has been a priority for the proposal. It also provides planning and operational efficiency and flexibility. The master planning of HS & PS as a unified campus allows flexibility to adapt future changes in the student population. The segmented and rotated built form breaks up the visual perception of the buildings. Additionally, the building facades are layered with irregular patterns, colours and projected sunshades for further facade articulation. Courtyard facing facades, including the west facing facade, are well shaded during school hours by 2.8m wide walkways and awning.	**Appendix H of the EIS**
4.1.2	It is hard to read the difference between the primary school and the high school with only decorative changes to highlight this. This could cause problems for wayfinding, lack of civic presence for each school, and remove a sense of progress for the students.	It is important to create a unified campus feel between HS and PS. A unified campus provides strong civic presence of the schools within the community. A unified campus provides flexibility for PS & HS to adapt to future changes in the student population. The functional planning of the schools allow opportunities for shared used of facilities between HS & PS. A unified campus design allows opportunities for future changes in education & school management for example a K-12 campus model. Both schools will utilise a coloured wayfinding strategy throughout the campuses that will identify buildings and circulation and enable students and staff to navigate their way around. This strategy in conjunction with signage will assist all people with varying needs to navigate their way around the school campuses. The wayfinding strategy will apply to the internal courtyard exterior façades. Colour will be applied to façade panels, doors, balustrade panels, and stairwells and provides adequate differentiation between the new high school and the new primary school without compromising their unified design.	**Appendix H of the EIS**
4.2 Tree canopy cover			
4.2.1	While the installation of mature trees on this project is strongly supported, there are ongoing concerns about the total amount of canopy cover and the capacity to safely support the total number of students outside on hot summer days.	The design team has maximised the size and quantity of trees on this project to address the exposure and lack of natural shade to the site. With the aim to maximise the mature canopy coverage of the site and to achieve this as quickly as possible. The proposed mature canopy area is calculated to be $17,850m^2$, representing approximately a 30% site coverage. It should be noted that this canopy coverage only includes the site within the proposed school boundaries and does not include trees within the Council verge land. Species selection has been carefully chosen to use native endemic species, suited to the site conditions, and are fast growing/proven performers. The availability of these species has been secured by the early procurement of the trees and on growing to ensure that the trees are installed at the maximum pot size. These measures will increase the speed of when the trees meet maturity and provide shade and amenity to the external areas.	**Appendix M of the EIS**
4.3 Transport			
4.3.1	Concerns about prioritising active transport with main entrances being placed in the middle of the long blocks and pedestrian crossings at the ends requiring long walks and cycles along the busy footpaths or on roads with not cycle lanes.	This matter is addressed in Section 3.2 in **Table 6**.	n/a

4 Response To Submissions

4.6 Government Architect (GA) NSW – Design Review Panel, First Review Letter

Table 5 GA NSW – State Design Review Panel 23 February 2022 - First Review (letter dated 2 March 2022)

Item #	Issue	Response	Reference
5.1 Connecting with Country			
5.1.1	Foster engagement with contemporary artists and active community members to develop a living cultural connection between the school and Indigenous communities.	A 'Designing with Country' report has been prepared to outline the extent of works involving input from a Darus Artist at future stages of the project.	**Attachment G**
5.1.2	The integration of narratives related to Country in the central plaza is supported. Explore how narratives as well as principles and metaphors from Country can inform the revised masterplan, including a more generous and defined civic and public-facing entry that provides a strong identity and connection to Country.	A strong First Nations narrative connects the main entrances and the east/west link separating the HS & PS. This is achieved by a feature pavement treatment that is strengthened by a series of smaller landscape rooms created by endemic vegetation/tree plantings and fixtures. These rooms provide outdoor learning opportunities and spaces for smaller groups to gather and learn.	**Attachment G**
5.1.3	Refer to the draft framework Connecting with Country on the GANSW website.	The appended Designing with Country Report has been prepared to address culturally significant items discussed with the Aboriginal Representatives. The report has been prepared to address GBCA requirements and guided by the Connecting with Country guide on the GANSW website.	**Attachment G**
5.2 Masterplan design			
5.2.1	Test different masterplan options and develop a proposition that is consistent with the key design principles and responds to the specific context.	The masterplanning is a product of balancing infrastructure requirements and site conditions, resulting in mostly 3 storey buildings and the required ground floor play space for 2000 HS students and 1000 PS Students. A study of lower scale buildings will negatively impact the amount of play space required. See Section 3.8 of the Architectural Design Report.	**Appendix H of the EIS**
5.2.2	The proposal has a very large fenced boundary and little proper public access for the community. Consider making part of the site, which might include sports fields, sports courts and the halls or library, publicly accessible.	In accordance with SINSW asset management & protection regulation, the entire site must be well secured within a fenced area. Community after hour access to 2 hard courts has been agreed to with Blacktown City Council. After school hours access has been considered in parallel with providing students with a secure facility during school hours. Access to the Hall and Library are subject to future agreement with the schools.	n/a
5.2.4	The extent and scale of the street wall on the eastern side of the site is not supported. It is also negatively impacting the internal courtyard of the high school on the western side. Explore ways to set back and break up the built form and provide views through and across the site, which might include reconfiguring, rotating or clustering the buildings, to appropriately respond to the context and improve student amenity.	The proposed building heights are predominantly three (3) storeys to maximise outdoor play space for both schools and to create opportunities for tree canopy while sitting comfortably within the lower-rise character of the suburb. The proposed additional building height produces an improved development outcome with acceptable amenity to the site, the public domain and to surrounding residents, maintaining appropriate privacy, solar access and a streetscape that compliments the existing and future character of the area. The site and wider area is largely flat and there would be little opportunity to maintain views if buildings were reduced to one or two storeys, especially as this would increase the building footprints and reduce building separation. Articulation in building facades, separation where practicable and orientation break up building massing and create interest in the streetscape.	n/a
5.2.5	The proposal is meeting open space requirements; however attention should be paid to the quality of this space to ensure its design and amenity supports better outcomes for student learning. This might include breaking up the large landscape spaces that dominate the interior of the site into more intimately scaled spaces that allow for small groups while still being efficient in terms of surveillance.	The design aims to provide a diversity of spaces to accommodate physical, social, and educational activities whilst achieving the $10m^2$ play space requirement. This requires the space proofing to accommodate large open playing fields, multiple (5) external sports courts, and areas large enough to facilitate full school assemblies. The design looks to creates a diverse range of smaller scaled spaces framed by trees, planting, and fixtures to facilitate clusters of smaller groups of students for social and learning opportunities. It is considered that the current design has managed to achieved the balance of the large gathering/targeted play spaces and the intimate spaces whilst achieving the open play space requirements.	**Appendix M of the EIS**
5.2.6	The extent of active transport in the local community is unclear. Develop an evidence-based strategy that identifies safe walking and cycling routes and their arrival to the school.	The master plan for the entire precinct, which Council has advised will be provided as planned, and funded by developer contributions, provides pedestrian footpaths to both sides of all roads as a minimum. On 'Collector' roads, this is increased to a Shared Path on one side and a standard footpath on the other. Cross sections for both types of roadways are shown in Section 2.2 of this report. Therefore, formal walking and cycling routes are available throughout the entire precinct (noting that children under the age of 16 are permitted to ride bicycles on standard footpaths). This project proposes to provide 7 pedestrian wombat crossings which will facilitate safe access routes to all corners of the school site. Existing safety features along pedestrian and cyclist routes are provided throughout the broader network - e.g. pedestrian refuge islands at Abell Road, pedestrian footbridge from Betula Parade to Meehan Terrace, pedestrian refuge islands at Elara Boulevard.	n/a

4 Response To Submissions

Table 5 GA NSW – State Design Review Panel 23 February 2022 - First Review (letter dated 2 March 2022)			
Item #	**Issue**	**Response**	**Reference**
5.2.7	Consider exploring an option in which buses travel on an access way across the site, east-west, between the primary and secondary schools, away from nearby housing and to drop students off in the middle of the site.	A road through the site is wholly infeasible and impractical. It would occupy on the order of 4,000m^2 of space (200m wide site x 20m wide corridor) or the equivalent of the available play space for 400 students. It would sever the two schools and result in a poor outcome for the overall site / campus. It would compromise the available bulk play space which can be used for large sports fields. It would introduce safety issues by requiring students to cross an additional internal roadway and have direct interaction with heavy vehicles within the site. It would road widening to Elara Boulevard and Galah Street (not just to the school frontages but also along the broader road network) to accommodate bus services.	n/a
5.3 Landscaping			
5.3.1	Outdoor learning spaces are important to enhancing student learning opportunities. Develop an approach to these spaces that is student and Country-centred and identify their placement and configuration as part of the masterplan.	Outdoor learning spaces have been integrated into both HS and PS spaces. These smaller spaces/rooms have been created by using planting/trees and fixtures to establish areas for small groups to participate in outdoor learning programs. These spaces have all been connected to the wider Connection with Country narrative/overlay to embed the learning to country.	n/a
5.3.2	Ensure there is appropriate and sufficient space for spectators of sports to enable comfortable use by both students and the public.	Primary spectator areas have been provided to the north & south of the field. These areas have can be used by large or clusters of smaller groups and have a mixture of seating types, planting and trees for natural shade. The area to the west of the field has a dense vegetated buffer to provide separation to the car park and provide a shade and wind break.	n/a
5.3.3	Consider relocating the sports courts so they run longways alongside each other to create a more efficient and adaptable configuration.	Two sports courts are located to be accessible from Galah St for after hours access. The remaining HS courts are for exclusive use by the High school students and therefore located adjacent to other outdoor sporting facilities. This orientation allows for further tennis / volleyball usage as well as minisports games. Running them longways would interfere with the parking supply.	n/a
5.4 Architecture			
5.4.1	Develop an identity that differentiates the high school from the primary school to support the legibility of entrances and movement of people, and reflect their differing spatial needs. This might be achieved through architectural expression, articulation, form, material, cladding etc.	It is important to create a unified campus feel between HS and PS. A unified campus provides strong civic presence of the schools within the community. A unified campus provides flexibility for PS & HS to adapt to future changes in the student population. The functional planning of the schools allow opportunities for shared used of facilities between HS & PS. A unified campus design allows opportunities for future changes in education & school management for example a K-12 campus model.	**Appendix H of the EIS**
5.4.2	Consider lowering the height of the primary school to two storeys. This might result in less open space per student, however it will provide a scale more suited to children, and enable easier access to the ground plane and enhanced opportunities for outdoor learning.	Alternative design approaches were investigated through the design stage. As documented in the EIS and Architectural Design Report, a two storey design delivering the same required gross floor area results in an inferior outcome in terms of site amenity and environmental impacts. Assessment of the two (2) storey alternative design highlighted that this approach would result in larger building footprints, and a significant outdoor play space deficiency and non-compliance with the EFSG mandated 10m^2 of outdoor play space per student. The reduced play space would also compromise the quality of play spaces due to inadequate play areas, greater overshadowing of play areas, non-compliant EFSG outdoor sports facilities and limited opportunity for community use of outdoor sporting facilities. There is no evidence that a two-storey building is more appropriate for primary school students and their needs. Many students across the metropolitan area enjoy high-quality learning environments in schools higher than a two-storey built form. Parramatta PS, Northbourne PS, Waitara PS are good examples of such schools. In a dense urban and even suburban settings, it is much more important to have adequate, generous and diversified outdoor play spaces for students to enjoy rather than low-level buildings. The design team has implemented various design elements to enhance the outdoor experience of students across the campus. Shade structures, active and passive play spaces, seating arrangements, outdoor learning spaces both on ground level and top levels, sports fields, extensive landscaping and planting, all of these together with Design with Country themes enrich the experience of students across the campus grounds and provide a range of exploration opportunities.	**EIS** **Appendix H in the EIS**
5.4.3	Undertake solar analysis of both the buildings and the exterior spaces they create to explore the use of buildings as shading devices which can produce areas that are calm and safe, with moderate temperatures away from the sun.	Shaded areas and spaces for refuge have been considered in the landscape & building design. There are open Outdoor Learning Areas located on all floors for refuge / shelter during inclement weather condition. The target is between 25%-40% mature tree canopy coverage. Early procurement of all required mature trees for both the primary and high school projects is proposed to control the procurement by securing the nominated tree species, necessary number of trees, at the required size and guarantee the quality of the product.	n/a

4 Response To Submissions

Table 5 GA NSW – State Design Review Panel 23 February 2022 - First Review (letter dated 2 March 2022)			
Item #	**Issue**	**Response**	**Reference**
5.5 Sustainability and climate change			
5.5.1	Provide details of how tree canopy targets will be met. Address the lack of tree canopy in the short term and how students will be provided shade to mitigate heat impacts over the next 5 – 10 years as the canopy grows.	The target is between 25%-40% mature tree canopy coverage. Early procurement of all required mature trees for both the primary and high school projects has been engaged in order to control the procurement by securing the nominated tree species, necessary number of trees, at the required size and guarantee the quality of the product. Securing mature trees will ensure shade is provided to the outdoor gathering spaces and a stronger canopy coverage will be available from day one. It also means that these trees will become the significant trees quicker that all great schools have.	n/a
5.5.2	Orientating most of the buildings on a north-south axis creates long faces to the west, which adds heat load to the buildings and exposes them to the dominant wind direction. Consider relocating and reorientating the buildings to improve energy efficiency and internal amenity.	A centralized master plan model had been considered and assessed during the master plan phase. However, stakeholder engagement with the school community identified the preference of the perimeter model as it increased the continuous open play space and allowed the inclusion of playing fields. The consolidation of the free play area together with the playing fields allows the compliance with the EFSG requirement of 10m2 of play area per student, a total of 30,000m^2 required for this campus. It also provides planning and operational efficiency and flexibility. The masterplanning of HS and PS as a unified campus allows flexibility to adapt future changes in the student population. Courtyard facing facades, including the west facing facade, are well shaded during school hours by 2.8m wide walkways and awning.	n/a

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4.7 Government Architect (GA) NSW – Design Review Panel, Second Review Letter

Table 6 GA NSW – State Design Review Panel 20 July 2022 - Second Review (letter dated 1 August 2022)

Item #	Issue	Response	Reference
6.1 Connecting with Country			
6.1.1	The inclusion of narratives related to Country in the landscape and façade design is acknowledged and supported. Continue to expand the profile of Country in relation to planting selection, flooding, outdoor learning spaces and wider experience of the landscape.	The full scope of the Connecting to Country consultation, profiling and inclusions in this project is detailed in the SSDA architectural and landscape design report. The main theme identified for this project is Connection, Conservation and Preservation – Reconnecting to Land, Water, Sky, Seasons and Animals. This desire for reinstatement of flora and fauna is a response to the site being completely cleared of all natural elements. Other themes identified in the consultation process included: Darug cultural history and significance; Rivers; Stone; Darug totem – Kangaroo; Yams. Opportunities for developing a living cultural connection between the school and the community through Country activities during the operational phase of the school are explored with stakeholders from the NSW Department of Education. Please also refer to the appended 'Designing with Country' report for extended design interventions. Plants that have very strong historic uses within the Darug Country have been selected to be planted as single mass planting with accompanying signage educating about the use of the plants. This will enable active and passive learning as the students can experience the plants, picking and eating and using the plants as the Darug did. Design language around the water story and grading strategies allow the rainfaill to be captured and flow in dynamic paths. The outdoor learning spaces complement the curved language of the walls and landscape, allowing kids to circle around the teacher and create conversation spaces. Finally, both schools will have a site specific yarning circle, calling on the stone of the Darug and allowing for art opportunities in the wooden totems.	**Appendix H of EIS** **Appendix M of EIS** **Appendix DD of EIS** **Attachment G**
6.2 Site strategy and context			
6.2.1	Given the scale and number of students, it is critical the project adopts a placemaking strategy that clearly differentiates places for older students, younger students, and the community. This strategy should inform other design development decisions.	The overarching concept and brief for this project is to design a whole K-12 educational campus and not a separate primary and high school on the same site. The single campus strategy provides the flexibility to utilise learning spaces and play spaces for various year groups according to student numbers for PS and HS. For example, if PS student intake is higher than the HS, the PS students will be accommodated in HS spaces and also have access to some HS play area. Therefore, it is extremely important that the design language is consistent across the site and placemaking is simple to understand and tailor to suit various cohort needs. The placemaking strategy evolves around the outdoor spaces catering for specific age groups, a range of activities, and different size groups. The facilities which will be shared use with the community are clustered around the Galah St entry and are located away from learning spaces and play area. The campus buildings are designed to allow flexibility of learning spaces between PS and HS. High school buildings, Building A to D, consist of well distributed Specialist Learning Areas that are accessible by HS students of all year group. General Learning Hubs are distributed across building A to D. This planning strategy ensures that there are GLS's in each block or floor for allocation of year groups. Each block has been allocated with a unique colour for ease of wayfinding.	n/a
6.2.2	Moving the hall further into the site so it sits between the primary and high school is recommended. This will ensure good access to the hall for both schools and create a non-fence division between the two main spaces. Use sports courts and other landscape spaces to maintain good community access to the hall.	HS Buildings are A to D, PS buildings are E & F. The Hall, Building G is positioned at the ideal position to be; - Equally accessible from PS & HS, and - accessible from Galah St for potential after school hour use. Moving the hall further into the site will detract from the play space as a good and usable amenity. Supervision will be limited and so will be the connection between PS and HS. It will also mean longer distance for the public to access the facility and in turn, more fences to comply with security requirements along these access ways. The hall on Galah Street provides easily accessible facilities to the community while still maintaining good access from both schools and maintaining SINSW asset protection strategies. A fence proposes a light-weight element which can be adjusted and / or removed as needed, providing additional flexibility to accommodate various sizes of student population. A building, however, is considered a fixed barrier and does not provide this level of flexibility.	n/a

4 Response To Submissions

Table 6 GA NSW – State Design Review Panel 20 July 2022 - Second Review (letter dated 1 August 2022)			
Item #	**Issue**	**Response**	**Reference**
6.2.3	Further develop the entries to both schools to ensure they have a stronger civic presence. Consider the following: a. Rotate one of the high school buildings near the current entrance 90 degrees to create a larger break in the eastern façade and signal the entry to the high school. This could also provide access to the halls. b. Adopt a similar strategy of rotating buildings for the primary school entrance. c. Create a hierarchy to the entrances by exploring changes in built form and facades, and possible removal of the elevated walkways over the entrance. d. Ensure the creation of a high-quality public space at the entrances to welcome students, staff, and parents. Consider paving, landscape, furniture, and child friendly scale for these spaces.	The HS Entry point, the break between building C & D, is 20m wide including a COLA. The PS Entry, the break building E & F is 15m. Block C had been rotated from the street frontage to create a break along Kaluta Ave and identify the main entry to the HS. Similarly, Block E has been angled to identify the main entry to the PS. These rotations pose a setback of 15m to identify a prominent entry point. Rotating a building at 90 degrees will impact the usability of the play space, create a supervision issue and will negate the notion of an overarching campus concept. Since the SDRP 2 presentation the design team has shortlisted additional architectural and landscape elements to better articulate the entries and create well defined and welcoming entry forecourts which can serve the school community at various times. These elements will be incorporated into the design pending additional funding availability. Some of these elements include low-level canopies to provide shelter, seating arrangements, paving materiality, earth mounding and specific planting, signage and colour. Walkways above entries are required to connect the campus on L1&L2 to support a flexible campus model and also provide efficient circulation paths for the anticipated numbers of students and staff. Following the recent SDRP presentation, the walkways above the entries have been locally expanded to include outdoor learning spaces on L1 & L2. This provides opportunity for students on these levels to gather, experience and connect with the outdoors as well as connect with students on other levels via centralised voids. Outdoor seating, patterned paved surface and soft landscaping have been incorporated in the landscape design at HS and PS entrances to create a meeting / gathering point outside the secondary secure point. The forecourt landscape design includes features such as native soft landscaping, a climbable mount, patterned & colour paved court. The material palette in the landscape design of the forecourt reflects the Architectural built form's materiality. In addition to interpreting Connecting with Country Theme 4 – Stone which being represented in the paving pattern. Refer to the appended drawing SSDA 0261.	**Attachment C**
6.2.4	Review the efficiency of a single car park and explore options to break up the car parking provision to support shorter walking distances.	A single car park is the most efficient layout to reduce paved areas which can contribute to a heat island effect. Additional vehicle entries at the perimeter were avoided as they pose safety risks to pedestrians in general and students in particular. The distance from the proposed car park to the nearest HS block is 10m, to the Hall - 60m, to the PS - 150m. These are reasonable distances to walk from a car park for staff and are considerably less compared to walking distance required when using public transport. Sustainability targets include a priority of active / green travel plan to promote travel modes other than private cars both for students and staff. The location and size of the car park provides the opportunity for community use of the car park after hours. This is currently under investigation.	n/a
6.2.5	Ensure up-to-date flood information is included in the analysis of flooding risk and that a mitigation strategy is developed.	The Stormwater and Flooding Report and FERP have been updated to address the latest available flood data.	**Attachment E** **Attachment F**
6.2.6	The active transport strategy is not aligned with the design response of the school. For example, access for students walking and cycling is through the middle of the blocks, requiring long distances without protected bike lanes. Further develop the response to ensure the safety and efficiency of walking and cycling is given priority.	The main entries to the schools are located in the middle of the blocks to cater, in an equitable way, for all traveling modes including Kiss & Drop, bus, pedestrians and cyclists. The busy entries are located away from the pedestrian crossings at the corners to prevent overcrowding and safety issues around intersections. The main entry for cyclists is on Galah St, across from the main cycling path of the suburb along that street. The majority of the bike parking for students and end-of-trip facilities are located there.	n/a
6.3 Landscaping			
6.3.1	Ensure the covered spaces in the landscape design complement the COLAs and can provide safe, diverse, and comfortable shelter for 3,000 students when sunny or raining.	The design team identified additional landscape design elements which will be incorporated into the design when funding becomes available, including: • additional sheltered spaces across the play space; • widening of the link between the main entries and the halls to allow for additional seating and group gatherings; • one external basketball court in the HS will be fully sheltered by a canopy providing an opportunity for all-weather activity; • an additional low level canopy may be added in adjacency to the PS library to cater for passive; and	n/a

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Table 6 GA NSW – State Design Review Panel 20 July 2022 - Second Review (letter dated 1 August 2022)			
Item #	**Issue**	**Response**	**Reference**
		• quiet play area also doubling up as a sheltered gathering space outside the special program rooms for community use after hours.	
6.3.2	Outdoor learning spaces are important to enhancing student learning opportunities. Develop an approach to these spaces that is student and Country-centred and identify their placement and configuration as part of the masterplan.	A Country-centred narrative is at the core of our design response for this project. A variety of outdoor learning spaces are proposed on ground level ranging from large COLAs to yarning circles, sheltering canopies and intimate outdoor common areas close to the library and the Special Education Learning Unit. Additional small scale outdoor learning spaces and common areas are proposed on L1 and L2 across the campus to cater for students on the top floors. These spaces are typically connected to the ground level via large voids and enjoy view to the distant mountains and green spaces to the west.	n/a
6.4 Architecture			
6.4.1	It is recommended that a two-storey limit for all, or part, of the primary school is adopted. While this may impact the open space requirement of 10sqm/student, it will: a. Create spaces that are more appropriate to the scale of primary school students and their learning needs. b. Enhance the overall experience of students attending primary school. c. Support the differentiation of the primary and high school in built form.	There is no evidence that a two-storey building is more appropriate for primary school students and their needs. Many students across the metropolitan area enjoy high-quality learning environments in schools higher than a two-storey built form. Parramatta PS, Northbourne PS, Waitara PS are good examples of such schools. In a dense urban and even suburban settings, it is much more important to have adequate, generous and diversified outdoor play spaces for students to enjoy rather than low-level buildings. The design team has implemented various design elements to enhance the outdoor experience of students across the campus. Shade structures, active and passive play spaces, seating arrangements, outdoor learning spaces both on ground level and top levels, sports fields, extensive landscaping and planting, all of these together with Design with Country themes enrich the experience of students across the campus grounds and provide a range of exploration opportunities. The identity of this project is a one educational campus based on the SINSW hub design. This design seeks to rationalise learning and teaching spaces and future proof the school to achieve maximum flexibility should changes be required, either in year group sizes or programmatic use of spaces. The built form is appropriate for both HS and PS and provides an adequate urban street edge for such a facility. Both HS and PS at three-storey are identified by other means like façade articulation, entry design, colour, and associated Designing with Country artwork.	n/a
6.4.2	The current effort to create differentiation between the primary and high school through the façade design is acknowledged, however further development is required to ensure the difference can be read in scale, not just in the elevation. Consider the following: a. Explore built forms and shapes that are distinct to the primary and high school. b. Varying the materials and finishes.	The masterplanning is a product of balancing the briefed areas resulting in mostly 3 storey buildings and the required ground floor play space for 2000 HS students & 1000 PS Students. A study of lower scale buildings will negatively impact the amount of play space required. See Section 3.8 of the Architectural Report. The identity of this project is a one educational campus based on the SINSW hub design. This design seeks to rationalise learning and teaching spaces and future proof the school to achieve maximum flexibility should changes be required, either in year group sizes or programmatic use of spaces. The built form is appropriate for both HS and PS and provides an adequate urban street edge for such a facility. Both HS and PS at three-storey are identified by other means like façade articulation, entry design, colour, and associated Design with Country artwork. Following the recent SDRP presentation, the material and colour palette has been expanded to include metal cladding in various forms, metal hoods and additional screening elements, expressive sun shading, textured paving and a variety of brick patterns to respond to Connecting with Country themes.	n/a
6.4.3	Use walkways and stairwells as key placemaking and gathering points. Further develop these aspects to provide diversity of experience, and to support a range of amenity including shelter, gathering, views to the mountains, wayfinding etc.	Following SDRP presentation no 2, the intersection in walkways, mainly between the buildings, were expanded to accommodate classroom size outdoor learning spaces on L1 & L2. These spaces enjoy views to the Blue Mountains and the parkland to the west. Balustrades along the walkways include coloured metal screens – the colour being part of the wayfinding system – each block is identified by a specific colour. Stairwells were rotated to be perpendicular to the walkways to allow for better supervision and will be a key feature in the wayfinding strategy for the school, using transparencies, specific artwork and graphics on all three faces.	n/a
6.4.4	The long western facing walkways are the primary circulation for the school. Develop the design to ensure year-round, all-weather protection is provided for students.	The west facing buildings consist of mostly General Learning Spaces which will be occupied up to 3pm during school hours and unoccupied outside school hours. The façade is protected by 2.8m wide walkway & roof. The appended sun & shade simulation diagrams indicate a short window of sunlight exposure outside school hours.	**Attachment J**

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Table 6 GA NSW – State Design Review Panel 20 July 2022 - Second Review (letter dated 1 August 2022)			
Item #	**Issue**	**Response**	**Reference**
6.5 Sustainability and climate change			
6.5.1	Provide further details of the proposed tree canopy target and when and how this will be met.	The target is between 25%-40% mature tree canopy coverage. Early procurement of all required mature trees for both the primary and high school projects has been engaged in order to control the procurement by securing the nominated tree species, necessary number of trees, at the required size and guarantee the quality of the product. Securing mature trees will ensure shade is provided to the outdoor gathering spaces and a stronger canopy coverage will be available from day one. It also means that these trees will become the significant trees quicker that all great schools have.	n/a
6.5.2	Provide further details of the sustainability strategy including Net Zero targets and whether full electrification is possible.	Sustainability is high on the agenda for the proposed development. In line with the approved business plan, the project will be targeting a formal Green Star 5 Star certification through Green Building Council of Australia's (GBCA) Green Star Design and As Built (D&AB) v1.3. The project has been formally registered. In addition, the project is designed to meet the sustainability requirements of the NSW Department of Education's Educational Facilities Standards and Guidelines (EFSG). An on-site renewable energy system has been incorporated in the design, comprised of 70 kw PV System for primary school (400m^2), and 100 kw PV System for High school (700m^2). No fossil fuels are burned on site to generate electricity, heating, or cooling. Other strategies that would contribute towards meeting the net-zero goals, include: • Minimise greenhouse gas emissions and consumption of energy; • Greater than 10% reduction in energy efficiency over minimum NCC compliance. (Aiming for at least 10% reduction as required by Green Star 4 Star); • Passive design including consideration of orientation, thermal mass, shading, and fabric and glazing insulation, performance, and colour; • Energy efficient lighting design and lighting control; • Energy efficient heating, ventilation, and air-conditioning design and controls; • Energy efficient appliances and equipment; • Energy monitoring and whole of building demand management and control.	**Appendix O of the EIS**

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4.8 Transport for NSW Agency Advice

Table 7 Transport for NSW (advice dated 14/12/2022)

Item #	Issue	Response	Reference
7.1 Transport and Parking			
7.1.1	Sightline assessment to be provided for the proposed wombat crossings in proximity to intersections to ensure visibility at the proposed pedestrian crossings complies, in accordance with the Austroads Guide to Road Design: Part 4A: Unsignalised and Signalised Intersections (Section 3 – Sight Distance).	A sightline assessment has been undertaken at each proposed pedestrian crossing and is provided at Appendix F of the updated TAIA. This assesses the sightlines required for both 60km/h and 30km/h speeds (73m and 27m sight distance) to represent the travel speeds for vehicles approaching straight to the crossing and vehicles approaching around a bend, respectively. Considering this, suitable sightlines are achieved on approach to all proposed pedestrian crossings. Realistically, it is expected that vehicles will often approach crossings at speeds less than 30km/h, particularly when turning from a minor road (e.g. from Rakali St to Galah St) and due to the crossings being raised and approachable at low speeds only. Therefore, a more conservative assessment has been provided. Based on this and the explanation above, the sightlines to the proposed crossings are suitable.	**Attachment D**
7.1.2	Noting there are existing pedestrian splitter islands at the roundabout intersection of Kaluta Avenue and Elara boulevard, the demand for a proposed pedestrian crossing at these locations are to be investigated.	The demand volumes for pedestrian crossings have been outlined in the TAIA. The intersection of Kaluta Avenue and Elara Boulevard will be a high intensity location for both pedestrian and vehicle movements, including heavy vehicles (buses), and therefore pedestrian safety treatments are a high priority. The ability for children to safely access the site with pedestrian priority is critical to the success of the project. Comments from DPE, TfNSW, and BCC are also noted as part of the SSDA submissions relating to a complete pedestrian network, which these crossings would help facilitate.	**Attachment D**
7.1.3	TfNSW notes, as per the Transport and Accessibility Impact Assessment (TAIA), the proposed school capacity comprises 3000 students and 219 staff members. This can potentially generate an additional 1000's private vehicles to the already congested road network in the area during the school drop off and pick up period, should no active and public travel provisions be provided from Day 1 of the school operation. The TAIA mentions that car mode and parking are the lowest priority in the transport strategy to discourage private cars and supplement alternative transport options, which is a positive strategy. However, this should be justified with more details on how this can be achieved. The school operation timing is unclear from the report.	Justification and provisions for active and public transport options are outlined in detail in the TAIA. Provisions include construction of new pedestrian wombat crossings, construction of bicycle storage and end-of-trip facilities, and construction of a new indented bus bay to accommodate higher volumes of bus services in future. All of these active and public transport provisions will be provided from Day 1 of operation.	**Attachment D**
7.1.4	The SIDRA traffic model outcome does not represent the overall cumulative impact at the intersections along Elara Boulevard and Richmond Road. Currently, the intersection of Richmond Road and Elara Boulevard experiences long queues, resulting in poor speed ratio and journey time reliability along Richmond Road and Elara Boulevard. This is likely to worsen as further developments in the area are completed, noting people who live outside of the walking and cycling catchments from these schools are more likely to drive their children to school.	Updated traffic modelling (in this revision of the report) now addresses cumulative impacts along Elara Boulevard and Richmond Road as requested. The project includes provision of an indented bus bay to accommodate a higher volume of bus services in future, to ensure that people who live outside the walking and cycling catchments are not forced to drive to school and are encouraged to take public transport. Bus services to the outer areas of the catchment were specifically discussed with TfNSW during the Transport Working Group consultation stream.	**Attachment D**
7.1.5	Adequate accessible parking should be provided within the on-site parking area.	Accessible parking is proposed to be provided in accordance with the BCA.	**Appendix K of the EIS**
7.1.6	To attract sustainable travel mode to/from schools and manage the impacts of the future schools, TfNSW recommends the following: • Council and DET to collaborate with TfNSW to investigate on travel demand management measures, with a greater focus on improving facilities and safety for people walking, cycling and using public transport. • Provision of footpaths on both sides of the streets providing safety cyclists, with adequate infrastructure, to existing and new street networks within a 15-minutes walking catchment (1.2km) of the schools. • Ensure tree canopies are planted on at least one side of the street networks within the 15 minutes walking catchment of the schools. • Before the schools are built, the Council should consider providing a connected and safe footpath network and multiple generous pedestrian crossings across all surrounding Local and State roads on key desire lines to embed safe, convenient pedestrian movement from Day 1. • Monitor situations on a regular basis to understand future travel patterns and how pedestrians and cyclists move around in the area. Also ensuring that safe walking and cycling routes to key destinations, crossing opportunities at desired lines, direct/reliable local/school bus routes and adequate bus stop facilities are provided. Any proposed pedestrian crossing facilities, signage and line marking on the Local road network will require consideration of the Council's Local Traffic Committee.	• Council has advised the footpath network is funded and will be delivered for the entire precinct, with footpaths to be constructed once residential construction within any particular sub-area reaches approximately 80% completion. Council to advise on timing. It is recommend that this infrastructure should be available from Day 1. • SINSW will replace impacted street trees on immediately streets fronting the site. Tree canopies on streets beyond street frontages is a responsibility for Council. • This project will provide pedestrian crossings to ensure desire lines to the school (from Day 1) are facilitated. • The School Transport Plan now includes provision for future monitoring and updates. • Requirements relating to Council / LTC approval are anticipated as a condition of development consent.	**Attachment D**

4 Response To Submissions

Table 7 Transport for NSW (advice dated 14/12/2022)			
Item #	**Issue**	**Response**	**Reference**
7.1.7	A significant number of vehicles and pedestrians will access the site at the start and end of the school day. School Zones must be installed along all roads with a direct access point (either pedestrian or vehicular) from the school. School Zones must not to be provided along roads adjacent to the school without a direct access point. Road Safety precautions and parking zones should be incorporated into the neighbouring local road network: • 40km/hr School Zones are to be installed in streets with direct access in accordance with the below/following conditions. • Council should ensure that any parking, drop-off / pick-up zones and bus zones incorporated are in accordance with TfNSW standards.	The proposed School Zone extents are identified in Figure 3.4 of the TAIA report. The Applicant is supportive of the recommended conditions of consent associated with School Zone documentation requirements.	**Attachment D**
7.1.8	TfNSW is responsible for speed management through all public roads within the state of New South Wales, being the only authorised organisation that can approve speed zoning changes and authorise installation of speed zoning traffic control devices on the road network within New South Wales. Accordingly, the Developer must obtain written authorisation from TfNSW to install the School Zone signs and associated pavement markings and/or remove/relocate any existing Speed Limit signs. To obtain authorisation, the Developer must submit the following information for review and approval by TfNSW, at least eight (8) weeks prior to student occupation of the site: - A copy of Council's development Consent Conditions - The proposed school commencement/opening date. - Two sets of detailed design plans indicating the following: I. School Property boundaries II. All adjacent road carriageways to the school property III. All proposed school access points to the public road network and any conditions imposed/proposed on their use IV. All existing and proposed pedestrian crossing facilities on the adjacent road network V. All existing and proposed traffic control devices and pavement marking on the adjacent road network (including School Zone signs pavement markings). VI. All existing and proposed street furniture and street trees. School Zone signs and pavement marking patches must be installed in accordance with TfNSW approval/authorisation, guidelines and specifications. All School Zone signs and pavement markings must be installed prior to student occupation of the site. The Developer must maintain records of all dates in relation to installing, altering, removing traffic control devices related to speed. Following installation of all School Zone signs and pavement markings, the Developer must arrange an inspection with TfNSW for formal handover of the assets to TfNSW. The installation date information must also be provided to TfNSW at the same time. Please note, until the assets are formally handed-over and accepted by TfNSW, TfNSW takes no responsibility for the School Zones/assets.	The proposed School Zone extents are identified in Figure 3.4 of the TAIA report. The Applicant is supportive of the recommended conditions of consent associated with School Zone documentation requirements.	**Attachment D**
7.1.9	TfNSW notes the proposed mode shares for public and active transport mode share within the Green Travel Plan (GTP), but TfNSW requires the applicant to significantly reduce the mode share for single occupancy car use for staff (which is currently at 80% including 15% for car-pooling) and further increase car-pooling for staff and use of buses for staff and increase cycling and walking mode shares for staff when cycling and walking paths have been safely managed. Please consult TfNSW website Travel Plan Toolkit and Travel Plan template for further information.	The project is current seeking to find a balance between inputs from Council and TfNSW. It is proposed that these mode share targets be retained, and acknowledge that these targets can and should change over time to reflect changing travel behaviour in response to future surveys and studies. The School Transport Plan includes provision for annual reviews and updates to adjust these mode splits as required.	**Attachment D**
7.1.10	TfNSW recommends that the GTP include an implementation plan. The Implementation Plan should include all of the initiatives and incentives within the GTP, timing and completion dates to ensure the overall effectiveness of the GTP as an implementation strategy. Each part of the Implementation Plan should be managed overall by a Travel Plan Coordinator/Steering Committee. The Implementation Plan should: - Identify the party or parties responsible for delivery and implementation of each element of the updated GTP throughout various stages of the development lifecycle, including for its ongoing implementation, monitoring and review, for a period of at least 5 years postOC; - Be updated both on an annual basis, and when future transport services are upgraded. - Include your current communication strategies and initiatives.	The School Transport Plan (equivalent to the GTP), which has been provided in preliminary format as required for the SSDA and will be issued as a final document prior to occupation, will include details relating to implementation. The School Transport Plan template has been developed in coordination with and endorsed by TfNSW and the Green Building Council of Australia (GBCA).	**Attachment D**
7.1.11	TfNSW recommends that the GTP includes student and staff surveys that are conducted each year for the lifecycle of the development. The surveys should include questions to obtain workforce data analysis (including staff and student residential postcodes), to identify the staff and student travel origin and destination patterns, to inform strategies that help to reduce car parking demand for staff and students to get to and from the site. The Travel Survey should also be promoting any initiatives or strategies that encourage sustainable transport routes. An example of a travel survey can be found here. A Travel Survey should be prepared for this GTP as a separate appendix.	The final School Transport Plan (prior to occupation) will include details relating to future/ongoing travel surveys.	n/a

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Table 7 Transport for NSW (advice dated 14/12/2022)			
Item #	**Issue**	**Response**	**Reference**
7.1.12	TfNSW requests that a parking management strategy be incorporated into the GTP (into the Implementation Plan), that prioritises use by staff on a needs basis, e.g. preference for staff parking that are car-pooling or car sharing	The final School Transport Plan (prior to occupation) will include details relating to a parking management strategy.	n/a
7.1.13	Please include a Transport Access Guide as a separate appendix in the GTP to inform staff, students and visitors to the school of the travel choices available to them. This should include information about public transport connectivity, end of trip (EoT) facilities, and local pedestrian and cycling connections.	The final School Transport Plan (prior to occupation) will include a Travel Access Guide.	n/a
7.1.14	TfNSW recommends reducing the amount of carparking proposed (142 car parking spaces across both schools) as this will further encourage car driving as a preference. More sustainable modes should be encouraged which is consistent with Future Transport 2056 in which Travel Demand Management (TDM) is one of TfNSW top priorities.	The project is current seeking to find a balance between inputs from Council and TfNSW. Council has requested an increased parking provision in contrast to TfNSW's request for a reduction. It is propose that the quantity of car parking spaces be retained as per the current proposal.	**Attachment D**
7.1.15	A good supply of quality EoT and bicycle parking is requested to encourage walking and cycling mode shares (once these paths are safely managed). TfNSW asks for clarity on these bike spaces; currently there are 219 new staff, but only 40 bike spaces with EOT facilities for staff, and a further 144 bike spaces across both schools but it is not clear if these are for students or if the 144 bike spaces also include the 40 bike spaces for EoT for staff. TfNSW recommend that this bicycle parking and any EoT be monitored over time to ensure sufficient supply to encourage active transport both to/from the site, for staff. The bicycle parking should be located at the development site at convenient locations, be safe, secured and under cover. Some further guidance on bicycle parking and end of trip facilities can be found in the cycleway design toolkit.	Bicycle storage for students is proposed as per the Department of Education's Educational Facilities Standards & Guidelines (EFSG), comprising 84 spaces for the high school and 60 spaces for the primary school (total 144 spaces). These 144 spaces are for students. The spaces are distributed as follows, as shown on the architectural plans, however the exact distribution may vary prior to occupation: - 10 rails (20 spaces) near Elara Boulevard entry - 14 rails (28 spaces) near Kaluta Avenue entry - 16 rails (32 spaces) near Kaluta Avenue & Swallowtail Street - 14 rails (28 spaces) near Swallowtail Street entry - 18 rails (36 spaces) near Galah Street entry In addition, a capacity of 40 spaces for staff is proposed, colocated with the EOTF adjacent to the school hall (Block G).	n/a
7.1.16	The Transport Access Guide should include (but not be limited to) the following: - Information about cycling, walking and public transport initiatives (once safe pathways are completed) to encourage the use of sustainable transport journeys by staff and students. - Promotion of end of trip (EoT) facilities, including any new cycling infrastructure available, and update number and location of bicycle parking and EoT facilities. - Information on car share, car-pooling and priority parking for people that carpool or carshare.	The final School Transport Plan (prior to occupation) will include a Travel Access Guide.	n/a
7.1.17	The Public Transport Accessibility Impact Assessment states an action to seek an increase in the frequency of the 747 school buses in the area and potentially all services that pass these schools to service the potential 1000 extra students. These improvements may have an impact on the bus stop, layover and road capacity requirements in the vicinity and possibly within the development.	As documented in the meeting minutes for the Transport Working Group consultation stream (three meetings with Council + TfNSW on 12/05/22, 09/06/22, and 20/07/22), the project team has worked closely with TfNSW to develop the transport strategy for the site including the bus stop and bus servicing. TfNSW's bus servicing representatives stated that they had no complaints with the proposal, and that initial bus servicing in Year 2025 is acceptable. TfNSW requested enrolments by suburb (specifically Colebee) and this will be provided by SINSW to TfNSW on an ongoing basis as part of continual service planning for the life of the development. TfNSW also advised that services on the 747 route which terminate at/near the site would continue on as another route. Services are expected to continue to change over time and the operations of the school (including elements such as School Transport Plans and Travel Access Guides) will adapt to these changes.	**Appendix D of the EIS**
7.1.18	The proposed design of the indented bus stops should be in accordance with Bus Capable Infrastructure guidelines. The capacity of these stops needs to be appropriate not just for services currently existing or agreed upon but any future increase in services (747, school and other as mentioned above).	As documented in Section 4.7 of this report, the proposed indented bus bay has a capacity for 5 buses based on the Bus Infrastructure Guide, or could potentially fit up to 6 buses with reduced (non-independent) spacing. TfNSW has not advised of any specific capacity that this bus stop should accommodate. Based on the Bus Infrastructure Guide, a bus stop with capacity for 5 buses would be suitable for 90 – 120 buses passing the bus stop in the busiest hour (subject to various factors including dwell time), which is considered substantially higher than the expected future increase in services at this location. This report notes that this proposed capacity would be sufficient to accommodate the full demand of the school within approximately 15-20 minutes of the bell time. All other services could be readily accommodated across a peak hour period.	**Attachment D**
7.1.19	A Construction Traffic and Pedestrian Management Plan (CTMP) must be prepared prior to the issue of the construction certificate with details of predicted construction traffic movements, routes and access arrangements, and outline how construction traffic impacts on existing traffic, pedestrian and cycle networks would be appropriately managed and mitigated.	Proposed to be imposed as a condition of consent.	**Attachment B**
7.1.20	An Operational Traffic Management Plan (OTMP) to be prepared prior to occupancy and prepared by a suitably qualified person, in consultation with TfNSW.	As per recent SINSW projects approved through DPE, it is anticipated that the OTMP actions would be incorporated into the requirements of a School Transport Plan, which is an expected condition of consent. Refer to SSD-9579147 (Pendle Hill High School), Condition D21 for an example. Therefore, it is recommend that an OTMP should not be required as a separate condition of consent.	**Attachment B**

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Table 7 Transport for NSW (advice dated 14/12/2022)			
Item #	**Issue**	**Response**	**Reference**
7.1.21	Sight distances from the proposed vehicular crossings are to be in accordance with the Austroads Guide to Road Design: Part 4A: Unsignalised and Signalised Intersections (Section 3 – Sight Distance) and AS 2890. Vegetation and proposed landscaping/fencing must not hinder sight lines to and from the vehicular crossings to motorists, pedestrians and cyclists.	A sightline assessment has been undertaken for the driveway of the car park and the loading area and is provided at Appendix F of this updated TAIA. For the car park driveway, it is expected that most movements will occur during school zone hours and so it is appropriate to consider the AS2890.1 sight distance required for this speed (55m), although this has been increased to consider the minimum sight distance for a 60km/h speed (65m) to account for any car park movements occurring during non-school zone hours. The AGRD Part 4A requires sight distances of 40m and 73m for 40km/h and 60km/h speed zones, respectively. However, it is more appropriate to consider and comply with the AS2890 requirements as this standard is specifically intended for use at access driveways and AGRD Part 4A would be overconservative. For the loading dock driveway, the AS2890.2 sightline requirement for 60km/h speed zones (83m) encroaches into the proposed fence line. This fence line will be reviewed during the detailed design phase to target shifting the fence about 2.6m back within the site. However, a 40km/h school zone will be in place during the majority of vehicle movements in the local area, which only requires a 55m sight distance and is clear of the fence. Therefore, if the fence cannot be readily adjusted, the current sightlines are still suitable. The AGRD Part 4A requires sight distances of 79m and 131m for 40km/h and 60km/h speed zones, respectively. However as outlined above, it is more appropriate to consider and comply with AS2890, although it is noted that the AGRD Part 4A requirement for 40km/h can be achieved if the fence is shifted. Vehicles exiting both the driveways are able to achieve suitable sight distances to Galah Street clear from fencing and significant landscaping or vegetation. Galah Street does contain a line of small trees located within the sightlines, however these obstructions are minor and are not expected to significantly impact drivers' sight. Rather than removing the trees, it is recommend that Council monitor, maintain and trim the trees if required. In addition to the sightlines required to Galah Street, the minimum sightlines required to the footpath for pedestrian safety have also been assessed. Sight distance to the footpath is achieved for both driveways.	**Attachment D**

4 Response To Submissions

4.9 NSW SES Agency Advice

Table 8 NSW State Emergency Service (advice dated 15/11/2022)

Item #	Issue	Response	Reference
8.1	**Flooding**		
8.1.1	Development should not result in an increase in risk to life, health or property of people living on the floodplain.	Flood Evacuation Response Plan (FERP) has been prepared in consultation with SES to ensure development will not result in increased risk to life, health, or property of people attending the proposed development.	**Attachment F**
8.1.2	Risk assessment should consider the full range of flooding, including events up to the Probable Maximum Flood (PMF) and not focus only on the 1% AEP flood. This has to be considered in the risk assessment.	The original Stormwater and Flooding Report submitted with the EIS and updated Stormwater and Flooding Report included with the Submissions Report considered flood risk associated with the PMF in addition to the 1%AEP. To ensure that all available flooding information is considered, an amended Flooding Report has been compiled and is to be read in conjunction with the Stormwater and Flooding SSDA Report. This document incorporates the following additional flood events. It is noted that these do not materially impact the findings of the previous reports or design proposals. • 0.5% AEP • 0.2% AEP • 0.1% AEP	**Attachment F**
8.1.3	Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes. Evacuation must not require people to drive or walk through flood water.	Site evacuation management solutions were coordinated with advice and recommendations made directly by SES. This route is provided in Section 5.2 of the FERP.	**Attachment F**
8.1.4	In the context of future development, self-evacuation of the community should be achievable in a manner which is consistent with the NSW SES's principles for evacuation. Future development must not conflict with the NSW SES's flood response and evacuation strategy for the existing community.	Site evacuation management solutions were coordinated with advice and recommendations made directly by SES. Evacuation route proposed in Section 5.2 passes through Abell Road in line with current SES evacuation strategy for area. The FERP prepared in consultation with SES outlines that flood warning times of 12 hours are applicable for the site. The school will therefore be closed prior to flooding and will therefore not impact the evacuation strategy for the existing community.	**Attachment F**
8.1.5	Development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation.	Site evacuation management solutions were coordinated with advice and recommendations made directly by SES. Site will be evacuated prior to the flooding of site. This approach was reached with recommendation by SES based on adequate flood warning times. No shelter in place is proposed due to extent of PMF event as outlined in Section 4.4 of the FERP.	**Attachment F**
8.1.6	The Flood Emergency Response Plan (section 4, 5 and 6) should be updated to reflect the current terminology used by NSW SES. Specifically, this is Watch and Act, Advice and Emergency Warning. For further information please refer to the Hazard Watch website.	Phrasing used within the FERP has been updated to incorporate the current terminology used by NSW SES. This includes Australian Warning System (AWS), new warning levels and action statements. Refer to Sections 4, 5, and 6 of the FERP.	**Attachment F**
8.1.7	The NSW SES is opposed to the imposition of development consent conditions requiring private flood evacuation plans rather than the application of sound land use planning and flood risk management.	The FERP outlines flood evacuation plans from the proposed development site in Section 5.2 using existing flood evacuation routes provided by SES for the Melonba and Marsden Park areas. This aligns with the existing evacuation strategy and routes currently utilised by SES for the region.	n/a
8.1.8	Development strategies relying on an assumption that mass rescue may be possible where evacuation either fails or is not implemented are not acceptable to the NSW SES. This may occur if caregivers are unable to safely reach the children prior to the commencement of flooding.	The strategy does not rely on mass rescue. The site is to be evacuated prior to flooding of site based on flood warning lead times. This approach has been determined in direct consultation with SES and is outlined in Section 4.4 of the FERP.	**Attachment F**
8.1.9	Consent authorities should consider the cumulative impacts any development will have on risk to life and the existing and future community and emergency service resources in the future.	Location of site was planned and zoned for construction of a school development during precinct planning. Relevant consent authorities have provided input for flood planning of site within other sections of this Submissions Report and outline that compatibility with SES strategies are required for site.	n/a
8.1.10	The RtS must also be accompanied by an updated Flood Emergency Response Plan developed by a suitably qualified flood risk and emergency management consultant in consultation with NSW SES and be in accordance with current best practise flood emergency management. The Flood Emergency Management Plan must provide clear, quantifiable triggers for each emergency management action.	Consultation with Peter Cinque from SES was performed Monday 25 July to cover the evacuation plan for site. Quantifiable triggers aligning with NSW SES terminology is provided in Section 4 of the FERP.	**Attachment F**

4 Response To Submissions

4.10 Blacktown City Council Agency Advice #1

Table 9 Blacktown City Council (advice dated 9/11/2022)

Item #	Issue	Response	Reference
9.1 Design and built form			
9.1.1	Information is requested regarding the effectiveness of the proposed passive design elements to manage current and future heatwaves in Melonba.	A project-specific climate change adaptation plan has been developed, and suitable mitigation strategies for the High risk items (including Heat-waves) have been included in the architectural and building services designs. The passive design strategies included in the project's Climate Risk Register, include: - Façade optimisation, by designing to exceed the requirements of Section-J NCC by at least 10%, via increasing insulation R-values, glazing performance / external shading. - Mixed-mode ventilation - All the occupied/habitable spaces are designed for mixed-mode ventilation, and have been provided with operable windows, ceiling fans and air-conditioning. The operable windows in the Learning Spaces have been designed to have an effective free-area of 6.25% of the floor area being served, and 5% for all other habitable spaces. When the outdoor conditions are favourable, which is anticipated to be around 50% of the year, the spaces would effectively rely on natural ventilation. At other times, air conditioning will be utilised. The proposed mechanical plant will be able to cope with the maximum projected temperatures (2degC). The above noted strategies will potentially make the building resilient to future heat waves, in an effective manner.	**Appendix H of the EIS** **Appendix O of the EIS**
9.1.2	There is no building separation between blocks to accommodate pedestrian circulation.	Buildings have been arranged in proximity to one another around the periphery of the site to maximise site security, student privacy, minimise acoustic impacts to adjacent dwellings, maximise open space provision, and to maximise opportunity for tree planting. Despite the connectivity and proximity of buildings, considerable pedestrian connectivity is provided through and between the buildings. The maximum length between pedestrian entry points within the school frontages is approximately 120m. This provides for superior pedestrian circulation in comparison to the surrounding street network which provides no mid-block pedestrian connections and has block lengths greater than 220m. Articulation in building facades, separation where practicable and orientation break up building massing and create interest in the streetscape.	**Appendix H of the EIS**
9.1.3	Council would like to raise the character of the area as a matter for the Department to consider in its determination of the proposal. Whilst this is not necessarily a reason for objection, the proposed school is surrounded by low density residential areas with majority double storey dwellings. The proposed school buildings are bulky triple storey buildings that exceed the 9 m height limit applicable to the site. There is also mostly no building separation between the Blocks to accommodate pedestrian circulation. The school buildings would therefore change the character of the area.	It is noted that the this is raised as a comment rather than an objection. A response is hereby provided nevertheless. Under the provisions of Section 3.43 of the T&I SEPP, no formal Variation Request under clause 4.6 of Appendix 11 to the CRC SEPP is applicable to a SSDA. Notwithstanding, significant justification has been provided in the EIS demonstrating that the additional building height produces an improved development outcome with acceptable amenity to the site, the public domain and to surrounding residents. The desired future character of Marsden Park, as set by the Growth Centre Structure Plan and the Indicative Layout Plan is a mixed use community of a town centre, village centres, schools, open spaces, vegetated creek corridors and residential development. The site has been identified as intended for a school since the inception of the Marsden Park release area. The presence of primary and secondary schools is characteristic of low density residential suburbs and are characteristically larger, taller and bulkier than the residential built form that surround them. The proposed building heights are predominantly three (3) storeys to maximise outdoor play space for both schools and to create opportunities for tree canopy while sitting comfortably within the lower-rise character of the suburb. The proposal exceeds the maximum height of building control of nine (9) metres with a maximum proposed height of up to 13.5 metres. The proposed additional building height produces an improved development outcome with acceptable amenity to the site, the public domain and to surrounding residents, maintaining appropriate privacy, solar access and a streetscape that compliments the existing and future character of the area. Articulation in building facades, separation where practicable and orientation break up building massing and create interest in the streetscape.	**Appendix H of the EIS** **Appendix I of the EIS**

4 Response To Submissions

Table 9 Blacktown City Council (advice dated 9/11/2022)			
Item #	**Issue**	**Response**	**Reference**
9.2 Transport and Parking			
9.2.1	Insufficient car parking is provided. Additional parking spaces could be created by providing either a basement carpark below or an additional elevated parking level above the proposed carpark to address the shortfall of parking spaces.	On-site parking has been provided to maintain an appropriate level of open play space, and a sustainable transport strategy has been prepared in order to support this available parking capacity. The transport strategy includes new bus infrastructure, new cycling infrastructure, new pedestrian infrastructure, and a School Transport Plan for ongoing management. The sustainable transport strategy for this development, which is aligned with State Government strategies and priorities, seeks to change travel behaviour rather than maintaining the status quo. Conversely to BCC's comments, TfNSW noted during the Transport Working Group consultation (TWG #3, 20/07/2022) that they believe the proposal provides too much parking and have reiterated this in their SSDA submission. Council has also noted at item (c) of their submission that heat islands and heat waves are of significant concerns. An elevated car park would result in more significant heat island issues on the site. An elevated or basement car park would involve significant levels of embodied carbon which would contribute to climate change and the worsening of future heatwaves. Council has noted at item (d) of their submission that the character of the area should be a consideration for the project. Construction of a multi-storey car park would be considered incompatible with the character of the local area, including the riparian / parkland zone opposite Galah Street.	**Attachment D**
9.2.2	There appears to be boundary adjustment along Swallowtail Street and Kaluta Avenue for the new indented on-street parallel parking spaces.	This is correct.	**Appendix B of the EIS**
9.3 Ecologically Sustainable Development			
9.3.1	Consideration should be given to providing additional solar panels on the roof across the entire development site to utilise the available space, as sustainable development principles are encouraged.	Provision has been made across the project to achieve a 5 Star green star rating. Energy efficient equipment and passive design which increases natural light and provides for natural ventilation reduce energy consumption. Notwithstanding, the roofs have been designed to facilitate additional PV cells in the future should demand and budget dictate.	n/a
9.4 Flooding and Stormwater			
9.4.1	The proposal to remove and not replacing the affected stormwater kerb inlet pits along Swallowtail Street is not accepted. The same provision needs along Kaluta Avenue needs to be made, that is, changing the kerb inlet pits to a double butterfly gated pit subject to satisfactory analysis to demonstrate the change does not adversely impact on the inlet capacity of these pits and pavement design. This will need to be provided on engineering plans for assessment.	All impacted Kerb Inlet Pits (KIP) impacted by the proposed bus parking bay extensions will be reconstructed to match the new proposed kerb line. Refer to Drawings: ▪ 221022-TTW-SITE-C-0441 ▪ 221022-TTW-SITE-C-0443 ▪ 221022-TTW-SITE-C-0444	**Attachment E**
9.4.2	No civil engineer plan was located in the submission.	Civil Engineering Plans have been included as part of the Stormwater and Flooding SSDA report submission. Refer to the Flooding and Stormwater SSDA Report.	**Attachment E**
9.4.3	The drainage system is to be designed in accordance with Council's Water Sensitive Urban Design Developer Handbook 2020, Engineering Guide for Development 2005 and Council's Water Sensitive Urban Design Standard Drawings.	These Council guidelines have been integrated into the design of site.	**Attachment E**
9.4.4	Submit DRAINS and Model for Urban Stormwater Improvement Conceptualisation electronically for review.	DRAINS and MUSIC models have been provided for review. Preliminary DRAINS model and ILSAX parameters submitted to Laith Almoil from BCC and approved on 06/09/22.	n/a
9.4.5	Engineering Plans: All Ocean Guards are to be clearly notated as "200 micron Ocean Guards". Provide a pit schedule clearly identifying pits with any number of Ocean Guards.	Pit schedule detailing provision of all OceanGuards is provided on Drawing 221022-TTW-SITE-C-0335. OceanGuards labelled as "200 micron Oceanguard".	n/a
9.4.6	Engineering Plans: Provide an onsite stormwater detention catchment plan.	Catchment Plan for both MUSIC and DRAINS is provided in Appendix E of the Stormwater and Flooding SSDA Report.	**Attachment E**
9.4.7	Engineering Plans: Provide a model for Urban Stormwater Improvement Conceptualisation catchment plan that shows both the land use and the areas contributing the each specific device. Ensure that a minimum fraction impervious of 85% is adopted for land-use in the Model for Urban Stormwater Improvement Conceptualisation.	A minimum land use of 85% impervious area has been adopted for use in the provided MUSIC model. A catchment plan showing individual device catchment has been included in Appendix E of the Flooding and Stormwater report.	**Attachment E**
9.4.8	Engineering Plans: Detailed design is to be provided for the onsite stormwater detention, Storm filter Chamber, Ocean Safe OS-1112 and Rainwater tank which includes sections, dimensions, levels, depths, catchments, Storm filter cartridges details, floatable baffles etc. This is to ensure that the stormwater system is designed in accordance with Council's guidelines and is effective in operation.	Refer to the Civil Engineering Drawing. ▪ 221022-TTW-SITE-C-0340 ▪ 221022-TTW-SITE-C-0360 ▪ 221022-TTW-SITE-C-0362 ▪ 221022-TTW-SITE-C-0365 Refer to the Hydraulic drawings for the rainwater tank.	**Attachment E**

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Table 9 Blacktown City Council (advice dated 9/11/2022)			
Item #	**Issue**	**Response**	**Reference**
9.4.9	Engineering Plans: The 1% Annual Exceedance Probability flows from the site are to be directed to the onsite stormwater detention. Demonstrate how the surface flows in excess of the pipe capacity are directed to the onsite stormwater detention system.	Overland flow generated from the 1%AEP storm event are captured on site and directed to the OSD by associated grated inlet pits and the in ground stormwater network. Refer to the following Drawings and DRAINS model: ▪ 221022-TTW-SITE-C-0331 ▪ 221022-TTW-SITE-C-0332 ▪ 221022-TTW-SITE-C-0333 ▪ 221022-TTW-SITE-C-0334	**Attachment E**
9.4.10	Engineering Plans: All pits deeper than 1.2m must provide step irons at 300 cts.	Refer to Drawing 221022-TTW-SITE-C-0360	**Attachment E**
9.4.11	Engineering Plans: On Drawing 0340 to be corrected as detailed in the Council submission	Refer to new Site Strip Levels on Drawing 221022-TTW-SITE-C-0350	**Attachment E**
9.4.12	Stormwater & Flooding Report (by TTW revision 3 dated 16 September 2022) is to be amended as detailed in the Council submission.	Stormwater and Flooding SSDA Report amended as per Council advice. The FEMP has been updated as outlined in **Section 4.9** of this report.	**Attachment F**
9.4.13	Flood Emergency Response Plan by TTW (dated 16 September 2022) is to be amended to include the following: • Provide and indicate permanent fail-safe, low maintenance measures incorporated in the development to ensure timely, orderly and safe evacuation of students and staff from the area. Provide details when the evacuation will occur once the flood reaches a particular location, depth, extent etc. Additionally, demonstrate that the displacement of staff and students during times of flood will not significantly add to the overall community cost and community disruption caused by the flood. • Evacuation route north of the site as shown in Figure 5.1 of the report is not accepted. The route should include evacuating on higher ground along Kaluta Avenue and follow the local ridge along Abell Road. The route should extend east along Abell Road towards Richmond Road. An alternate route should include east along Abell Road and cut off across Glengarrie Road and head south towards South Street if there are any issues with Richmond Road during the flood event. • Detailed consultation with State Emergency Services is required to address their flooding concerns and an Emergency Response Plan from State Emergency Services will also be required for the site and implemented into the development.	Consultation with Peter Cinque from SES was undertaken on 25 July 2022 to cover the evacuation plan for site. This informed the evacuation strategy and route provided in Section 4 and 5 of the FERP. Section 5.2 of the FERP has been updated to show primary evacuation route across Abell Road. Section 2.4 of the amended Flooding Report shows that evacuation along Kaluta Avenue to Abell Road remains unimpacted for all storm events up to and including the 0.1%AEP. Consultation with Peter Cinque and SES recommended operation of a second evacuation point from site along Elara Boulevard should early flood evacuation warning be issued. This would remain unimpeded up to and including the 0.5%AEP as demonstrated in Section 2.2 of the amended Flooding report. Warning times of 15 hours provided for site provided in Section 2.2 and 4.1 were confirmed by NSW SES. Solutions adopted in the FERP were made from direct consultation with Peter Cinque from SES. Flood evacuation routes, flood warning times, and Flood Response Actions reflect comments made by SES during direct consultation sessions.	**Attachment F**

4 Response To Submissions

4.11 Blacktown City Council Agency Advice #2

Table 10 Blacktown City Council (advice dated 11/11/2022)

Item #	Issue	Response	Reference
10.1	**Transport and Parking**		
10.1.1	In the pre-DA meeting we advised that all surrounding roads should have 11m carriageway. Only Kaluta Avenue fronting the development has a width of 11m. Other streets surrounding the development (Elara Blvd, Galah St and Swallaowtail St) have a width of 9m. These narrow roads will create traffic and parking congestion in future.	The existing roads and proposed upgrades to Katula Avenue are consistent with the Precinct Indicative Layout Plan and the Blacktown City Council Growth Centre Precincts DCP, and are fit for purpose. The site has been earmarked for a school since the inception of the Marsden Park precinct in 2011. With full consideration for operation of a school on this site, Kaluta Avenue was always intended to be a Collector Road and all other surrounding roads were planned to be local streets. Control 3.4.1.2(4) of the DCP states that roads be constructed in accordance with the hierarchy shown on the Precinct road hierarchy figure in the relevant Precinct Schedule (see Figure below [provided in my email]). It confirms that Kaluta Avenue is identified as a Collector Road and that Elara Boulevard, Swallowtail Street and Galah Street are identified as local roads. In accordance with Control 3.4.1.2(26) of the DCP, local roads are to have a carriageway of 11 metres in the R3, R4, B2 and B4 land use zones, and 9 metres in all other zones. The site is zoned R2 low density residential and therefore the surrounding local roads require a carriageway width of 9 metres. Council was provided with an opportunity to comment on the proposed road design and hierarchy at the precinct planning stage. The school location and road hierarchy has been set for a long time and the roads have since been constructed. The subject site has been identified as a proposed school site in all master planning for the Marsden Park / Melonba precinct. On this basis, the road network was designed with a Collector road (11m) along Kaluta Avenue and Local roads (9m) to all other frontages. The project is already proposing to widen Swallowtail Street from 9m to 10.2m (widening of 1.2m) to accommodate accessible kiss & ride in particular but also to serve the general kiss & ride function. This is a significant increase from the 9m width intended in the master plan. Further widening of this road, and any widening of Elara Boulevard and Galah Street, would increase traffic speeds and it is recommend that narrower roads be retained as a traffic calming measure. Further widening of roads may also require additional boundary adjustments (refer comments above) which would reduce the available play space on site, requiring reductions to the provision of on-site car parking in order to maintain allowable play space ratios.	**Attachment D**
10.1.2	According to the Growth Centre DCP, the proposed development requires 219 staff parking, 60 student parking and 30 visitors parking. Applicant has provided only 142 off-street parking spaces which are allocated solely for staff. There is a short fall of 167 parking spaces. This is a significant short fall. The applicant's traffic consultant justifies the short fall in parking citing available on-street car parking on the surrounding streets and multi model transport. We do not agree with these justifications.	On-site parking has been provided to maintain an appropriate level of open play space, and a sustainable transport strategy has been prepared in order to support this available parking capacity. The transport strategy includes new bus infrastructure, new cycling infrastructure, new pedestrian infrastructure, and a School Transport Plan for ongoing management. The sustainable transport strategy for this development, which is aligned with State Government strategies and priorities, seeks to change travel behaviour rather than maintaining the status quo. When the sustainable transport strategy is considered and fully applied, there is no parking shortfall and no usage of on-street parking, given the good availability of multi-modal transport options both now and in future. Even if the strategy is only partially applied or effective, the parking shortfall would be substantially lower than the assumptions made by the Growth Centres DCP. Section 4.9.3 of the TAIA has demonstrated that at least 290 on-street car parking spaces exist in the local precinct, only counting non-residential street frontages (i.e. not counting parking spaces in front of any houses), of which approximately 150 spaces would be available even if the Growth Centre DCP parking demand assumptions were fully applied (which, based on the sustainable transport strategy, is not considered to be reasonable). This is a substantial availability of parking, which would be available in addition to all residential frontages (which are not counted in the calculations above).	**Attachment D**
10.1.3	The applicant has proposed designated accessible parking on the surrounding streets. We do not support this accessible parking on the street for safety reasons. Accessible parking for parents/student should be provided within the off-street parking area.	Accessible drop-off and pick-up has been proposed on-street to be equitable and equal with the remainder of general-use kiss & ride facilities for the broader student population. Provision or requirement for accessible drop-off and pick-up to occur in a separate location such as the staff car park would be inequitable. Additionally, the on-street locations are specifically aligned to be adjacent to the SELU classes. Off-street parking in the main car park would be further from the SELU classes and less practical for access. The proposed accessible parking on-street is designed and would be provided fully in accordance with Australian Standard AS2890.6, which is designed specifically for this purpose with the safety of users in mind. On-street provisions (as opposed to off-street provisions) also reduce the number of vehicle movements at site driveways, which reduces the potential for pedestrian-vehicle interaction which is a significant safety risk. Providing accessible drop-off and pick-up in the staff car park would encroach into play space to accommodate the additional footprint which would not be acceptable, or would require a reduction to the staff parking capacity, which is not anticipated to be acceptable to Council. Accessible on-street parking has precedent within the Blacktown LGA. Existing locations include 30 Cambell Street, Blacktown; 9 Kildare Road, Blacktown (both sides of road), 14 Main Street, Blacktown; 209 Beames Avenue, Mount Druitt; 2 Themeda Avenue, Rouse Hill (marked 5-minute accessible spaces).	**Attachment D**

4 Response To Submissions

Table 10 Blacktown City Council (advice dated 11/11/2022)			
Item #	**Issue**	**Response**	**Reference**
10.1.4	The applicant has proposed 7 pedestrians crossing around the proposed development. The applicant is to engage a traffic consultant to determine suitable places on the roads for the wombat crossing. The applicant's traffic consultant should consult with the nearby residents to determine a suitable location. All wombat crossings require separate approval from Council through Local Traffic Committee process. All wombat crossings are to be provided at no cost to Council and should include street lighting as required.	The justification for the proposed crossing locations is fully documented in the TAIA and was discussed at great length with Council through the pre-lodgement Transport Working Group consultation stream. Council acknowledged during consultation (TWG #2, 09/06/2022) that they were happy that the project is providing more wombat crossings than was anticipated. All wombat crossings are to be provided at no cost to Council and should include street lighting as required. The SSDA was on exhibition for comment by local residents, which included all details of the proposed pedestrian crossing locations. There were no objections to the SSDA lodged by any residents, on any grounds. Of the comments received, one submission mentioned pedestrian crossing locations and a concern at a loss of street parking outside their house. As the submission name was withheld and address redacted, it is not possible to accurately determine the location, however based on the requested change in location (to Kaluta Avenue and Wagtail Street) it is assumed that the submission relates to the proposed crossing on Kaluta Avenue near Periwinkle Street. The location currently proposed in the EIS provides direct pedestrian connection through to the pedestrian footbridge between Betula Parade and Meehan Terrace. The current proposal is also located close to the corner of the school site which will provide more convenient access for more users, with fewer pedestrian required to divert or back-track to reach the crossing (thereby also reducing jaywalking or unsafe crossings). The suggested alternative location mentioned in the submission would not achieve these outcomes.	**Attachment D**
10.1.5	Car parking provision does not comply with Council's DCP. We will not support parking on the adjacent residential streets to accommodate the shortfall in the required parking for the school.	The proposal does not rely on on-street parking nor does the proposal anticipate a shortfall in off-street parking. Rather, a holistic sustainable transport strategy has been prepared, and is supported with both infrastructure and management solutions, to reduce the parking demand to a level that would be accommodated within the available car parking. The analysis provided in this report which refers to on-street parking availability and capacity is provided for comparison only, as described directly in Section 4.9.3 of this report. This analysis tests the assumptions of the Growth Centres TAIA, which is considered to be incorrect based on the proposed application of a sustainable transport strategy and demonstrates that even under those assumptions ample on-street parking would remain available for local residents.	**Attachment D**
10.1.6	Local roads surrounding the development have a width of 9m and should not be part of bus routes.	There are no bus routes proposed along local roads. All bus activity is proposed to occur at Kaluta Avenue, which is a Collector road and 11m wide.	**Attachment D**
10.1.8	The additional traffic generated by the proposed development is likely to create traffic congestion during school starting and finishing times. Explain on what basis the traffic report concludes that all key intersections around the site are expected to operate satisfactorily under the proposed future scenario during both peak periods.	The TAIA has reached this conclusion on the basis of traffic modelling for all key intersections around the site, including 10-year growth projections combined with the full proposed capacity of the schools, which was fully detailed in Section 4.5 of this report. All traffic modelling has been updated in the current revision of this report in response to DPE's submission on the EIS, which raised concerns around some of the parameters used. Updated modelling with refined parameters maintains similar outcomes to the previous TAIA and demonstrates an appropriate level of impact by the school development, particularly with respect to some worsening of conditions which occurs as a result of background traffic growth regardless of this school development.	**Attachment D**

4 Response To Submissions

4.12 Sydney Water Agency Advice

Table 11 Sydney Water (advice dated 7/11/2022)			
Item #	**Issue**	**Response**	**Reference**
11.1	**Infrastructure Servicing**		
11.1.1	The water and wastewater system should have adequate capacity to service the proposed development.	An Infrastructure Delivery Report – Hydraulics and Fire prepared by JHA was lodged with the SSDA which documents that water and waste water systems have adequate capacity to service the development.	**Appendix FF of exhibited EIS**
11.1.2	Amplifications, adjustments, and/or minor extensions may be required.	The site (greenfield) has been provided with a sewer junction and JHA have determined that no amplifications are required.	**Appendix FF of exhibited EIS**
11.1.3	Comply with Sydney Water's 'Section 73 Compliance Certificate' fact sheet.	Noted and a Section 73 application will be made once the SSDA is approved.	n/a
11.1.4	Comply with Sydney Water's 'Requirements for Business Customers for Commercial and Industrial Property Developments' fact sheet.	Noted and will comply.	n/a

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4.13 Endeavour Energy Agency Advice

Table 12 Endeavour Energy (advice dated 19/10/2022)

Item #	Issue	Response	Reference
12.1	**Infrastructure Servicing**		
12.1.1	Applicants should not assume adequate supply is immediately available to facilitate their proposed development.	An application for connection was submitted by the level 3 consultant and a design information package provided by Endeavour Energy. Provision for the required substations is being pursued under a separate approval pathway.	n/a
12.1.2	Before commencing any underground activity the applicant must obtain advice from the Before You Dig service.	A dial before you dig was completed as part of the design stage by Steensen Varming. The contractors once engaged will need to complete their own DBYD enquiry as well as completing their own surveys.	n/a
12.1.3	For public / road safety and to reduce the risk of vehicle impact, the distance of driveways from electricity infrastructure should be maximised.	Provision for the required substations is being pursued under a separate approval pathway.	n/a
12.1.4	The construction of any building or structure connected to or in close proximity to the electrical network must be properly earthed.	Electrical network cables are protected, buried into soil, and not connected to any of the structures.	n/a
12.1.5	Preference is for no activities to occur in easements and they must adhere to minimum safety requirements.	Provision for the required substations is being pursued under a separate approval pathway.	n/a
12.1.6	Endeavour Energy's emergency contact number 131 003 should be included in any relevant risk and safety management plan.	Endeavour Energy's emergency contact has been included in the Flood Emergency Response Plan, under the Emergency Contact Details. The number will also be included in any future risk and safety management plan.	**Attachment F**
12.1.7	Electricity infrastructure should not be subject to flood inundation or stormwater runoff.	Substations are above the 1:100 floor level as required by the Endeavour Energy standards.	n/a
12.1.8	Amendments can impact on electricity load and the contestable works required to facilitate the proposed development.	Substation sizing has been based on the site maximum demand as calculated by the design team. Steensen Varming understands there is no plans for future expansion of the school.	n/a
12.1.9	Design electricity infrastructure for safety and environmental compliance consistent with safe design lifecycle principles.	Design has been completed by an accredited level 3 designer in accordance with the Endeavour Energy guidelines.	n/a
12.1.10	Applicants will need to submit an appropriate application based on the maximum demand for electricity for connection of load.	Application for connection has been submitted for the project.	n/a
12.1.11	Development should avert the possible risk to health from exposure to emissions form electricity infrastructure such as electric and magnetic fields (EMF) and noise.	Substations have been located in accordance with the Endeavour Energy standards. Buildings meet all required minimum clearances.	n/a
12.1.12	Public safety training resources are available to help general public / workers understand the risk and how to work safely near electricity infrastructure.	Availability of public safety training resources are acknowledged.	n/a
12.1.13	The performance of the generation system and its effects on the network and other connected customers' needs to be assessed.	The detailed design for the solar panel system is to be completed by the contractor. The contractor will need to submit applications to Endeavour Energy for the system during their design finalisation stage.	n/a
12.1.14	Streetlighting should be reviewed and if necessary upgraded to suit any increase in both vehicular and pedestrian traffic.	Street lighting has been reviewed with the extent of work is captured in the proposed public domain works. Street lighting is coordinated with the appropriate safety measures in place.	n/a
12.1.15	Reducing greenhouse gas emissions and helping customers save on their energy consumption and costs through new initiatives and projects to adopt sustainable energy technologies.	The project is being designed to meet Greenstar targets and initiatives requiring equipment selected for all trades to be energy efficient as well as making use of appropriate materials. Sustainable energy technologies incorporated in the design include the provision of solar panels, detailed metering systems and smart control systems for the control or mechanical and lighting systems to minimise energy use.	**Appendix O of exhibited EIS**
12.1.16	Landscaping that interferes with electricity infrastructure is a potential safety risk and may result in the interruption of supply.	Trees have been selected to minimise risk to electrical infrastructure. Continued coordination is required to ensure tree locations mitigate the risk of future conflicts with services. All landscaped areas will have a regular maintenance regime that will mitigate the risk to power supply.	n/a

4 Response To Submissions

4.14 Public Submissions

Table 13 Public Submissions

Item #	Issue	Response	Reference
13.0	**Timing and Delivery**		
13.0.1	There is an urgent need for a primary school in the area. Request the school be delivered as quickly as possible.	Acknowledged. This proposal seeks to deliver a new public high school and a new public primary school to service the immediate student catchment.	n/a
13.0.2	There is an urgent need for a high school in the area. Request the school be delivered as quickly as possible.	Acknowledged. This proposal seeks to deliver a new public high school and a new public primary school to service the immediate student catchment.	n/a
13.1	**Traffic and access**		
13.1.1	Request a pedestrian crossing is not located in front of my house (address redacted) as this will take away the street parking that I have. Instead, requested that the crossing be placed near junction of Kaluta Avenue and Wagtail Street.	As the submission author's name has been withheld and address not provided, it is not possible to accurately determine this location, however based on the requested change in location (to Kaluta Avenue and Wagtail Street) it is assumed that the submission relates to the proposed crossing on Kaluta Avenue near Periwinkle Street. The location currently proposed in the EIS provides direct pedestrian connection through to the pedestrian footbridge between Betula Parade and Meehan Terrace. The current proposal is also located close to the corner of the school site which will provide more convenient access for more users, with fewer pedestrian required to divert or back-track to reach the crossing (thereby also reducing jaywalking or unsafe crossings). The suggested alternative location mentioned in the submission would not achieve these outcomes. The justification for the proposed crossing locations is fully documented in the TAIA and was discussed at great length with Council through the pre-lodgement Transport Working Group consultation stream. Council acknowledged during consultation (TWG #2, 09/06/2022) that they were happy that the project is providing more wombat crossings than was anticipated.	**Attachment D**
13.2	**Flood evacuation**		
13.2.1	There are only 3 exit points from the area (and only 2 can be used during the floods). Including Northborne Public school and these 2 new schools there are 4,000 students in the area. The exit roads are 1 lane roads and with speed limits 50km/h. There are thousands of houses in these estates. In case of any floods, how do you expect people to evacuate the suburb?	The FERP has been developed in consultation with SES and Council advice. Warning and response times were adopted based on advice received from SES, and both SES and Council recommended evacuation from site as the preferred viable strategy for the FERP. Additional flood maps based on the latest information from Infrastructure NSW have been included in the amended Flooding Report. These show that inundation during the 0.1% AEP flood event is limited to only the north western half of site. Evacuation from the south of site via Abell Road is therefore still possible during all floods up to and including the 0.1%AEP. FERP has been updated to reflect that evacuation would only be undertaken in consultation with the SES. The SES advice would always take priority over the Chief Warden. Assistant Wardens would be assigned as required.	**Attachment F**
13.3	**Naming**		
13.3.1	The proposed high school will be located in the suburb of Melonba but is being referred to as 'new high school in Marsden Park'. Request that the school name be reconsidered.	The proposal does not relate to the naming of the two proposed schools.	n/a
13.4	**Co-location of schools**		
13.4.1	The proposed land was initially designated only for High school, but the same place is now squeezed to accommodate primary school. The site is not large enough for all 3,000 students.	The Marsden Park Precinct Plan was developed as a release area within the Sydney North West Growth Centre. The school sites and associated school catchments were planned by the NSW Government. There is considerable demand for the proposed new primary school at Melonba and new high school at Marsden Park with young families with children moving into the area, and the proportion of school aged children anticipated to rise in coming years. The proposal is designed to meet the current and future education demands for residents of Melonba and Marsden Park. The two schools have been designed to provide appropriate space for all students, staff, and other visitors who will use the site as documented through the SSDA.	n/a
13.4.2	What work has been undertaken to show that the co-location of the schools does not have adverse impacts on local residents or the students themselves.	The EIS and comprehensive suite of supporting documentation responds in full to the SEARs. This includes a Social Impact Assessment prepared in accordance with the relevant guidelines which confirms that he proposal will have an overall positive impact on the local and future community, and that all potential negative impacts can be avoided, mitigated and/or managed to ensure an acceptable outcome for local residents and students.	**EIS and Appendices**

5 Updated Project Justification

The proposal is essential infrastructure to support the North West Growth Centre and Marsden Park Precinct.

The proposal will create 440 construction jobs as confirmed by the Cost Summary Statement (Appendix F of the EIS). The operation of the new primary school in Melonba and new high school in Marsden Park proposal creates 219 Full Time Equivalent jobs.

The project has weighed up budget cost benefits for the efficient allocation of public money. There are immeasurable economic benefits in the ongoing social and educational outputs of the two (2) proposed school as discussed in the Social Impact Assessment (**Appendix EE** of the EIS).

All matters raised in the submissions and agency advice received have been considered as outlined in this report.

The key environmental impacts are summarised below:

Built Form and Landscaping

The desired future character of Marsden Park, as set by the Growth Centre Structure Plan and the Indicative Layout Plan is a mixed use community of a town centre, village centres, schools, open spaces, vegetated creek corridors and residential development. The site has been identified as intended for a school since the inception of the Marsden Park release area.

The presence of primary and secondary schools is characteristic of low density residential suburbs and are characteristically larger, taller and bulkier than the residential built form that surround them.

The proposed building heights are predominantly three (3) storeys to maximise outdoor play space for both schools and to create opportunities for tree canopy while sitting comfortably within the lower-rise character of the suburb. The proposal exceeds the maximum height of building control of nine (9) metres with a maximum proposed height of up to 13.5 metres. The proposed additional building height produces an improved development outcome with acceptable amenity to the site, the public domain and to surrounding residents, maintaining appropriate privacy, solar access and a streetscape that compliments the existing and future character of the area.

Articulation in building facades, separation where practicable and orientation, break up building massing and create interest in the streetscape.

Creation of a unified campus feel between the new high school and new primary school is necessary for creating a stronger civic presence within the community and provides for greater flexibility to adapt to future changes in the student population and programming.

A significant tree canopy across the site, with planting of mature aged trees will provide appropriate shade and amenity improvements from the first day of operation.

Traffic, Transport and Parking

Transport, traffic and parking have been assessed in detail by specialist traffic consultants in consultation with TfNSW and Council and are found to be acceptable. The proposal would limit impacts on the surrounding traffic network through the provision of infrastructure including pedestrian crossings, a perimeter footpath, bicycle parking and end of trip facilities, kiss-and-drop zones and bus bays, and through the implementation of the School Travel Plan.

Car parking is the lowest priority transport for the proposal with a deliberate restriction on the number of parking spaces available to encourage a modal shift and reduce the number of private vehicles accessing the site. With consideration for the views of TfNSW to reduce parking provision, and of Council to increase parking provision, a balance has been struck to encourage alternative transport mode use as much as possible, while providing adequate parking provision for those staff who cannot be dissuaded from driving to site.

5 Updated Project Justification

Flood Risk and Stormwater Management

Detailed site-specific flood investigations have been undertaken by specialist consultants in consultation with the DPE, NSW SES and Council.

A Flood Evacuation Response Plan (FERP) has been developed for the schools in consultation with the NSW SES to ensure development will not result in increased risk to life, health, or property of people attending the proposed development.

Stormwater quantity has been designed in accordance with Council specifications and the *Educational Facilities Standards and Guidelines* to achieve appropriate water quality targets.

Ecologically Sustainable Development

The project is targeting a Green Star equivalency of 5 Stars under the latest version of Green Star (Buildings V1). By targeting of 5 Stars, the project will be aligned to the ESD principles under Clause 193 of the Regulation.

Noise and Vibration

There is potential for noise and vibration impacts to exceed acceptable limits as determined by appropriate industry standards. Appropriate mitigation measures will be implemented to limit unreasonable impacts and maintain appropriate amenity to school users as well as to surrounding residential receivers.

Social Impacts

The project will have an overall significant public benefit to the local community and will help address growing demand for essential education and community infrastructure. Community concerns and negative social impacts associated with the proposal can be mitigated with appropriate measures and appropriate communication.

Cumulative Impacts

The wider Marsden Park and Melonba area is in transition with large scale public and private development works occurring over many years. The large and vacant nature of the site assists in limiting construction and associated impacts to the wider area.

The EIS and supporting documentation responds in full to the SEARs. The potential impacts of the proposal have been documented, the views of public authorities and the public have been considered, and the DPE has sufficient information to be able to assess and determine the SSDA.

Attachments