

Environmental Impact Statement

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)

PLANNING. URBAN DESIGN. RETAIL AND ECONOMIC. HERITAGE Printed: File Name: Project Manager: P. Hemphill Project Number: Client:

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DECLARATION

ENVIRONMENTAL IMPACT STATEMENT

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REAP DECLARATION	
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Abbreviations

ACHAR	Aboriginal cultural heritage assessment report
AEP	annual exceedance probability
BCA	Building Code of Australia
BC Act	Biodiversity Conservation Act 2017
CAR	contamination assessment report
CBD	central business district
CIV	capital investment value
COLA	covered outdoor learning area
Council	Blacktown City Council
CPTED	crime prevention through environmental design
CRC SEPP	State Environmental Planning Policy (Precincts—Central River City) 2021
DCP	Blacktown City Council Growth Centre Precincts Development Control Plan
DFP	DFP Planning Pty Limited
DoE	NSW Department of Education
DP	deposited plan
DPE	NSW Department of Planning and Environment
DSI	detailed site investigation
EFSG	Educational Facilities Standards and Guidelines
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPBC	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
EPI	environmental planning instrument
ESD	ecologically sustainable development
FPL	flood planning level
FTE	full time equivalent
GANSW	Government Architect NSW
GLS	general learning spaces
LGA	local government area
OSD	on site detention
OSHC	out of school hours care
PMF	probable maximum flood
PSI	preliminary site investigation
RL	reduced level
SAS	site audit statement
SDRP	state design review panel
SELU	supported education learning unit
SEPP	state environmental planning policy
SEARs	secretary's environmental assessment requirements
SES	New South Wales State Emergency Service
SFR	stormwater and flooding report
SIA	social impact assessment
SIMP	social impact management plan
SINSW	School Infrastructure NSW
SSD	state significant development
T&I SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
TfNSW	Transport for NSW

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 new high school and Melonba new primary school, located at 20 Kaluta Avenue and 10 Swallowtail Street, Melonba to cater for a combined total of 3,000 students, supported by 219 staff. The proposal includes removal of 26 trees and transport infrastructure upgrades including construction of seven (7) pedestrian crossings and shared paths around the perimeter of the site.

Marsden Park new high school is a new secondary school comprising:

- 97 general learning spaces (GLS) and specialist teaching spaces;
- Three (3) supported education learning unit (SELU) rooms;
- School hall, and lecture and movement studio;
- Administration spaces;
- Staff and student facilities;
- Library;
- Canteen;
- Sports courts;
- Playing field;
- Landscaping and outdoor learning areas;
- Covered outdoor learning area (COLA); and
- Car parking (shared with Melonba new primary school).

Melonba new primary school will comprise:

- 44 GLS;
- Three (3) SELU rooms;
- Administration and staff facilities;
- Canteen;
- Multi-purpose hall;
- Library;
- Out of School Hours Care (OSHC);
- COLA;
- Outdoor play areas including sports courts; and
- Landscaped outdoor learning areas.

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 proposed works will generate up to 440 new construction jobs.

The new schools would be co-located at Lot 30 DP 1237735, Elara Boulevard, Melonba NSW 2765, bound by Elara Boulevard, Kaluta Avenue, Swallowtail Street and Galah Street, within the Blacktown Local Government Area.

The site is zoned R2 Low Density Residential under Appendix 11 Blacktown Growth Centre Precincts Plan of *State Environmental Planning Policy (Precincts – Central River City) 2021* (CRC SEPP). Development for the purpose of an educational establishment is permissible with consent in the R2 zone.

The proposal generally consists of one (1) and three (3) storey built form arranged around the perimeter of the site to maximise outdoor space while minimising acoustic and privacy impacts to and from adjacent development (**Figure 1**).



Figure 1 Visual representation of north and east elevations (Source: NBRS Architecture)

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.

The site is biodiversity certified land and is currently cleared of all vegetation. Removal of 35 existing street trees is proposed to accommodate site access and upgrades to road and footpath infrastructure. Considerable canopy cover is proposed around the street frontages and across the site with the planting of 444 x 200 Litre advanced trees to achieve visual and physical amenity and environmental performance from day one of operation (**Figure 2**).



Figure 2 Visual representation of internal play area (Source: NBRS Architecture)

The proposal is targeting a 5-star Green Star rating and will implement ecologically sustainable development initiatives including passive thermal design, energy and water efficiency, waste minimisation and resilience in design.

The transport strategy for the site prioritises active transport, namely walking, cycling and public transport. Active transport modes are encouraged by locating the new schools at the centre of the catchment and connecting to an extensive existing and proposed footpath and cycling network (Figure 3). A total of 144 bicycle parking spaces and of end of trip facilities will be provided on site.



Figure 3 Existing and Future Transport Strategy (Source: NBRS Architecture)

An 85 metre long bus bay is proposed along Kaluta Avenue to service both schools. A kiss and drop bay will be provided on Swallowtail Street with room for 16 vehicles for the new primary school at Melonba. A kiss and drop bay with room for 16 cars will be provided along Kaluta Avenue for the new high school at Marsden Park. At each kiss and drop location, provision for four (4) accessible parking bays will be provided to serve the SELU.

A combined car park comprising 142 spaces will be provided for staff of both the new primary school at Melonba and new high school at Marsden Park, providing for 65% of staff. Whilst Council has requested that the proposal comply with the DCP minimum car parking rates (one space per staff member), TfNSW has encouraged the proposal to reduce car parking provisions on site further to promote a modal shift for staff travelling to site. The project's traffic consultants, Taylor Thomson Whitting have calculated an appropriate balance between the two (2) competing views. Car pooling is encouraged by reserving car parking spaces exclusively for shared vehicle journeys.

Noise impacts associated with students playing outdoors have been assessed as well as the outside school hours care, classroom openings and noise emissions, workshop areas, hall/gym use, the public address system, waste removal and deliveries, cleaning activities, traffic, plant equipment and after-hour community uses of the site. Acoustic Studio acoustic engineers has been involved through the design process to minimise unreasonable noise and vibration impacts and maximise amenity, both during the construction and operation stages of the proposal.

Council has advised that filling of the site undertaken in association with preceding subdivision works has already satisfied the minimum Flood Planning Level being 1% Annual Exceedance Probability level plus 500mm freeboard. Notwithstanding, a Flood Emergency Response Plan has been developed for the school in consultation with the NSW State Emergency Service to establish a flood preparation, watch, warning and response strategy.

A Connection to Country report has been prepared by Comber which summarises consultation and engagement undertaken with Aboriginal community representatives and their input. The associated design responses include appropriate native planting, and interpretive design, materiality and artwork. The Connection to Country strategy has developed a colour palette for incorporation through the schools' design as shown in Figure 4.



from the

cumberland plains

people

nepean riverways

Figure 4 Colour palette reflecting Country themes (Source: NBRS Architecture)

for ceremon

School Infrastructure NSW (SINSW) and the project team have consulted with the local community, Blacktown City Council and State government agencies throughout the design of the development. Feedback provided through this time has been incorporated and addressed in final design and supporting documentation.

The local community raised concern that existing local schools are oversubscribed and that there is insufficient school capacity for the growing population. Members of the community requested that the new schools be built as quickly as possible. In addition, the community also raised concern regarding the appropriateness of the location of the new high school in Marsden Park, local traffic congestion and car parking capacity.

Other key stakeholders including NSW Government Architect, Blacktown City Council, Transport for NSW and the NSW State Emergency Service have been engaged through the development of the proposal. Some key changes that have been implemented to the design as a result of this consultation includes increased articulation of built form and façade treatment, use of landscaping elements to break outdoor spaces into more 'child scale' spaces, improved wayfinding at primary entry points, and transport infrastructure design to improve safety, efficiency and encourage active transport modes.

The proposed works have been assessed on balance as providing significant public benefit to the immediate local and surrounding district through the provision of new education facilities as promised through the strategic planning associated with the North West Growth Centre land release. The proposed works will provide new, purpose designed learning spaces that make use of the latest technology and deliver ESD principles to provide for the educational needs of a growing community. A new local primary school and high school will foster a greater sense of community among children and their families by providing a new communal centre in the heart of the neighbourhood. This is further supported by new facilities on site that will be available for community use.

This Environmental Impact Statement report has been prepared under Part 4 of the *Environmental Planning and Assessment Act 1979*, in accordance with the Secretary's Environmental Assessment Requirements for SSD 26876801 issued by the (then) Department of Planning, Industry and Environment, and Part 8 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation). The works proposed under this State Significant Development (SSD) application will be subject to the recommendations of specialist reports to ensure appropriate outcomes are achieved.

The proposed works have been designed to, and will be carried out in, the interests of the public. The works will meet the project objectives to provide new education facilities for the Marsden Park locality in the North West Growth Area.

Accordingly, it is requested that the Minister for Planning grant approval to the proposed SSD application as set out in this report.

1.1 Overview

1.1.1 Purpose of Report

DFP Planning Pty Ltd (DFP) has been commissioned by SINSW on behalf of the Department of Education (DoE) to prepare an Environmental Impact Statement (EIS) to accompany a development application (DA) to the NSW Department of Planning and Environment (DPE) for the proposed construction of Marsden Park new high school and Melonba new primary school at 20 Kaluta Avenue and 10 Swallowtail Street, Melonba (the site).

The proposed development is for an educational establishment with a capital investment value (CIV) of more than \$20 million and accordingly, is deemed to be State Significant Development (SSD) pursuant to Clause 15(1) of Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021*.

On 28 April 2022, the Secretary of the DPE issued Secretary's Environmental Assessment Requirements (SEARs) (**Appendix A**) for SSD No. 41372302.

This report has been prepared in accordance with the SEARs, Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Part 8 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) to enable assessment and determination of the proposal.

1.1.2 Project Objectives

In 2013 Marsden Park was released as part of the North West Growth Area to accommodate up to 10,300 new dwellings and associated infrastructure. The precinct included land for a new high school and three (3) new primary schools. This proposal seeks to deliver the high school and one (1) of the primary schools on land identified for those purposes.

Based on the anticipated population of 30,200 persons and associated catchments of the planned school sites, SINSW has determined that the proposed new high school in Marsden Park will need to accommodate up to 2,000 students and the new primary school in Melonba will need to accommodate up to 1,000 students.

The proposed schools seek to provide education facilities that maximise amenity and sustainability while limiting adverse impacts to surrounding residents and complying with budget constraints.

1.2 Site History

The topography of the immediate area is typical of the Cumberland Lowlands physiographic region being generally flat or gently undulating, with locally occurring watercourses and floodplains (**Figure 5**).

The site is within the traditional country of the Darug people. An Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared by AECOM (2016) documents evidence of Aboriginal people occupying the Cumberland Plain for at least 36,000 years.

Archaeological data indicates that assemblage size and complexity tended to vary significantly linked to a variety of environmental factors, with larger, more complex assemblages concentrated on elevated, low gradient landform elements adjacent to higher order watercourses.



Figure 5 Cumberland Lowlands rural land at Marsden Park prior to development (Source: AECOM)

The site was more recently used as grazing land and Nearmap aerial photography shows that the site contained paddock fencing from at least 2009 until 2016.

The area was rezoned for residential development in October 2013 as part of the North West Growth Centre land release. Development subsequently occurred around the site.

Remnant trees were cleared from the site in early 2017 and earthworks followed to create a flat site. Construction of Elara Boulevard occurred in 2018 and construction of Kaluta Avenue, Swallowtail Street and Galah Street followed in 2019 distinguishing the boundaries of the site.

1.3 Site Context

1.3.1 Location

The site is located in the newly formed suburb of Melonba, approximately 40 kilometres north west of Sydney central business district (CBD) and 12 kilometres north west of Blacktown CBD.

The site is accessible from Richmond Road via Elara Boulevard or Abell Road to the east and will be accessible from Stony Creek Road to the west when the planned local road network is completed.

The site is located towards the western side of the Marsden Park Precinct and is generally surrounded by low density residential development (**Figure 6**). The site is adjacent to land identified as Water Management, Environmental Conservation and a future sporting field to its west, and is proximate to a future local centre and local park to its south.



Figure 6 Site Location (Source: Nearmap)

1.3.2 Site Description

The site is located at Elara Boulevard, Melonba, which is within the Central River City Precinct and Blacktown Local Government Area (LGA). The site is irregular in shape and is sited between two tributaries of Little Creek. The site is generally level but has a gentle fall of about 4m from the south-eastern corner (RL23) to the north western corner (RL19.5). The site contains no vegetation other than grass and is currently fenced to prevent unauthorised access (**Figure 7**).

The site has a total area of 6.0 hectares and has four (4) road frontages:

- Elara Boulevard (northern boundary)
- Kaluta Avenue Collector Road (eastern boundary)
- Swallowtail Street (southern boundary)
- Galah Street (western boundary)

No natural watercourses are mapped as traversing the site.



Figure 7 Aerial photograph of proposed schools site (Source: Nearmap)

1.3.3 Surrounding Development

To the north, east and south of the site is emerging and recently completed low density residential development comprising one (1) and two (2) storey dwellings. To the west of the site is an open space area (which serves a drainage function) and beyond this is Little Creek, a tributary to South Creek that flows north to the Hawkesbury River. Further to the south is an area zoned as B2 Local Centre, which has not yet been developed. The next phase of residential development in the area is located on the western side of Little Creek and is currently in the bulk earthworks phase to create the street network.

1.3.4 Surrounding Road Network

The Marsden Park Precinct Plan was informed and supported by a detailed traffic and transport assessment prepared by AECOM. As documented in the Marsden Park Precinct Plan Post-exhibition Planning Report, a detailed assessment of road network opportunities was undertaken from both broad and more local perspectives to ensure appropriate road connections and capacity will meet future forecast traffic volumes and to inform the design of public transport, walking and cycling networks. This detailed transport planning included consideration for the two (2) proposed schools on the Melonba site.

As stated in Section 3.4 of the *Blacktown City Council Growth Centre Precincts Development Control Plan* (the DCP), the access network within the Precinct has been designed to provide a hierarchy of interconnected streets to deliver safe, convenient and clear access within and beyond the Precinct.

Key roadways immediately adjoining and surrounding the school site include a collector road (Kaluta Avenue) and local roads include Elara Boulevard, Galah Street and Swallowtail Street. **Figure 8** below shows how these roads connect to the wider network where collector roads are identified in orange and the local roads are coloured teal.



Figure 8 Planned local road network (Source: Taylor Thomson Whitting)

The intersections of the perimeter roads around the site are already established and can be summarised as:

- Roundabout:
 - Elara Boulevard and Kaluta Avenue;

- Giveaway Sign:
 - Elara Boulevard and Swallowtail Street;
 - Galah Street and Swallowtail Street;
 - Elara Boulevard and Galah Street;
- Unsigned Intersection:
 - Kaluta Avenue and Wagtail Street;
 - Kaluta Avenue and Periwinkle Street; and
 - Galah Street and Rakali Parade.

The provision of individual driveways to the adjoining narrow residential lots results in approximately 30% of street frontages opposite the site being driveway crossovers. Car parking on surrounding streets is generally unrestricted.

1.3.5 Surrounding Transport Network

There are no rail or ferry services proximate to the site. There are public bus stops located on Elara Boulevard 100 metres east of the site, one (1) eastbound and one (1) westbound. Busways operate the 747 and 748 routes to Rouse Hill, and 751 to Blacktown. All three (3) routes run at least every 30 minutes on weekdays.

As a master-planned new release area, Melonba and Marsden Park benefit from a comprehensive pedestrian and cycle network. The Traffic and Transport Assessment prepared by AECOM (2013) in the planning of the Marsden Park Precinct highlighted the benefits of providing viable alternatives to the private car for journeys and stated:

A comprehensive bicycle network is proposed for Marsden Park Precinct which will link the centres, schools, transport nodes and various residential neighbourhoods with key strategic routes and onward destinations. The proposed bicycle network will include a mixture of dedicated bicycle facilities which will take the form of off-road (shared path) and on-road (cycle lane) routes. Shared paths are provided adjacent to sub-arterial and collector corridors, resulting in a grid like network with approximately 800m between linkages.

Off-road shared paths are proposed along all arterial and sub-arterial roads providing a network of high order bicycle facilities for fast, efficient connections for travel between Marsden Park Precinct to regional destinations.

Large sections of the 1.5 metre wide shared path network has been constructed, including along the northern frontage of the site (Elara Boulevard) which currently connects to Jackwood Crescent and Mangrove Crescent in the west, Pepperberry Parade and Ribbonwood Crescent in the north, Inman Way in the south, and to Sundrew Parade and Abell Road in the east.

As confirmed by Council, all local roads in this locality will have footpaths on both sites of the road as per the requirements of the DCP, to be provided by the developers directly or by Council funded by the developers through a bonds scheme.

The walking catchment of the two (2) proposed schools is provided in Figure 9.



Figure 9 Walking catchment to existing and proposed school sites (Source: SCT Consulting)

1.3.6 Options Analysis

In line with other NSW Government expenditure, SINSW projects require business cases to be prepared and submitted to NSW Treasury as part of the annual budget process. A business case is a documented proposal to meet the Government's objectives that is used to inform investment decisions. It contains analyses of the costs, benefits, risks and assumptions associated with various investment.

Options analysis for school developments occurs as part of the business case process with a preferred option being put forward for funding and to progress to development application stage.

The design options for Marsden Park new high school and Melonba new primary school sought to address the key drivers for change and key site constraints and opportunities including:

- Creation of high-quality fit for purpose learning facilities including indoor and outdoor spaces;
- Minimising negative amenity impacts to neighbouring properties including acoustic, privacy, overshadowing, and traffic impacts;
- Encouraging a modal shift away from reliance on private motor vehicles for more healthy and sustainable transport; and
- Reintroducing ecological values to the site to mitigate the heat-island effect.

The developed design proposed in this SSDA has been identified as the option which best addresses the issues above and meets education service needs in this intake area.

1.3.7 Design Development

Site Analysis

NBRS Architecture in consultation with the full project team, were commissioned to design a new high school in Marsden Park and a new primary school in Melonba for 2,000 and 1,000 students respectively on the subject site.

Key considerations for the concept design have been student, staff and community needs, amenity of adjacent residential dwellings, the local traffic and transport network, solar penetration, regional views, prevailing winds, aboriginal heritage, flood risk, crime prevention, and working within an assigned budget.

Connection to Country

Having been guided by the principles of the *Draft Connecting with Country* document issued by GANSW, NBRS Architecture established the following design principles to provide holistic guidance in the approach to Designing with Country:

- Acknowledge;
- Obverse;
- Evaluate and establish connection;
- Framework;
- Consult; and
- Take Action designing with Country to create a sense of place.

Working with specialist consultants in the field (both Comber and Tocomwall), and relevant working groups, the following traditional themes and narratives were developed as significant to the site:

- 1. Connection, conservation and preservation reconnecting to the land, water, sky, seasons and animals;
- 2. Cultural history and significance (customs and ceremonies, meeting places, Eucalypts, landscape, artifacts, flags, murals, and stories);
- 3. Rivers;
- 4. Stone;
- 5. Darug totem Kangaroo;
- 6. Darug word Yam; and
- 7. Darug Language.

Wattle seed and seed pods is also a local theme incorporated into the design of the proposal as the suburb name 'Melonba' being the local Darug word meeting "Wattle Seed".

These themes have been implemented through the design of building facades and landscaping as detailed in **Section 3** of this EIS.

Concept and Masterplan

NBRS established the following key design principles to guide the design process:

- **Communicate through architecture** providing a learning environment that realises a universal culture of nurturing continual learning.
- **Navigate by architecture** a built environment that influences the interaction between people that implicitly suggests the importance of respect and consideration for others.
- **Learning and student wellbeing** providing for experience situations and engage with concepts on a firsthand basis.
- Served and servant spaces diversity of structured and less structured learning spaces for continual educational in all facets of a school.
- **Heritage connection** preserve local history and cultural significance for students, staff and the community.
- **Challenge and risk** safe opportunities for experimentation and challenge that teach children how to extend beyond their perceived limits through hands on experience.
- Environmental control and connection ecological sustainable design with natural lighting and ventilation requirements as well as maximising outdoor learning opportunities for a positive impact on student wellbeing.

- **School and community connection** spaces that provide an opportunity to engage with and enhance the surrounding community.
- Natural connection outdoor environments to encourage spontaneous, voluntary and joyful learning opportunities for students to explore and interact with their peers and the world around them.
- **Ease of adaption** adaptability is a real time response to evolving student needs supported by the manipulation of fixtures and furnishings.
- Instant connection spatial organisation so educational buildings remain relevant and cater for evolving pedagogy and technology.
- Layered groupings opportunities to personalise spaces and take greater responsibility for their own learning.
- **Shared spaces** spaces to facilitate relationships and encourage users to learn from each other.
- **Culture and identity** school social spaces and out of school community activities to encourage a culture of acquiring knowledge everywhere.

NBRS Architecture, working with the project team, developed a masterplan creating one (1) educational campus on the site containing the two (2) schools. The layout generally arranges predominately three (3) storey school buildings along the road frontages around the perimeter of the site with outdoor play and assembly spaces in an expansive central courtyard. The open courtyard arrangement assists with the supervision of play spaces, assists with privacy and security, and mitigates acoustic impacts to surrounding residential development.

The halls, libraries, canteen and sporting fields/courts and car park are arranged and located so as to be convenient for use by both schools. These lower height elements of the campus provide for a physical and visual connection to riparian land and future park on the west of the site and capitalises on views to the Blue Mountains.

The principal pedestrian entry points between the two (2) schools were separated with the new high school at Marsden Park accessible via Kaluta Avenue and the new primary school at Melonba via Swallowtail Street. These formal entry points provide a clear 'gateway' into the site with a larger separation between buildings, COLA and plaza spaces for gathering and school signage. Secondary pedestrian entry points are located around the site to reduce walking distances. Vehicle entry to the site for car parking, deliveries and waste collection occurring via Galah Street.

Concept revisions and development of final scheme

The development of the design involved considerable stakeholder consultation as documented in the Community Engagement Report (**Appendix D**). The Project Control Group (PCG), consisting of representatives from SINSW, Director Education Leadership (DEL), Project Managers, Cost Planners and NBRS, influenced the customisation of the architectural design and operational details.

Some of the notable changes reflected in the final scheme are:

- Building massing and the impression of long building facades was broken-down with greater separation and articulation of buildings, with some set as angles rather than being parallel to the street.
- The hierarchy of entry points was changed to alleviate traffic congestion and emphasize differences between the two (2) schools.
- Differentiation between the new high school in Marsden Park and new primary school in Melonba with a more 'mature' materiality and colour palette on the high school facades and incorporation of large patches of coloured cladding in the primary school facades.

- The corners of the school to the north and south of Kaluta Avenue were articulated to strengthen their visual recognition as urban markers for a more legible streetscape and sense of identity.
- Playground spaces were broken-up with landscaping elements to create smaller, more intimate spaces for a more 'child scale'.
- Kiss-and-drop, bus bay and on-street parking spaces have been reconfigured and redesigned.

Setbacks to the street range from six (6) to 15 meters which provide an appropriate relationship of the buildings in the streetscape, to allow for significant screen planting and to help maintain visual privacy to adjacent residential dwellings.

Building heights are predominantly three (3) storeys to maximise outdoor play space for both schools and create opportunities for tree canopy while sitting comfortably within the lower-rise character of the suburb. Articulation in building facades, separation and orientation break up building massing and create interest in the streetscape.

Outdoor gathering, play, sport and learning spaces would be embellished with carefully considered and high-quality landscaping, providing for 10m² of open play space per student. The proposal has employed best practice in Water Sensitive Urban Design (WSUD) with rainwater harvesting, natural irrigation and appropriate planting selection. Shade structures and covered walkways are proposed to assist with the comfortable use of outdoor space.

A total of 444 new trees are proposed, well advanced in growth when planted to ensure that shading and other amenity and environmental benefits are realised from the first day of operation. Along the site frontages within the public realm, 35 of the 66 existing street trees will be retained and 35 new trees will be planted, resulting in a net increase of 12 trees.

Further ecologically sustainability development (ESD) initiatives including maximising natural light and ventilation, energy efficient fittings, high performance glazing, sustainable materials, and installation of solar panels would be implemented to achieve a 5 Star green star rating.

A 2.15m high proprietary perimeter fence would be installed to provide site security, supplemented by secondary security fence for separation between supervised students and potential visitors during school hours. The perimeter fence will be located a few metres within the site boundary to allow for substantial buffer planting.

Signage, both freestanding and affixed to the building facades is proposed at key entry points into the site.

An emphasis has been placed on connecting to walking and cycling paths with safe pedestrian connections, and with bus infrastructure to encourage a modal shift and reduce private vehicle trips. A total of 142 parking spaces are proposed for staff. The proposed layout and landscaping of the new high school at Marsden Park and new primary school at Melonba is illustrated in **Figure 10** below.

The design of the final proposal is outlined in detail in Section 3.2 of this EIS.



Figure 10 Landscape Plan (Source: NBRS Architecture)

1.3.8 Separate Works Packages – Under Separate Planning Pathways

Installation of an electricity substation on Kaluta Avenue is being undertaken concurrently as Development Without Consent under the provisions of the T&I SEPP.

2 Strategic Context

2.1 Strategic Justification and Project Need

The NSW Government has increased its 'School Building Program' investment from \$6.7 billion to \$7 billion to deliver 200 new and upgraded schools to support communities across NSW. In the past year 50 new school or upgraded schools were delivered.

In July 2011, the Premier announced the release of the Marsden Park Precinct as part of the North West Growth Centre land release. A draft Precinct Planning package was exhibited between November and December 2012.

The exhibited Indicative Layout Plan initially proposed a total of 17 hectares of land for four (4) schools. The final Indicative Layout Plan was revised to provide 14 hectares of land for three (3) schools (**Figure 11**).

From the Marsden Park Precinct Post-Exhibition Planning Report:

"The Precinct Proponents will also dedicate land to create two school sites referred to as the northern primary school land and the Kindergarten to Year 12 (K-12) school land. Post exhibition the proposed K-12 site was relocated from the North Village cluster to the Western Village cluster. Winten will now dedicate the land as agreed with the Department of Education and Communities. The K-12 site in the alternate location is still well positioned via the precinct road network to serve the entire precinct catchment."

The rezoning of the precinct came into force on 4 October 2013 under *State Environmental Planning Policy (Sydney Region Growth Centres) 2006.* The rezoning facilitated approximately 10,300 new dwellings and 3,000 new jobs. The objective of the proposal is to provide a new primary school (years K-6) and a new high school (years 7-12) to cater for the associated catchment of this new population, consistent with the precinct planning.



Figure 11 Marsden Park Precinct Indictive Layout Plan

2 Strategic Context

2.2 Strategic Plans

2.2.1 State Policies

Table 1 provides a summary assessment of the proposed development against the relevant provisions, goals and objectives of relevant State policies.

Table 1 Response to Provisions, Goals and Objectives of State Policies		
State Policy	Response	
 NSW State and Premier's priorities (Dept. Premier and Cabinet) Relevant priorities: Highest quality education Bumping up education results for children Increasing the number of Aboriginal young people reaching their learning potential Greening our city 	 There are 14 NSW State and Premier's priorities at July 2022, and the four (4) listed here have relevance to education. The proposal supports the relevant priorities as it will: Provide a high-quality learning environment to support the education of children, including Aboriginal children, children with special needs support and people with disability. Encourage local schooling with additional capacity and reduced traveling further afield. Provide educational infrastructure to support the growing population in the locality. Provide a high-quality environment to enable a high quality publicly funded education. Provide landscaping and tree planting scheme to green the school environments. Provide a safe learning environment and education regarding personal protection and welfare. 	
Future Transport Strategy 2056 (Transport for NSW) Relevant vision outcomes: • Successful places • Accessible services • Sustainability	 The strategy sets six (6) state-wide outcomes to guide investment, policy and reform and service provision. The proposal will support the relevant vision outcomes identified in the NSW Future Transport Strategy 2056 by: Encouraging active travel by locating the schools at the centre of the catchment and connecting to an extensive existing and proposed footpath and cycling network. Providing 144 bicycle parking spaces and of end of trip facilities. Encouraging the use of public transport through the provision of school bus services and set-down areas. Encouraging the use of public transport by limiting the number of available car parking spaces on site. Encouraging car pooling by providing parking spaces exclusively for shared vehicle journeys. 	
Greater Sydney Region Plan: A metropolis of three cities (Greater Cities Commission)	 The project contributes to the implementation of the Greater Sydney Region Plan and its five (5) districts. The districts are being planned to deliver growth and change in Greater Sydney, and the site forms part of the Central City District. The project will contribute to the vision of the Plan by: Aligning infrastructure with forecast growth and optimising its use. Providing services and infrastructure to meet communities' changing needs. Integrated land use and transport creates walkable and 30-minute cities. Urban tree canopy cover is increased. A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change. 	
Central City District Plan (Greater Cities Commission)	The project is consistent with the Central City District Plan as it proposes to service the additional housing supply anticipated in the North West Growth Area, thereby supporting the local community with social infrastructure as it continues to grow and evolve in accordance with the plan. It is noted that the Blacktown LGA is anticipated to cater for 32% (over 28,600 children) of children of school age that need to be accommodated during the life of the plan. The schools have been sited and designed to encourage walking and cycling to campus.	

Table 1 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
	The new school campuses will facilitate community uses outside of school hours as encouraged in the Plan.
Staying Ahead State Infrastructure Strategy 2022- 2042 (Infrastructure NSW)	The proposal is consistent with this Strategy as it delivers investment in modern education infrastructure to service population growth.
Marsden Park Precinct Plan (Dept. of Planning and Environment)	The Marsden Park Precinct Plan was developed as a release area within the Sydney North West Growth Centre. The school site and associated school catchment was planned by the NSW Government as outlined in Section 2.1 of this EIS.
Blacktown Local Strategic Planning Statement 2020 (Blacktown City Council)	 The project contributes to the implementation of the Local Strategic Planning Statement as it will deliver major infrastructure that has so far not kept pace with the rate of development in the North West Growth Area. The schools will support new communities by improving their access to this essential infrastructure where they can be accessed by safe, high quality walking and cycling links. As outlined in this EIS, the proposal delivers on: Local Planning Priority 1: Planning for a city supported by infrastructure. Local Planning Priority 3: Providing services and social infrastructure to meet people's changing needs. Local Planning Priority 7: Delivering integrated land use and transport planning and a 30-minute city. Local Planning Priority 14: Increasing urban tree canopy cover and Green Grid connections.
Crime Prevention Through Environmental Design Principles	The project incorporates CPTED principles into the planning of the school sites and adjoining public domain. This report provides a CPTED assessment of the proposal at Appendix J . The assessment considers the objectives and desired outcomes of the principles/strategies employed by CPTED and demonstrates how these will be achieved.
Healthy Urban Development Checklist (NSW Health)	 The design of the proposed schools is consistent with the relevant aspects of the Healthy Urban Design Checklist as it will: Include community uses to promote social and physical activity. Promote walking and cycling through provision of appropriate infrastructure. Include CPTED principles in its design to promote a safe environment for students and visitors to the schools.
Better Placed: An integrated design policy for the built environment of NSW (GANSW) This policy aims to ensure a well-designed built environment that is: • Healthy for the community • Responsive to the needs and aspirations of local people • Integrated • Equitable and • Resilient	 The project team met with the Government Architect and State Design Review Panel (SDRP) twice through the design process, and comments were incorporated into the design accordingly (Appendix D & H). The project meets the objectives of this policy as follows: The proposal provides 144 bicycle parking spaces and end of trip facilities to encourage walking and cycling. Proposed gym, sports field and sports courts promote physical activities. The proposal is responsive to the needs and aspirations of the community by providing state-of-the-art educational facilities. The proposal is integrated into the community through afterhour community uses and through being adjacent to residential and recreation uses. Connection to country has been considered as discussed in Section 6.11.1. ESD principles have been incorporated into the design as discussed in Section 6.4.
Design Guide for Schools (GANSW) This policy aims to: Promote and champion good design	Schedule 8 of the T&I SEPP sets out the seven (7) design quality principles which must be addressed as part of any development application for a school (refer Section 4.7.5).

Table 1 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
processes and outcomes for schools across NSW; and Deliver schools that	The works have been designed with careful consideration for context, built form and landscape, sustainability principles, accessibility, health and safety, amenity, whole-of-life cycle and aesthetics.
 Deriver schools that respond positively to their physical, social and environmental context; and Support the delivery of excellent learning environments 	The Architectural Design Report (Appendix H) provides an analysis of the design against the design quality principles and finds that the proposal satisfies the principles, including responses to local context, biodiversity values, site circulation/accessibility, safety and security, amenity of learning spaces, adaptability of learning environments, and quality of character and materiality.
Environmental Design in Schools (GANSW)	The Environmental Design guide presents strategies for passive design as opportunities for making positive, sustainable change in the building or running of a school
This policy aims to provide school principals and school communities with a holistic understanding of environmental design.	The strategies set out in the Environmental Design guide have been incorporated into the proposal with common objectives with the Educational Facilities Standards and Guidelines (EFSG) and green star system, seeking to achieve environmentally sensitive design (ESD) and ensure its integration into school development. The proposal implements ESD principles to achieve a 5-star rating. This has been achieved in light of the need for protection from environmental constraints such as noise and privacy impacts and within budget constraints.
Greeners Places (GANSW) Integration Connection Multifunctionality Participation 	The proposal delivers on the principles of Greener Places by encouraging active transport options, outdoor play and learning, contributing to the green gird, and delivering ESD principals as outlined in Section 6.4 of this EIS.
Draft Greener Places Design Guide (GANSW)	The Draft Greener Places Design Guide framework provides information on how to design, plan, and implement green infrastructure in urban areas throughout NSW.
The major components that make up the green infrastructure network fall into three (3) categories: Open space for recreation; Urban tree canopy; and Bushland and	The proposal provides high quality landscaping and introduces significant canopy coverage over a site without tree canopy cover. Outdoor learning areas are also proposed to increase teaching/ student learning facilities, connection to nature and connection to Country. The project supports the Guide by applying the design advice in the design of the two (2) schools as detailed in Section 6.4 of this EIS.
waterways. Sydney's Walking Future 2013 – Connecting people and places (Transport for NSW)	 This plan encourages walking for transport purposes by: (a) promoting walking for transport; (b) connecting people to places through safe walking networks around centres and public transport interchanges; and (c) engaging with partners across government, with councils, non-government organisations and the private sector to maximise our effectiveness.
	The proposal includes a School Travel Plan (Appendix P) aimed at encouraging more children to walk and cycle to school. The proposal encourages active travel by locating the schools within the student catchment and connecting to an extensive existing and proposed footpath network. In this effort, the proposal includes construction of shared paths around the immediate perimeter of the site and provision of seven (7) pedestrian crossings.
	Crucially, active transport is further encouraged by limiting the number of available parking spaces on site.
Sydney's Cycling Future 2013 - Cycling for everyday transport (Transport for NSW)	This Plan is focused on Sydney CBD, major centres and public transport interchanges, however provides for better planning, design and construction of new urban area for cyclists.
	The proposal includes a School Travel Plan (Appendix P) aimed at encouraging more children to walk and cycle to school and the physical

Table 1 Response to Provisions, Goals and Objectives of State Policies		
State Policy	Response	
	works proposed include cycle parking, pedestrian crossings and end of trip facilities to support and encourage cycling to school by students and staff.	
Sydney's Bus Future 2013 – simpler, faster, better bus services (Transport for NSW)	Students and staff can access school and public bus transport for travel to and from school as outlined in Section 6.5 of this EIS. The proposal provides purpose built and appropriately located bus set-down/pick-up areas.	

3 Project Description

3.1 **Project Summary**

The key aspects and features of the proposal are set out in Table 2.

Table 2 Summary of key aspects of the project		
Aspect	Description	
Project Summary	Construction of two (2) new schools, new high school in Marsden Park and new primary school in Melonba, located at 20 Kaluta Avenue and 10 Swallowtail Street, Melonba including removal of 26 trees and transport infrastructure upgrades including construction of seven (7) pedestrian crossings and shared paths around the perimeter of the site.	
	 Marsden Park new high school is a new secondary school comprising: 97 general learning spaces (GLS) and specialist teaching spaces; Three (3) supported education learning unit (SELU) rooms; School hall, and lecture and movement studio; Administration spaces; Staff and student facilities; Library; Canteen; Sports courts; Playing field; Landscaping and outdoor learning areas; Covered outdoor learning area (COLA); and Car parking (shared with Melonba new primary school). Melonba new primary school will comprise:	
	 Three (3) SELU rooms; Administration and staff facilities; Canteen; Multi-purpose hall; Library; Out of School Hours Care (OSHC); COLA; Outdoor play areas including sports courts; and Landscaped outdoor learning areas. 	
Site Area	6.0 hectares	
Uses	Educational establishment (high school and primary school)	
Capacity	 Up to 3,000 students: 2,000 at new high school in Marsden Park. 1,000 at new primary school in Melonba. Up to 219 staff (Full Time Equivalent jobs). 	
Access	 New high school in Marsden Park primary pedestrian access will be from Kaluta Avenue. New primary school in Melonba primary pedestrian access will be from Swallowtail Street. Car parking for both schools will be accessed via Galah Street. Kiss and drip facility located on Swallowtail Street and Kaluta Avenue. Bus laydown located on Kaluta Avenue. 	
Car parking	A total 142 car parking spaces will be provided for staff to be shared between the two (2) schools, including two (2) adaptable spaces.	
Bicycle parking	A total of 84 bicycle parking spaces will be provided for Marsden Park new high school and a further 60 bicycle parking spaces will be provided for Melonba new primary school.	
Melonba new primary school hours	 School hours: 8:00 – 16:00 Mon-Fri (during school terms) Outside school hours care: 6:00 – 8:00 and 16:00 – 18:00 Mon-Fri (during school terms) Vacation care: 7:00 – 18:00 Mon-Fri (outside school terms) 	
Marsden Park new high school hours	 School hours: 8:00 – 16:00 Mon-Fri (during school terms) After school hours use of hall, library, lecture and movement spaces: 16:00 – 18:00 Mon-Fri (during school terms) 	

Table 2 Summary of key aspects of the project	
Community use hours	Use of communal hall, library, lecture and movement spaces: 18:00 – 22:00 Mon-Fri 9:00 – 22:00 Sat 9:00 – 18:00 Sun *Occasional special events may continue on-site until midnight. Under these circumstances the operators/authorised community members must comply with agreed conditions and activities to be strictly limited to indoors.
Ancillary service hours	 Cleaning: 5:30 – 18:00 Mon-Sun Waste Collection: before 7:00 and after 18:00 Mon-Fri
Construction hours	 7:00 – 18:00 Mon-Fri and 8:00 – 13:00 Saturday (no construction on Sundays) No construction deliveries between 7.30 - 9:00 and 13:30 – 15:00 on school days.
Construction jobs	440 full time construction jobs (as calculated by MBM – Appendix F)

3.2 Physical Layout and Design

Detailed Architectural Plans (**Appendix B**) and a supporting Architectural Design Report (**Appendix H**) have been prepared by NBRS Architecture which show the physical layout and design of the proposal in technical detail.

The six (6) hectare site is split into two (2) portions with four (4) hectares (the northern portion) to accommodate the Marsden Park new high school and two (2) hectares (the southern portion) to accommodate Melonba new primary school as summarised below.

3.2.1 Built form

The proposal has a total floor area of 26,745m², with 19,230m² associated with Marsden Park new high school and 7,515m² associated with Melonba new primary school.

The general design concept employs three (3) storey buildings arranged around the perimeter of the site to maximise outdoor play and learning spaces while minimising acoustic and privacy impacts to adjacent residential development.

A single storey building in the western portion of the site accommodates shared facilities including the gymnasium, halls, lecture theatre, canteen and waste rooms.

Some proposed buildings are angled so not to be wholly parallel to the street to break building massing and soften the built form to the streetscape. Façade treatment would employ use of coloured masonry work with organic shapes, patterns and repetition to create visual interest, draw distinction between the two schools, improve wayfinding and to reflect themes of Durag Country (Figure 12 and Figure 13).



Figure 12 Northern elevation of Block A fronting Elara Boulevard (Source: NBRS Architecture)

3 Project Description



Figure 13 Southern elevation of Block F fronting Swallowtail Street (Source: NBRS Architecture)

Marsden Park new high school main pedestrian access will be from Kaluta Avenue. Melonba new primary school main pedestrian access will be from Swallowtail Street.

The proposed layout of the new high school at Marsden Park and the new primary school at Melonba is shown in **Figure 14** and **Figure 15**.



Figure 14 Ground Floor Site Plan (Source: NBRS Architecture)



Figure 15 School facilities layout plan (Source: NBRS Architecture)

Some visual representations of the proposed new high school at Marsden Park and the new primary school at Melonba are provided in **Figure 16 - Figure 21**.



Figure 16 Visual representation of north and east elevations (Source: NBRS Architecture)


Figure 17 Visual representation of south and east elevations (Source: NBRS Architecture)



Figure 18 External view of main entry to Melonba new primary school – Swallowtail Street (Source: NBRS Architecture)



Figure 19 Internal view of main entry to Marsden Park new high school (Source: NBRS Architecture)



Figure 20 View of northern elevation – Elara Boulevard (Source: NBRS Architecture)



Figure 21 View of eastern elevation – Kaluta Avenue (Source: NBRS Architecture)

3.2.2 Landscaping

The proposal would provide 10m² of play space per student for both schools (20,000m² at Marsden Park new high school and 10,000m² at Melonba new primary school).

The landscape design incorporates formal entry plazas, assembly spaces, social spaces, play equipment, sports fields and courts, outdoor learning areas, COLAs, and yarning circles as shown in **Figure 22**.



Figure 22 Landscaped spaces arrangement (Source: NBRS Architecture)

A wide variety of materials and finishes are proposed to be utilised to create suitable spaces that are appropriately scaled and laid out to provide for maximum comfort, diversity of spaces and flexibility of use. Landscape details and their rational is provided in **Appendix M** and **N**. Materials include coloured concrete, sandstone pavers, rubber softfall, sand, mulch, aggregate concrete, feature cutting and stamping, turf, synthetic turf, and garden beds. A wide

variety of seating, retaining walls, edge treatments and 'street furniture' would also be implemented.

A total of 444 new trees are proposed across the site comprising:

- 71 x Angophora floribunda (Rough barked apple);
- Two (2) x Araucaria cunninghamii (Hoop pine);
- 27 x Corymbia maculata (Spotted gum);
- 58 x Eucalyptus crebra (Narrow leafed red ironbark);
- 84 x Eucalyptus mannifera ('Little Spotty' Little Spotty);
- 28 x Eucalyptus tereticornis (Forest redgum);
- 22 x Flindersia australis (Crown ash);
- 33 x Melaleuca decora (White Feather Honeymyrtle);
- 28 x Melaleuca linariifolia (Snow in Summer);
- 55 x Melaleuca styphelioides (Prickly leaf Paperbark);
- Six (6) x Podocarpus elatus (Plum pine); and
- 30 x Waterhousea floribunda (Weeping Lilly Pilly).

These trees will be well advanced in growth when planted to provide shade and other amenity benefits from the first day of operation. The species range in height from six (6) metres to 20 metres. The mature canopy would cover approximately 17,850m² (Figure 23).



Figure 23 Landscape plan (Source: NBRS Architecture)

A 2.15 metre high perimeter fence is proposed to be installed to provide site security. The perimeter fence will be located a metre within the site boundary to allow for buffer planting (**Figure 24**).



Figure 24 Kaluta Avenue Landscape Section (Source: NBRS Architecture)

3.2.3 Signage

Each school will have two (2) signs at their principal pedestrian entry (**Figure 25 - Figure 28**). An indicative design of the signage is illustrated in the Architectural Plans prepared by NBRS Architecture (**Appendix B**).

An identification sign displaying the school name would be affixed to the side of a building at the third storey.

A digital electronic LED sign set 2.1 metres above the ground on steel frame posts and measuring 2.4×1.5 metres is proposed at the main entry of each school. Above the LED signs will be a school identification sign measuring 2.4 metres x 0.7 metres displaying the school's name and logo.



Figure 25 Marsden Park new high school identification signage (Source: NBRS Architecture)



Figure 26 Marsden Park new high school LED signage (Source: NBRS Architecture)



Figure 27 Melonba new primary school identification signage (Source: NBRS Architecture)



Figure 28 Melonba new primary school LED signage (Source: NBRS Architecture)

3.2.4 Public Domain

Car bays on Swallowtail Street and Kaluta Avenue and a bus bay on Kaluta Avenue and associated adjustments to maintain adequate footpath widths adjacent to these vehicle bays are shown in **Figure 29**. A boundary adjustment is also proposed along Elara Boulevard to accommodate a wider footpath along this frontage.

The proposed bus bays, drop-off bays and on street parking spaces are shown in **Figure 30**, and are discussed in **Section 6.5** of this EIS.



Figure 29 Proposed site boundary adjustments (Source: NBRS Architecture)



Figure 30 Proposed bus bays, drop off bays and parking bays (Source: Taylor Thomson Whitting)

4 Statutory Context

4.1 Planning Approval Pathway

The proposal comprises new education establishment (new high school and new primary school) with a CIV exceeding \$20 million. Pursuant to Part 2.2 of the Planning Systems SEPP, the proposed works are classified as SSD.

4.2 Permissibility

The site is zoned R2 Low Density Residential under Appendix 11 Blacktown Growth Centre Precincts Plan of *State Environmental Planning Policy (Precincts – Central River City) 2021* (CRC SEPP) as shown in **Figure 31**. Development for the purpose of an educational establishment is permissible with consent in the R2 zone.



Figure 31 Extract from North West Growth Centre Land Zoning Map

In addition, the R2 Zone is a prescribed zone for the purposes of a school under Section 3.34 of the T&I SEPP.

4.3 Statutory Approvals

4.4 Commonwealth Department of Environment and Energy

4.4.1 Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Part 3 Division 1 Subdivision C of the EPBC Act provides, amongst other things, that a person must not take an action that has, will have or is likely to have a significant impact on:

- a listed threatened species included in the extinct in the wild, critically endangered, endangered or vulnerable categories; or
- a listed threatened ecological community included in the critically endangered or endangered categories.

No 'controlled action' is proposed. Accordingly, no approval under the EPBC Act is required.

4.5 NSW Department of Planning and Environment (DPE)

4.5.1 Heritage Act 1977

The *Heritage Act 1977* contains provisions relating to the protection of items of State heritage significance or items of potential significance. The site is not identified as a State Heritage Item or a site subject to and interim heritage order under this Act.

4.5.2 National Parks and Wildlife Act 1974 (NPW Act)

The NPW Act contains provisions relating to the protection of native terrestrial fauna, flora and Endangered Ecological Communities (EEC) and contains the primary statutory controls relating to Aboriginal heritage in NSW.

Notwithstanding that Section 90 of the NPW Act does not apply to SSD (pursuant to Section 4.41 of the EP&A Act), provisions relevant to Section 90 of the NPW Act have been considered in the body of this assessment.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared by AECOM (**Appendix CC**), which provides an assessment of the Aboriginal cultural heritage values of the site and surrounding area undertaken during the precinct planning stage. The ACHAR concludes that there are no known Aboriginal cultural artefacts on site.

4.6 Transport for NSW (TfNSW)

4.6.1 Roads Act 1993

Section 138(1) of the *Roads Act 1993* relates to works associated with public roads and provides that a person must not:

- "(a) erect a structure or carry out a work in, on or over a public road, or
- (b) dig up or disturb the surface of a public road, or
- (c) remove or interfere with a structure, work or tree on a public road, or
- (d) pump water into a public road from any land adjoining the road, or
- (e) connect a road (whether public or private) to a classified road,

otherwise than with the consent of the appropriate roads authority."

The site adjoins public roads with frontages to Elara Boulevard (northern boundary), Kaluta Avenue – Collector Road (eastern boundary), Swallowtail Street (southern boundary) and Galah Street (western boundary). The proposal comprises modifications to provide new bus zone, 'kiss n drop' zone, and will provide transport infrastructure upgrades including seven (7) pedestrian crossings and shared paths around the perimeter of the site.

These proposed works have been discussed with TfNSW and Blacktown City Council and details of this consultation and an assessment of traffic and parking impacts are outlined in **Sections 5.3** and **6.5** of this EIS. A Public Domain Plan is contained within the Landscape Plans package (**Appendix N**). It has been prepared for the public works to form the basis of the Section 138 application.

4.7 Mandatory Matters for Consideration

4.7.1 Environmental Planning and Assessment Act 1979

Section 1.3 – Objects of the EP&A Act

Section 1.3 of the EP&A Act sets out the Objects of the Act. An assessment of the proposed development's consistency with these Objects is provided at **Appendix C**. The assessment concludes that the proposal is consistent with the Objects of the Act.

Section 4.33 – Determination of Crown Development Applications

The proposed development is submitted by the NSW Department of Education and so is classified as a *Crown development application* under Section 4.32. Section 4.33 of the EP&A Act sets out matters to be considered by consent authorities in the determining or imposition of a condition upon a Crown development application.

Section 4.41 – Approvals etc Legislation that Does Not Apply

Section 4.41 outlines a range of authorisations that are not required for SSD. A bushfire safety authority under the *Rural Fires Act* 1997 is the only authorisation listed under Section 4.41 that

4 Statutory Context

would otherwise have been required for the proposed development although it is not required in this instance as the site is not identified as being bushfire prone land.

Section 6.28 – Crown Subdivision, Building, Demolition and Incidental Work

The EP&A Act requires that Crown building work cannot commence until it is certified that the work complies with the Building Code of Australia (BCA). As discussed in **Section 6.14** and set out in **Appendix K**, the proposed works are capable of satisfying the provisions of the BCA.

4.7.2 Environmental Planning and Assessment Regulation 2021

Section 173 – Application to Planning Secretary for environmental assessment requirements

This section relates to obtaining the Planning Secretary's Environmental Assessment Requirements (SEARs) for an application that requires an EIS. Industry specific SEARs were issued for the project on 28 April 2022. An assessment of the proposed development's consistency with the SEARs is provided at **Appendix A**.

Section 190 - Form of environmental impact statement

This section outlines the required content for an EIS and in the circumstances of the matter, must be prepared having regard to the *State Significant Development Guidelines* for SSD.

Section 193 - Principles of ecologically sustainable development

This section requires the principles of ecologically sustainable development to be considered and the use of the precautionary principle where there are threats of serious and irreversible environment damage and the like.

The EIS has addressed the abovementioned provisions of the EP&A Regulation (see **Section 6**).

4.7.3 Biodiversity Conservation Act 2016 (BC Act)

Part 7 of the Biodiversity Conservation Act 2016 (BC Act) sets out provisions relevant to biodiversity assessment and approvals under the EP&A Act.

The site is identified as biodiversity certified land. Section 7.6 of Part 7 of the *Biodiversity Conservation Act 2016* (BC Act) provides that:

This Part [7] does not apply to development or activities on biodiversity certified land under Part 8.

As the land was biodiversity certified prior to the introduction of the BC Act, Section 35 of the *Biodiversity Conservation (Savings and Transitional) Regulation) 2017* confirms that:

Biodiversity certification that was conferred on land under Part 7AA of the Threatened Species Conservation Act 1995 and that was in force on the repeal of that Act is taken to be biodiversity certification conferred on the land under Part 8 of the new Act.

Accordingly, biodiversity assessment is not required to support the SSD application.

4.7.4 State Environmental Planning Policy (Planning Systems) 2021

Clause 15 of Schedule 1 of the Planning Systems SEPP identifies development that involves the erection of a building for an existing school on land that, immediately before the commencement of the development, was not used for the purposes of a school, with a CIV of more than \$20 million as SSD.

MBM has prepared a cost summary statement confirming that the CIV of the proposed development will be greater than \$20 million (**Appendix F**).

Clause 2.10 of the Planning Systems SEPP states that Development Control Plans (DCPs), whether made before or after the commencement of the SEPP, do not apply to SSD.

4.7.5 State Environmental Planning Policy (Transport and Infrastructure) 2021

Section 2.122 of the T&I SEPP relates to 'traffic-generating development' being development with a relevant size or capacity as defined by Schedule 3 of the SEPP. As the site and the proposed development would generate more than 200 motor vehicles per hour (as projected by Taylor Thomson Whitting in the Traffic and Accessibility Impact Assessment - **Appendix P**), the application must be referred to TfNSW.

Consultation with TfNSW has been undertaken in the preparation of the EIS and the traffic impacts of the proposed development are discussed in more detail in **Section 6.5** and details of consultation with TfNSW are contained in **Section 5.3.1** of this EIS.

Chapter 3 of the T&I SEPP sets out planning approval pathways and other provisions to facilitate the effective delivery of educational establishments in the State. The key provisions of Chapter 3 as they relate to the proposed development are addressed in **Table 3**.

Table 2 Transport and Infractructure SEDD Schools Key provision

Requirement	Response	
Clause 3.6: If there is an inconsistency between this Chapter and another environmental planning instrument, whether made before or after the commencement of this Chapter, this Chapter prevails to the extent of the inconsistency.	Noted.	
Clause 3.35: Development for campus student accommodation must not be evaluate design quality principles are evaluated (Schedule 8).	The project does not propose campus student accommodation.	
Clause 3.36: Schools—development permitted with consent and following to be considered,	The site is within the R2 Low Density Residential Zone which is a prescribed zone under Section 3.34 of the SEPP.	
(1) Development for the purpose of a school may be carried out by any person with development consent on land in a prescribed zone.	NBRS Architecture has prepared an Architectural Design Report (Appendix H), which provides an evaluation of the proposal against the design quality principles under Schedule 8 and demonstrates consistency.	
 (6) Before determining a development application for development of a kind referred to in subsection (1), (3) or (5), the consent authority must take into consideration— (a) the design quality of the development when evaluated in accordance with the design quality principles set out in Schedule 8, and (b) whether the development enables the use of school facilities (including recreational facilities) to be shared with the community. 	The project provides the opportunity for community uses on site including use of the sports field, sports courts and school hall. Community uses are detailed in Section 3.1 of this EIS.	
Clause 3.43: State significant development - schools—application of development standards in EPIs.	The proposal exceeds the Height of Buildings development standard that applies to the site under the Growth Centres SEPP. This does not preclude the granting of development consent pursuant to Section 3.43	
Development consent may be granted for development for the purpose of a school that is State significant development even though the development would contravene a development standard imposed by this or any other environmental planning instrument under which the consent is granted.	of the T&I SEPP. As detailed in Section 6.1 of this EIS report, flexibility in the maximum building height allows a superior outcome for the development.	
Clause 3.58: Traffic generating development: Referral to RMS required if development will result in educational establishment being able to accommodate 50 or more additional students; and involves enlargement/ extension of premises or new premise	The proposal involves the creation of two (2) new educational establishments, each accommodating more than 50 students and accordingly, referral to TfNSW is required. As discussed in this EIS, consultation with TfNSW has been undertaken in the preparation of the EIS. Their input	

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Table 3Transport and Infrastructure SEPP – Schools key provisions	
Requirement	Response
	and the project team's responses are outlined in Section 5.3.1 . The traffic impacts of the proposed development are discussed in more detail in Section 6.5 of this EIS.

A more detailed assessment against the relevant provisions of the T&I SEPP is provided at **Appendix C**.

4.7.6 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 4 of the Resilience and Hazards SEPP relates to remediation of contaminated land and requires, amongst other things, investigations to be undertaken as part of the development assessment process, to determine whether the subject land is likely to be contaminated and if so, what remediation work is required.

Site suitability investigations including a Site Capability (**Appendix V**), non-statutory Site Audit Statement (**Appendix X**), Contamination Assessment Report (**Appendix Y**), Preliminary Geotechnical Investigation (**Appendix W**), and peer review of all of these reports (**Appendix Z**) have all concluded that the site is suitable for use as an educational establishment without any further remediation works. Details are provided in **Section 6.9** of this EIS.

4.7.7 State Environmental Planning Policy (Industry and Employment) 2021;

Chapter 3 of the Industry and Employment SEPP aims to ensure that signage is safe, compatible in its character setting, and effective in its communication.

The proposed signage is of a style and scale which is considered suitable for the length and height of the built form and the size of the site, and will not dominate the streetscape.

Signage is outlined in the Architectural plans and Architectural Design Statement prepared by NBRS Architecture (**Appendix B** and **H**). A more detailed assessment is provided in **Section 6** and the Statutory Compliance Table at **Appendix C**.

4.7.8 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 2 - Vegetation in Non-Rural Areas and Chapter 6 - Bushland in Urban Areas of the Biodiversity and Conservation SEPP (the B&C SEPP) both apply to the site as the site has an urban land use zone and is located within the Blacktown LGA. However, the development has been cleared of all substantial vegetation and is surrounded by perimeter roads all sides. Accordingly, Chapter 2 and Chapter 6 of the B&C SEPP are not relevant.

Chapter 4 – Koala Habitat protection 2021 of the B&C SEPP applies to the site being a nonrural zone in the Blacktown LGA. Chapter 4 requires that the consent authority be satisfied that the developable land is not potential, or core, koala habitat. The site does not contain any substantial vegetation and cannot be considered as potential or core koala habitat.

Chapter 9 of the BC SEPP relates to the Hawkesbury-Nepean River and applies to the site as it is located within Blacktown LGA. Section 9.3 of the SEPP requires a consent authority to consider of the aims of Chapter 9, the general planning consideration under Section 9.4 and the specific planning policies and recommended strategies under Section 9.5 when determining a DA to which Chapter 9 applies. An assessment in these regards is provided in **Appendix C** where it is demonstrated that the proposed development is consistent with the relevant provisions of the SEPP.

In addition, Section 9.9 of SEPP BC requires development consent for remediation of land. No remediation of the site is required as discussed in **Section 6.9** of this EIS.

4 Statutory Context

4.7.9 State Environmental Planning Policy (Precincts – Central River City) 2021

A detailed assessment of the proposed development against the relevant provisions of *State Environmental Planning Policy (Precincts – Central River City) 2021* (CRC SEPP) is provided in **Appendix C**.

The site is entirely zoned R2 Low Density Residential and Educational Establishments are permissible in the zone as discussed in **Section 4.2** of this EIS.

The minimum residential density control under Section 4.1B applies to residential development only and is not applicable to the development of Educational Establishments. No floor space ratio control applies to the site.

The proposal exceeds the maximum height of building control of nine (9) metres (**Figure 32**) at all seven (7) buildings with a maximum height of up to 13.5 metres at building B. Impacts associated with the proposed built form are discussed in **Section 6.1**. 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 **Section 6.1** of this 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.



Figure 32 Height of building map

4.7.10 Blacktown City Council Growth Centre Precincts Development Control Plan (2016)

It is noted that Clause 2.10 of the Planning Systems SEPP and Clause 3.36(9) of the T&I SEPP exclude the application of DCPs to SSDAs. Notwithstanding, an assessment of the proposed development against the provisions of *Blacktown City Council Growth Centre Precincts Development Control Plan* (the DCP) has been undertaken against those provisions relevant to the proposal (refer **Appendix C**).

5 Engagement

5.1 General

In accordance with the SEARs issued by the Department of Planning and Environment on 28 April 2022, the project team has carried out consultation with a wide range of stakeholders, including neighbouring and surrounding landowners, State agencies, Local Government, the Aboriginal community and other community groups. The advice received throughout the consultation process to date has informed many aspects of the project including local amenity considerations, heritage significance, and the needs and functions of the future school

Consultation was carried out from late 2021 to present. WSP has prepared a Community Engagement Summary Report (**Appendix D**), which details all consultation carried out for the proposal. Details of the consultation carried out by the project team are set out in the following sections.

5.2 Community Engagement

5.2.1 School Community Engagement

A Project Review Group (PRG) was established to undertake meetings, workshops and school tours with representatives from two (2) local school communities (Northbourne Public School and Riverstone High School), including principals, parents and students. The PRG act as a communication channel through which to feed information between the wider school community and project team.

The primary role of the PRG was to discuss aspects of the design, consultation and construction approach, whilst seeking feedback and input from members.

5.2.2 Community and Community Groups

The following community engagement channels, tools and activities were undertaken to facilitate engagement with the local community:

- Medeia releases and project update public announcements (December 2020 present);
- Virtual information session (25 May 2022 8 June 2021) resulted in 21 feedback forms, 82 emails, 23 phone calls and six (6) registered ministerial letters;
- Door knock and hand delivery of letters (1 June 2022) to residents in Galah Street and Kaluta Avenue to gain permission to undertake acoustic site investigations;
- Online Survey (21 June 2022 10 July 2022) attracted 729 views and 229 responses; and
- Online video interviews (1 July 2021 and 4 August 2022) undertaken with parents with children in surrounding schools within the catchment of the proposal (total of four interviews).

Key feedback from community and community grounds included the following topics:

- A need for additional primary and high schools in the area;
- Enrolment pressures on existing schools in the area;
- Appropriateness of the location of the high school;
- Project timeframes;
- Density of residential development in the area;
- Local traffic congestion;
- School facilities;
- Car parking availability;

5 Engagement

- Location of kiss and drop facilities; and
- Request that the schools be build as quickly as possible.

5.3 Public Authority Engagement

5.3.1 NSW Government Architect

The project was presented to the State Design Review Panel (SDRP) on two (2) occasions (23 February 2022 and 21 July 2022). Detailed discussion about SDRP's comments and the architect's response is provided in the Architectural Design Report at **Appendix H**.

An overview of the key issues discussed at these meetings can generally be summarised as:

- Site analysis, contains and observations;
- Masterplan concept and building massing;
- Built form and height;
- Elevations;
- ESD strategies;
- Flexible learning spaces;
- Landscape principles and concept plan;
- Connecting with Country;
- Active transport strategy; and
- Public interface and fencing.

5.3.2 Blacktown City Council

The project team has consulted with several different departments within Blacktown City Council (Council), including:

• Planning, engineering, architect, civil, social planning and gateway teams - 25 February 2022.

This meeting provided an early presentation of the project and plans to Council, leading to discussion of views, accessibility, school identity, overlooking, overshadowing, setbacks, car parking and traffic impacts, emergency procedures and landscaping.

• Community Planner – 10 March 2022.

This meeting provided an opportunity to discuss the project with Council's Community Planner, to obtain input into the Social Impact Assessment (SIA). The matters discussed in the meeting included: socio demographic's in the community, other relevant developments in the local area, existing community features, social, cultural, health and wellbeing challenges for families, background on other recently opened schools, potential social impacts from the project and existing community groups in the area. These matters formed part of the consideration of the SIA.

 Transport Working Group (TWG) (including both Council and TfNSW representatives) – 12 May 2022 and 9 June 2022.

The TWG meetings involved consultation with Council to discuss traffic and transport considerations for the school. These meetings provided an opportunity to discuss the catchment boundaries, bus services, corridors and routes, transport priorities, onsite parking, traffic impacts on neighbours and the location of footpaths, street lighting and pedestrian crossing.

• Asset Activations – 18 May 2022.

The project team met with Council to discuss asset activations with Council. The matters discussed in the meeting included; site flow for community members accessing the site, synergies with the planned public park and potential Council carpark nearby to the site, fencing to not divide the two schools, shared use with the community and structured leasing agreements.

• Pre-Application meetings – 25 February 2022, 15 June 2022 and 25 July 2022.

The project team provided Council with an overview of the project and discussed details of interest to Council including waste management, operations, landscaping, built form, accessibility, solar access, shared use, and traffic.

• Community Planner – 4 July 2022.

The project team met with Council's Community Planner to further discuss the input into the Social Impact Assessment. Matters that were discussed in this meeting followed on from the discussions held within the meeting on 10 March 2022.

Council's requirements and feedback has been taken onboard through the design process and has been addressed in this EIS and supporting documents.

5.3.3 Transport for NSW (TfNSW)

As detailed in **Section 5.3.2** of this report, consultation with TfNSW has been undertaken via the joint Transport Working Group meetings with Council. These meeting provided an opportunity for the project team to discuss the planning and engineering for how traffic, parking, public transport and road safety will be managed as part of the design. The response and feedback from TfNSW refined the design of the development.

Traffic and transport matters are discussed in more detail in **Section 6.5** of this EIS and **Appendix P**.

5.3.4 Other Public Authorities

Additional consultation undertaken with other Public Authorities and the key matters raised is summarised in **Table 4** below.

Table 4 Additional Stakeholder Input			
Stakeholder	Engagement topic/s	Notes	
Northbourne Public School – 21 July 2022	Social impacts and opportunities	Investigating the socio-economic profile of the local school community, current enrolments and capacity at Northbourne Public School, potential impacts of the proposal, opportunities to provide public benefit and gauging community awareness of the proposal.	
NSW State Emergency Service (SES) – 25 July 2022	Requirements for a Flood Evacuation Strategy	A Flood Evacuation Strategy has been developed for the two (2) schools in accordance with the requirements of the SES (Appendix U)	
Riverstone High School Principal – 4 August 2022	Social impacts and opportunities	Investigating the socio-economic profile of the local school community, current enrolments and capacity at Riverstone High School, potential impacts of the proposal, opportunities to provide public benefit and gauging community awareness of the proposal.	

6.1 Built Form and Urban Design

6.1.1 Site and Design Context

The project requires consideration of the opportunities and constraints of the site and surrounds. The site sits within emerging and recently completed low density residential development and local drainage open space.

NBRS Architecture has set out the approach to the analysis of the site constraints and opportunities, as well as the design response to these matters, in an Architectural Design Report (**Appendix H**). The Architectural Design Report identifies the site is located in a new suburban subdivision with planned public transportation system and civic infrastructure, and limited juvenile street trees to assist with the microclimate.

The site benefits from being surrounded by roads to all boundaries, and is relatively flat with a fall of approximately four (4) metre across 360 metres.

The proposal places the school buildings along Elara Boulevard, Kaluta Avenue and Swallowtail Street to create a protective courtyard that maximises security and student surveillance, visual privacy and the buildings provide a degree of acoustic mitigation for the benefit of amenity to the school and to surrounding residents.

Some of the particular site and design initiatives include:

- Addressing administration facilities to the street at formal entry points for improved convenience, wayfinding and security.
- Placing the libraries, halls, gymnasium and sporting facilities on ground floor, close to site entry points between the two (2) schools for potential after hours community use and for shared use by both schools.
- Locating Support Education Learning Unit (SELU) on ground floor to benefit from a direct access from the kiss-and-drop drop zone.
- Placing High School wood and metal hub in ground floor for the practicality of structural material handling.

6.1.2 Building Height and Scale

The proposal involves construction of seven (7) buildings of one (1) and three (3) storeys up to 13.5 metres in height.

Section 4.3, Appendix 11 of the CRC SEPP sets a maximum building height of nine (9) metres across the whole site.

All seven (7) buildings exceed the maximum building height control as illustrated in **Figure 33**. Of the $53,770m^2$ site within the boundaries of the two (2) schools, 22.6% ($12,140m^2$) of area penetrates the nine (9) metre height control plane.



Figure 33 Maximum height plane diagram (Source: NBRS Architects)

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As adopted by the State government in 2013, the Marsden Park Precinct Plan identified the government school sites and associated student catchments. Accordingly, it is by design of the State government that this six (6) hectare site facilitates 3,000 students from kindergarten to year 12.

Alternative design approaches have been investigated to consider how best to deliver on the State government's initiative. As illustrated in **Figure 34** below, a design compliant with the nine (9) metre height control and the same gross floor area results in an inferior outcome in terms of site amenity and environmental impacts.



Three storey concept (up to 13.5 metres) Two storey concept (up to 9 metres)

30,000m² play space (10m² per student)

27,750m² play space (7.5m² per student)

Figure 34 Height compliant alternative (Source: NBRS Architects)

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 10m² 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.

Flexibility in the maximum building height allows a superior outcome for the development.

Streetscape and character

NBRS Architecture has prepared a Visual Impact Assessment (**Appendix I**) to assess the visual impact of the proposed development to adjacent development and the local public domain. The assessment concludes that the proposed new high school at Marsden Park and new primary school at Melonba have been sensibly designed in the context of their surrounding neighbourhood.

All four (4) surrounding road reserves are relatively wide (16m or 20m). This provides a good separation of built form across the street of approximately 32 metres. The scale relationship of the school buildings with the one (1) and two (2) storey built form of the surrounding residential dwellings is considered acceptable. In addition, the existing street trees (less 26 required to be removed), combined with the proposed tree planting in the public domain and front setbacks will assist in mitigating the scale of the buildings.

The proposal contributes to the creation of an interesting and attractive streetscape by providing an articulated placement of buildings with varied façade treatment.

The new buildings have been designed to provide passive surveillance of surrounding streets for improved safety and comfort.

Signage is appropriately scaled, placed and lit so to provide wayfinding, and to provide a sense of arrival and a sense of place without being objectionable or overbearing.

Setbacks

The design decision to place buildings around the periphery of the site has been made to internalise play space for improved management, school privacy and acoustic outcomes to surrounding residential areas. To balance these benefits with the potential impact of building massing, streetscape aesthetics, solar access and visual privacy to adjacent dwellings, the street fronting façades propose generous setbacks of six (6) metres or greater. The proposed setbacks are in excess of the minimum setbacks required in the DCP. Section 4.3.2 of the DCP requires 4.5 metres to Elara Boulevard, Kaluta Avenue and Swallowtail Street, and requires a three (3) metre setback from Galah Street. The proposal provides setbacks ranging from six (6) to 15 metres to account for a non-residential building typology.

The rotation of built form and angular building lines increases the prevailing setbacks and reduces the perceived bulk and scale of development.

All four (4) surrounding road reserves are relatively wide (16m or 20m) with provision for parking lanes, footpaths and planted verges. This provides a good separation of built form across a road reserve of 32 metres or more from building to building. The proposed three (3) storey built form with generous setbacks is scaled appropriately for the local context (**Figure 35**).



Figure 35 Artists impression of streetscape looking north along Kaluta Avenue and west along Swallowtail Street (Source: NBRS Architects)

Associated considerations for privacy and solar access are discussed below.

Privacy

The proposal minimises visual impact and protects the amenity of adjoining development including surrounding residences and the public domain.

As illustrated below, the potential for privacy impacts to surrounding dwellings is mitigated by the school site occupying an entire street block, thereby eliminating any direct school interface with common boundaries to residential dwellings. Any views from the school site / buildings to the dwellings opposite will be into their front yards of the houses (not private open space). Surrounding dwellings are separated by approximately 32 metres and existing street trees and proposed landscaping will impede direct view lines to the dwellings opposite. (**Figure 36**).



Figure 36 Privacy diagram (Source: NBRS Architects)

Further, school operation hours are outside of evenings, nights and weekends when residential dwellings are predominantly occupied.

Solar access

The proposal does not impact on the solar access of adjacent residential properties at all between 9am and 2pm on the winter solstice (21 June) as illustrated in **Figure 37 - Figure 39**.



Figure 37 Shadow diagram – June 21 at 9am (Source: NBRS Architects)



Figure 38 Shadow diagram – June 21 at 12pm (Source: NBRS Architects)



Figure 39 Shadow diagram – June 21 at 3pm (Source: NBRS Architects)

Views

Views to the Blue Mountains and distant tree lines are currently present across the site towards the north, west and south. The area is largely flat and these views are diminished by surrounding residential development. These regional views will be further compromised by future residential development across the precinct.

The proposal ultimately supports the well-being of the community by enabling educational, recreational, community uses on site in a way that is compatible with the low density residential environment in which it sites. Accordingly, the proposed built form, which exceeds the nine (9) metre maximum height control is considered justified and provides a superior outcome to compliant schemes.

Lighting

The Architectural Design Statement prepared by NBRS Architecture (**Appendix H**) details the external lighting strategy which was prepared in consultation with the project's electrical engineer, Steenson Varming. Lighting is proposed to key external spaces across both schools, including covered walkways, the car park, pedestrian pathways, and to bus, vehicle and pedestrian spaces around the perimeter of the site.

The lighting strategy has been developed in accordance with Australian Standards and Educational Facilities Standards & Guidelines (EFSG) and complies with:

- AS/NZS 1158.3.1 Lighting for Roads and Public Spaces; and
- AS 4282-1997 Control of the obtrusive effects of outdoor lighting.

It is proposed that external lighting will be controlled by a timer and PE cell. Light fittings and luminaire placement will be selected and designed to mitigate spill light to surrounding properties and upward waste light in line with the intent of AS 4282, EFSG and Greenstar requirements.

Lighting is not proposed to the games field or games courts or to associated pathways.

6.2 Tree Removal and Biodiversity

6.2.1 Biodiversity

As outlined in **Section 4.7.3**, the site is identified as Biodiversity Certified land and there is no requirement for a BDAR or BDAR waiver.

The site is highly modified having previously been cleared for agricultural purposes before being entirely cleared and levelled for the purposes of subdivision. There are some immature street trees around the boundary of the site.

The site capitalises on an opportunity to provide significant tree canopy cover, supported by other planting to improve amenity, reduce the heat island effect, and contribute to a green grid in connection with adjacent drainage land.

6.2.2 Tree Removal

Street trees were planted outside the site boundary along Elara Boulevard in 2018 and along Kaluta Avenue and Galah Street in 2019. There are currently 66 street trees located adjacent, but outside of the site. An Arborist Impact Assessment has been prepared for the site and is contained within the Landscape Design Report prepared by NBRS Architecture (**Appendix M**). The report finds that 26 of the existing trees will need to be removed to accommodate the road widening along Kaluta Avenue and to accommodate entry points along Galah Street. An additional 35 street trees will be provided within the public realm in addition to substantial tree planting within the front setbacks within the site.

The design of surrounding residential subdivision provides very limited opportunity for tree planting. Conversely, the proposal would introduce hundreds of trees to a currently treeless

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site and proposes an impressive canopy cover to assist with cooling the heat island effect, providing shade for comfort and sun safety, providing connection to nature, and reintroducing biodiversity values to the site.

A total of 444 new trees of appropriate species would be planted at maturity (200L pot size) to ensure there is substantial tree canopy from the first day of operation.

6.3 Landscape

The landscape design developed by NBRS Architecture provides a high level of amenity to the public realm and across the site for the benefit of staff, students and visitors. A detailed breakdown of the design development and justification for design decisions is provided in the Landscape Design Report at **Appendix M**.

The street fronting façades will provide a built form edge for some visual separation from the residential dwellings opposite. The building edge will be softened by substantial street tree planting and landscape treatments.

The proposal provides substantial outdoor play and learning spaces with 10m² of play space per student for both schools (20,000m² at Marsden Park new high school and 10,000m² at Melonba new primary school). The landscape design incorporates a great variety of spaces including formal entry plazas, assembly spaces, social spaces, play equipment, sports fields and courts, outdoor learning areas and COLAs.

The proposed landscaping creates spaces for students and staff to gather, learn and grow together. It responds to and tells the stories of the lands and its original characters, and provides a mixture of fixed and flexible, active and passive spaces. These spaces are varied in scale, outlook and materiality to provide many options and to break down the overall sense of scale. Shade is maximised with an improvise tree canopy cover across the site.

Outdoor learning spaces are provided with two (2) Yarning Circles as well as with the employment of circular walls and furniture to allow internally facing discussion and activities. Gathering spaces are designed to a variety of layouts and sizes to accommodate a diversity of different interaction styles. Large curved walls and wide stairs have the potential to facilitate an amphitheatre style whole-of-class presentation.

Connection to Country, as documented in Section 6.11.1 of this EIS, has been thoroughly implemented through the design of the new high school at Marsden Park and new primary school at Melonba. The key Country themes are reflected through the landscape design as illustrated in **Figure 40**. Some of these components include:

- Native planting selection including bushtucker planting.
- Mounded landscapes evoking the nearby hills.
- Wayfinding signage and educational plaques.
- Art opportunities in the screens on fences.
- Specific linemarking for Aboriginal games.
- High quality yarning circles (one per school) with specific design elements in tandem with the Aboriginal working group.
- Material treatment evoking the river story.
- Design language around the primary school.
- Opportunity to have activated landscapes during rainfall events such as on-grade water flow design.
- Colour and material selection through the primary materials.

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- Feature banding and colours within the plazas.
- Feature colour play on basketball courts.
- Interpretive paving design through central spine



Figure 40 Connection to Country landscape design elements (Source: NBRS Architecture)

6.4 Ecologically Sustainable Development

The proposal is targeting a certified 5 Star rating under the Green Star Design & As Built v1.3 rating tool.

Compliance with the Educational Facilities Standards and Guidelines, the National Construction Code and SINSW's Sustainable Development Plan Guide is demonstrated in an Ecologically Sustainable Development (ESD) plan for the project prepared by Steensen Varming (**Appendix O**).

The principles of ESD as set out under Clause 193 of the *Environmental Planning and Assessment Regulation 2021*) are addressed below:

- **The Precautionary Principle:** The proposal demonstrates that careful evaluation of the environmental risks to the site were undertaken and an appropriate design response has been proposed. Key considerations have included flood risk, the local heat island, tree canopy cover, energy efficiency, and adaptation to climate change.
- **Inter-Generational Equity**: The works demonstrate a strong commitment to the preservation of environmental health, diversity and productivity. Aboriginal cultural interpretation will be incorporated into the development to continue the long legacy of First Nations existence in the area and a site-specific Climate Change Adaptation Plan

has been prepared for the school to ensure their resilience and ability to adapt into the future.

- Conservation of Biological Diversity and Ecological Integrity: The site is Biodiversity Certified. The development introduces biodiversity values to what is currently a barren site to provide a safe and comfortable environment for students, teachers and other site visitors. The project supports local biological diversity and integrity of the natural environment with appropriate planting, pollution control and sustainability practises.
- Improved Valuation, Pricing and Incentive Mechanisms: The project has weighed up economic cost benefits with a short term and long-term view to deliver the best environmental and use benefits on budget. The costs associated with the construction waste will be borne by the project team. They shall be required to target 95% recycling of construction waste. This may have a greater financial cost to the project; however, it provides a more accurate reflection of the full life cycle costs of the materials proposed. Operational savings will be achieved through reduced energy and water consumption and waste recycling or re-use schemes.

The proposed schools project aims to exceed the Deemed to Satisfy (DTS) requirement of Section J of the National Construction Code and aspires to achieve a 5 Star Green Design and As Built V1.3 Rating which is considered by the Green Building Council of Australia as aligning with Australia Excellence outcome.

The Green Star tool is categorised by nine (9) sustainability categories being:

- Management
- Indoor environment quality
- Energy
- Transport
- Water
- Materials
- Land Use and Ecology
- Emissions
- Innovation

The proposed design aims to reduce all forms of emissions, including watercourse pollution, light pollution and ozone depletion by adopting the following strategies, Stormwater pollution prevention, and pollution of the night sky, and implement Water Sensitive Urban Design (WSUD).

The project will seek to increase the resilience of the site in response to potential risks arising from climate change. A high level of possible Climate Change impacts have been carried out to assess how the public realm design and services strategy will respond to the future expected climate conditions. The project will consider some key strategies to eliminate or reduce any risks as much as possible as outlined in the Steensen Varming report.

To further reduce the environmental impacts associated with the construction of new buildings an Environmental Management Plan (EMP) will be developed for the construction stage of the project to address environmental, worker health and safety and community risks.

Table 5 below outlines the requirements to achieve a 5 Star Rating.

Table 5 Minimum Requirements to achieve 5 Star Rating	
Requirements	Score
Minimum points required to achieve a 5 Star Rating	60
Minimum buffer points required	5
Total minimum score at tender 65	

Some key ecological sustainable development considerations and initiatives of the project are summarised in Table 6 below.

Table 6 Key sustainability strategies		
Consideration	Design/Operational response	
Heat island effect	 Light coloured roofs and landscaping elements Create a tree canopy cover across the site at commencement of operation with the planting of 444 x 200L advanced tree stock 	
Thermal comfort	 Shading of outdoor spaces Passive design principles including orientation, solar access, prevailing winds, seasonal and diurnal temperature changes. High Efficiency Heating, Ventilation and Air-conditioning (HVAC) systems to be incorporated 	
Energy	 Solar panels on roofs Building form designed for greater access to natural daylight and natural ventilation Passive design principles to respond to environmental conditions of the building i.e. orientation, solar access, prevailing winds, seasonal and diurnal temperature changes Building air tightness by incorporating automatically closing doors and revolving doors in the design 	
Water	 Water efficient fixtures/fittings will be specified (i.e. taps showerheads, toilets, zip taps, dishwashers etc.) Water Sensitive Urban Design to manage impacts of storm water runoff Rainwater reuse for landscape irrigation and toilet flushing Native species of plants and low water demand landscape design strategies 	
Waste	 Sustainable timber to be used and sourced where possible from re-used post-consumer recycled or FSC certified, or PEFC certified timber Steel will be specified to meet specific strength grades, energy reducing manufacturing technologies, and off-site fabrication. Recycled concrete comprising fine and coarse aggregate to be sourced from manufactured sand or other alternative materials to reduce the use of Portland cement 	
Social	 Provision of facilities for community use Spaces designed for collaborative learning and development Incorporation of Connection to Country 	
Resilience	 Stormwater infrastructure sized for increased rainfall Stormwater retention for future use Design for increased temperature extremes 	

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Table 6	Key sustainability strategies	
Transport	 Encourage a model shift away from private motor vehic footpaths, bike parking, bus laydown facilities and reduce 	les by providing ced parking provision

The report identifies that, subject to its recommendations being implemented, measures recommended are implemented there is a sensible buffer above minimum thresholds to reduce the risk of noncompliance and enable the achievements of the aspirations set for the project in terms of 5 Star Rating.

In conclusion the report provides recommendations to help further consolidate a set of sustainability strategies and targets to embed in the project.

6.5 Traffic, Transport and Parking

A Transport and Accessibility Impact Assessment (TAIA) has been undertaken for the proposal by Taylor Thomson Whitting (**Appendix P**).

The transport strategy for the site prioritises active transport, namely walking, cycling and public transport in line with relevant strategic policies and precinct planning (see **Section 2**). This strategy will support sustainability initiatives and limit local traffic congestion. Provision of appropriately designed transport infrastructure and ongoing management strategies will encourage a modal shift away from traditional dependency on private vehicle trips to active transport modes.

Taylor Thomson Whitting has calculated forecast travel mode splits as summarised in **Table 7** below.

Table 7 Forecast travel mode split		
Travel mode	Student model split	Staff Model shift
Melonba new primary school		
Walk	50% (500 students)	5% (3 staff)
Bike/scooter	10% (100 students)	5% (3 staff)
Bus	0% (0 students)	10% (7 staff)
Car (passenger)	40% (400 students)	15% (10 staff)
Car (driver)	0% (0 students)	65% (44 staff)
Marsden Park new high school		
Walk	25% (500 students)	5% (8 staff)
Bike/scooter	5% (100 students)	5% (8 staff)
Bus	50% (1,000 students)	10% (15 staff)
Car (passenger)	20% (400 students)	15% (23 staff)
Car (driver)	0% (0 students)	65% (98 staff)

6.5.1 Pedestrian Access

The proposal provides wide perimeter footpaths and seven (7) pedestrian crossings to connect the site to the surrounding pedestrian network. The location of these pedestrian

crossings (shown in **Figure 41**) have been designed in consultation with Council and TfNSW to follow 'desire lines' that ensure they are the most attractive crossing options for site visitors and prevent dangerous crossings at other locations along these roads. The proposed pedestrian crossings will connect the perimeter footpath around the school to the shared paths and local foot paths that are/will be present across the precinct. The flat nature of the precinct and the initiatives of outlined in the School Travel Plan (STP) in **Section 6.5.5** below will maximise the utilisation of this pedestrian infrastructure.



Figure 41 Proposed pedestrian crossing locations (Source: Taylor Thomson Whitting)

6.5.2 Cycle Network

Bicycle riders will have access to the shared path and pedestrian network. Bicycle storage for 84 bikes at the new high school in Marsden Park and 60 bikes at the new primary school in Melonba is proposed. End of trip facilities for staff with showers, changing rooms and lockers in accordance with *NSW Planning Guidelines for Walking and Cycling*.

Initiatives such as bicycle training workshops will be provided at the two (2) schools to ensure staff and students are comfortable with bicycle maintenance, are familiar with available cycling routes, and general road safety. These initiatives are outlined in the STP.

6.5.3 Public Transport

There is no train or metro service in proximity to the site and limited existing bus services. New indented bus bay with a capacity for approximately five (5) buses will be provided along the eastern frontage of the site at Kaluta Avenue. Discussions have been held with TfNSW regarding potential changes to existing bus routes in the area to accommodate the strategy.

An 85 metre long bus bay is proposed along Kaluta Avenue to service both schools.

The project team is continuing to work with TfNSW and bus service providers to ensure appropriate school special bus services are available for the 1,000 students anticipated to catch a bus to the new high school at Marsden Park. It has been assumed that no children attending the new primary school in Melonba will be travelling by bus.

6.5.4 Vehicular Access and Parking

Drop-off and pick-up by car, referred to as 'kiss and drop' will be facilitated by dedicating portions of the site frontage to accommodate road widening. A kiss and drop bay will be provided on Swallowtail Street with room for 16 vehicles for the new primary school at Melonba. A kiss and drop bay with room for 16 cars will be provided along Kaluta Avenue for

the new high school at Marsden Park. At each kiss and drop location, provision for four (4) accessible parking bays will be provided to serve the SELU.

Signage and associated line markings will enforce 'no parking' zones during school pick up and drop off times.

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.

A combined car park comprising 142 spaces will be provided for staff of both MPHS and MPS which will be accessed from Galah Street. Car parking spaces will be provided in accordance with AS2890.1. It is proposed to provide two (2) accessible parking spaces as required by the BCA at a rate of one (1) space per 100 car parking spaces. This parking provision will provide on-site parking for 65% of the 219 staff.

The quantity of parking spaces proposed does not meet the DCP's minimum car parking rate of one (1) space per staff member, plus one (1) space per 100 primary school students, plus one (1) space per five (5) students in year 12 (requiring almost 300 spaces). Whilst Council has requested that the proposal comply with the DCP minimum parking rates, TfNSW has encouraged the proposal to reduce parking provisions on site further to promote a modal shift for staff travelling to site. Taylor Thomson Whitting has calculated a balance between the two (2) competing views as outlined in the TAIA.

Car parking spaces will be allocated to specific staff and priority will be given to staff who carpool as discussed in the STP in **Section 6.5.5** below.

6.5.5 School Travel Plan

A School Travel Plan (STP) has been prepared by Taylor Thomson Whitting to support the transport strategy outlined in the TAIA and to provide a clear plan of management for movements within and around the site (**Appendix P**). The STP has been prepared in accordance with the Green Building Council of Australia technical advice R-14426 Sustainable Transport and with reference to the project's SEARs requirements.

The STP, which covers both the new primary school at Melonba and new high school at Marsden Park is guided by the following overarching principles:

- Students achieve daily physical activity requirements through active travel to school;
- Prioritise multi-modal transport planning and infrastructure provision to school;
- Consult with transport stakeholders early and regularly;
- Install supporting infrastructure to the school and on-site;
- Minimise traffic disruption to the school and community during construction;
- Implement and commit to a visible, funded, feasible Travel Plan;
- Monitor and evaluate the School Transport Plan process to revise and improve the process to achieve outcomes; and
- Increase consistency and quality of deliverables.

One specific initiative of the STP is to encourage carpooling among staff. The schools will Implement an app called 'Liftango' that notifies staff members of other staff who live along their travel route. Carpooling and use of the app would be encouraged with staff meetings to discuss carpooling opportunities and for staff to liaise with each other directly to share rides. With all car parking spaces allocated to specific staff members and not available for all staff, priority will be given to staff who commit to carpooling. Staff and students will be encouraged to cycle to school with special event days, bicycle training workshops and distribution of information such as available cycling route and road safety skills and by fostering a culture of active transport use.

A key component of the STP will be the collection of travel data, program evaluation and implementation of findings. Collection of data by an annual questionnaire, and time to time headcounts at bus stops, kiss-and-drop zones, pedestrian nodes and in the staff car park will provide a snapshot of travel mode splits. These results will be reviewed against the schools' transport strategy for modification if and when required.

6.5.6 Traffic Impacts

The TAIA documents existing traffic conditions and forecasts future traffic conditions following the full development of the site. Taylor Thomson Whitting modelled these traffic movements to determine the impact on the development on the local traffic network. Intersection modelling as forecast at 2032 finds that all surrounding intersections would continue to operate at an 'A' rating during both the am and pm peaks.

6.5.7 Waste Collection and Deliveries

Loading docks for deliveries and waste collection have been designed to accommodate 12.5 metre heavy rigid vehicles. The primary waste collection and delivery area would be shared by both schools with the entry/exit access point at Galah Street. An additional delivery area would be located north-east of the car park with access via Galah Street, to be managed by a sliding gate.

6.5.8 Construction Traffic

A Construction Traffic and Pedestrian Management Plan (CTPMP) has been prepared by Taylor Thomson Whitting and is incorporated into the TAIA (**Appendix P**). The CTPMP includes the following considerations:

- Access arrangements
- Hours of operation
- Construction timeline
- Construction workforce
- Worker parking
- Construction program

The delivery of material to and from site will result in some additional traffic activity associated with the works. Heavy vehicles are generally expected to arrive outside of peak morning and afternoon times. The estimated construction traffic volume for the worst case is 15 trucks per day or one (1) truck per hour. It is considered that increased traffic associated with construction activities will have only minor impacts on the existing road network.

The construction workforce arrival and departure periods between 6:30 - 7:00 and 18:00 - 18:30 represents the peak construction traffic periods. Notwithstanding, only light vehicle traffic generation would be generally associated with construction staff movements to and from the site.

During days of high estimated vehicle movements, communications between the site and incoming vehicles will be maintained to stagger the arrival of vehicles for them to be accommodated within the worksite and minimise traffic disruptions.

Loading and unloading would occur within the site at nominated vehicle zones. All deliveries are to be made within the approved work hours. Truck movements will be scheduled outside peak hours to reduce impacts to the local and state road network.

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There would be no requirement to change local public transport routes and services as a result of construction.

6.6 Noise and Vibration

Acoustic Studio has prepared a Noise and Vibration Impact Assessment (**Appendix Q**) to determine the impact of noise and vibration generated during the construction and operational stages of the proposal and to assist the project team in maximising amenity by limiting noise and vibration intrusion within the site and to surrounding land uses. The findings of this report are summarised below.

Methodology - existing noise levels

Unattended long-term noise monitoring was undertaken from 2 June 2022 to 16 June 2022 with receivers placed at residential premises identified as Logger L1 and L2 (**Figure 42**). Short-term operator attended monitoring was undertaken at Logger locations S1, S2, S3 and S4 on 2 June 2022. The noise loggers recorded the following measurements at 15-minute intervals:

- LAMAX The highest sound pressure level recorded over a measurement period LA1 -
- LA10 The sound pressure level that is exceeded for 10% of a measurement period, commonly accepted as the maximum noise levels.
- LA90 The sound pressure level that is exceeded for 90% of a measurement period, commonly accepted as the background noise level.
- LAeq The equivalent continuous sound pressure level, the level of noise equivalent to the energy average of noise levels occurring over a measurement period.



Figure 42 Sensitive receiver and noise monitoring locations (Source: Acoustic Studio)

Ambient noise levels at Loggers L1 and L2 were found to be 61-62 dB at day time (7:00-22:00) and 59-60 dB at night time (22:00-7:00) when measured in accordance with the *NSW EPA Road Noise Policy 2011*. However, Acoustic Studio observe that background noise levels during school operation hours (8:00-16:00) were lower that these day time levels due to the peak traffic flows on surrounding roads occurring outside of school times. Accordingly, daytime background noise levels are considered to be 36dBs and LAeq levels are considered to be 56-57 dB.

6.6.1 Operational Noise Emissions Assessment

Operational Noise and Emissions – Plant

Final plant selections have not been made for the proposal so a detailed assessment cannot yet be carried out. Notwithstanding, the project commits to ensuring plant associated with the operation of the new buildings will be controlled to ensure external noise emissions are not intrusive and do not impact on the amenity of neighbouring receivers with the relevant criteria as set out in the Noise and Vibration Impact Assessment.

Noise controls will be incorporated with the design of the plant rooms and any other plant located outdoors on other levels of the proposed building to ensure that the cumulative noise output from plant at the nearest affected receivers is within the allowable limits.

Operational Noise Emissions – Use

Noise levels associated with students playing outdoors have been determined by using the method adopted from the AAAC Guidelines, as well as measurements taken by Acoustic Studio of school play area noise at other schools projects, during play activities. Consideration has also been given to outside school hours care, classroom openings and noise emissions, workshop areas, hall/gym use, the public address system, waste removal and deliveries, cleaning activities, traffic, and after-hour community uses of the site.

From these findings, Acoustic Studio have made appropriate mitigation recommendations to ensure appropriate noise levels are maintained to internal spaces within the site and to surrounding land uses.

6.6.2 Construction Noise and Vibration Assessment

Construction Noise

Noise generated from plant and equipment operating individually are generally predicted to be above Noise Management Levels (NML) as experienced by the closest adjacent residential receivers. The worst-case noise impacts are anticipated to be excavators with hammers, predicated to be up to 33 dB above the NML.

Recommended mitigation measures to manage these anticipated impacts include:

- Schedule noisy activities to less sensitive times of the day for each nominated receiver (i.e. daytime hours).
- Hoarding that may already be included as part of the site works can reduce noise levels by five (5) to ten (10) dB.
- Including Respite Periods where activities are found to exceed the 75 dB(A) Highly Affected Noise Level at receivers, such as three (3) hours on and one (1) hour off.
- The predictions for noise levels above NMLs is not unusual given the heavy plant and equipment that must be used, such as excavators and hammers, and the proximity to on campus sensitive receivers (some of which are within 30m).
- Implementation of all reasonable and feasible mitigation measures for all works will ensure that any adverse noise impacts to surrounding residential, commercial and recreational receivers are minimised.
- Consider implementing equipment-specific temporary screening for noisy equipment, or other noise control measures. This is most likely to apply to noisier items such as jackhammers.
- For large work areas, solid screening or hoarding as part of the worksite perimeters would be beneficial.
- Locate specific activities such as carpentry areas (use of circular saws etc) to internal spaces or where shielding is provided by existing structures or temporary screening.
- Managing the arrival of trucks and heavy vehicles on site at any given time (through scheduling deliveries at different times).
- Unnecessary idling of vehicles and equipment is to be avoided.
- Traffic routes are to be prepared to minimise the noise impact on the community (such as entry and exit point at different locations on the site and access via separate roads where practical).
- When loading and unloading trucks, adopt best practice noise management strategies to avoid materials being dropped from a height.
- Adopt quieter methodologies. For example, where possible, use concrete sawing and removal of sections as opposed to jackhammering.

Construction Vibration

While it is considered likely that some detectable vibration will be experienced during construction due to the use of excavator hammers, vibratory rollers, jackhammers and piling, the specific construction equipment to be used is not yet known. Accordingly, a detailed vibration assessment cannot yet be undertaken. It is therefore recommended that the Construction Noise and Vibration Management Plan (CNVMP) be prepared by the Contractor when final details of the vibration management controls required for the works have been determined.

6.7 Ground and Water Conditions

An assessment of the suitability of the site for the proposed development is carried out in **Table 8**.

Table 8 Asse	ssment of Suitability of the Site for Development
Issue	Assessment Findings
Geotechnical	A Geotechnical Investigations Report prepared by J K Geotechnics (Appendix R) presents the results of a supplementary geotechnical investigation for the new primary school at Melonba and new high school at Marsden Park. The report provides advice on geotechnical aspects for the proposed civil and structural design.
Salinity	 A Supplementary Salinity and Acid Sulfate Soils Management Plan prepared by JK Environments (Appendix S) presents the results of site investigations assessing the soil and groundwater salinity conditions via implementation of a sampling and analysis program. The report concluded: "The assessment generally encountered non-saline surficial soils and slightly to moderately saline sub-soils across the development area, with levels of salinity that generally increased with depth. Soil conditions were found to be mildly to moderately aggressive to buried concrete and steel based on the pH and resistivity results." The report provides recommendations on the requirement for site specific salinity conditions including: Earthworks; Drainage ad run-off; Design of structures;
	 Landscaping; Footpaths and other hardstand design requirements; and Ongoing management

The above assessments find that ground and water conditions of the site do not prevent the proposal, subject to recommendations.

6.8 Flooding and Stormwater

6.8.1 Flood Risk

A Stormwater and Flooding Report (SFR) and Flood Emergency Response Plan (FERP) have been prepared by Taylor Thomson Whitting (**Appendix T** and **U**) to identify any flood risk onsite, assess the impacts of and on the development, and provide a strategy for preparing the schools for flood events. The conclusions of the report are summarised below.

A precinct wide flood study was prepared by J. Wyndham Prince in 2013. As identified in **Figure 43**, the study found that the site is not affected by the 1% AEP flood level but the north west corner of the site would be inundated by the local overland PMF event.
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1% AEP flood level

PMF level

Figure 43 Site flood levels (Source: J. Wyndham Prince)

Council has assisted with the flood assessment of the site. In a letter of advice from Council dated 31 May 2022, they advise that the Flood Planning Level (FPL) for the site should be the 1% AEP level plus 500mm freeboard. Council has advised that filling of the site undertaken in association with its subdivision has already satisfied this minimum FPL requirement.

The SFR concludes that the site will not materially impact flood conditions and that the existing flood impact and risk assessments developed for the subdivision works by J. Wyndham Prince are still valid.

The FERP finds that the PMF levels associated with the site occur after approximately 70 hours after the storm event, providing adequate warning time to evacuate the site. During these events, NSW State Emergency Service liaison officers will consult with the Education liaison officer to implement school closures. The FERP outlines requirements for:

- Education and training for staff and students to be prepared to respond to flood events evacuation drills;
- Flood emergency kits being available on site;
- Flood watch and warning systems;
- Coordination of flood evacuation orders;
- Establishment of emergency evacuation points; and
- Maintaining an emergency contact details list for students, parents and staff.

6.8.2 Stormwater Management

The abovementioned SFR prepared by Taylor Thomson Whitting (**Appendix T**) states that the proposal has been designed so that stormwater flows are conveyed around the site using grading, surface inlet pits (SIP) and in-ground pipes. Overland flows would be directed to SIPs with exceedance flows directed through to the northwest corner of the site and discharges into an existing 825mm diameter pipe as agreed with Council.

Roof catchments are proposed to be collected and directed through gutters and downpipes to a 250m³ rainwater tank.

Figure 44 below summarises the impervious and pervious surface calculations of the proposal.



Figure 44 Pervious and impervious surfaces across the site (Source: Taylor Thomson Whitting)

The proposal has integrated onsite stormwater detention (OSD) to meet Blacktown City Council specifications as detailed in the SFR.

Similarly, stormwater quality treatment has been designed to Councill's requirements with post development average annual load reduction of 90% total hydrocarbons. Taylor Thomson Whitting have modelled the proposed treatment train in MUSIC Modelling which will be provided to Blacktown City Council. The results of the MUSIC model are summarised in **Table 9**.

Table 9 Pollution Reduction Load Targets				
Pollutant Type	DCP Pollutant Reduction Target	MUSIC Model Pollutant Reduction		
Gross Pollutants	90%	97.6%		
Total Suspended Solids	85%	86.8%		
Total Phosphorus	65%	66.9%		
Total Nitrogen	45%	45.1%		

These stormwater civil works have been designed in consultation with Council and are capable of meeting all necessary standards and requirements as documented in the SFR.

6.9 Hazards, Contamination and Remediation

A Detailed Site Investigation (DSI) was conducted by DLA Environment in 2015 for the Woorong Park/Marsden Park development area, covering an area of approximately 472 hectares (summarised in the Non-Statutory Site Audit Statement (SAS) prepared by Coffey Services Australia in September 2018 (**Appendix X**). The DSI concluded that the release area site is suitable for 'Residential A' use being residential with garden/accessible soil. An

exception to this finding was three (3) specifically identified areas the DSI suggested could be made suitable by removing the fill material and preparing a subsequent asbestos clearance/validation report.

The subject site is located on the eastern side of the Woorong Park/Marsden Park development area and comprises 6.0 hectares. Bulk earthworks were undertaken in 2017 to level the site and subsequently in July 2018 some road base gravel (product DGB20) was placed in a 100mm to 150mm thick layer over an area 60m by 80m in the north-eastern corner of the subject site. At the time the area was used for site offices, worker amenities and parking. All services associated with the use were above-ground and the area was not used for vehicle maintenance, fuel or chemical storage nor for heavy vehicle parking. The use has since been discontinued.

The SAS confirmed that:

- None of the three (3) areas identified in the DSI report as requiring removal of fill materials are within 100m of the boundary of the site;
- Bulk earthworks did not adversely affect the suitability of the site for future use as an educational establishment; and
- DGB20 material imported to the northeast corner of the site did not affect the suitability
 of the site for future educational establishment.

The SAS concluded that the site is suitable for future use as an educational establishment.

A Contamination Assessment Report (CAR) was prepared by Geotechnique in October 2019 (**Appendix Y**) to identify any areas of contamination and any potential risk of harm to human health and the environment as a result of the proposed development.

Based on the assessment documented in the CAR, it is considered that the subject site does not contain suspected or potential sources of land contamination or potentially contaminating uses/activities of the land within the proposed development area. Based on this consideration the site is unlikely to present a risk of harm to human health and/or the environment and the site is therefore considered suitable for the proposed school; or other relevant uses, including a day care centre, park, recreational open space or playing field.

The CAR was subsequently updated following a site inspection undertaken in October 2020 and confirms that although a new sewer line was installed in the southwestern corner of the site it remains suitable for the proposed school, or other equivalent uses including a day care centre, park, recreational open space or playing field. The site has been fenced and unaffected since this time.

Geotechnique undertook a Preliminary Site Investigation (PSI) in February 2012 (**Appendix V**). The report considered that the site is suitable (from a contamination point of view) for the proposed development. Accordingly, a remediation action plan is not required. Notwithstanding, the PSI recommends that an unexpected finds protocol be adopted during the redevelopment of the site.

Douglas Partners also undertook a Preliminary Geotechnical Investigation in January 2022 (**Appendix W**) to assess the subsurface soil and groundwater conditions across the site. They require that all excavated materials to be disposed of off-site will need to be classified in accordance with the provisions of current legislation and guidelines. This includes topsoil, fill and natural materials that may be removed from the site.

A Site Suitability Peer Review of all the previous reports was undertaken in February 2022 by Geosyntec Consultants (**Appendix Z**) on behalf of SINSW. The review concludes as follows:

 The conclusions drawn in SAS (2018) prepared by Coffey remain relevant, and the site is considered suitable for the proposed redevelopment as an educational establishment. The supplementary investigations conducted between 2019 and 2021 confirm the conditions are suitable for the intended use;

- Any material imported to the site should meet VENM/ENM classification;
- Any material removed from the site must be classified in accordance with NSW EPA 2014 waste classification guidelines;
- An Unexpected Finds Protocol should be prepared and implemented during redevelopment works in the unlikely event contamination is identified; and
- The site must continue to be secured to prevent fly tipping.

There is no built form on site and no demolition is proposed. Accordingly, a hazardous materials survey is not required.

It is therefore considered that the subject site is suitable for use as an educational establishment.

6.10 Waste Management

6.10.1 Operational Waste Management

An Operational Waste Management Plan (OWMP) has been prepared by Elephant's Foot Consulting for the operational management of waste generated by new high school at Marsden Park and new primary school at Melonba (**Appendix BB**).

The OWMP has been based on three (3) key objectives being:

- **Promote responsible source separation** to reduce the amount of waste that goes to landfill by implementing convenient and efficient waste management systems.
- Ensure adequate waste provisions and robust procedure that will cater for potential changes during the operational phase of the development.
- Comply with all relevant council codes, policies and guidelines.

The OWMP identifies the different waste streams that are likely to be generated during the operational phase of the development and identifies:

- How the waste will be handled and disposed;
- Provides details of bin sizes/quantities and waste rooms;
- Descriptions of the proposed waste management equipment used; and
- Information on waste collection points and frequencies.
- Waste Generation Estimates

Based on assumed waste generation rates, the following bin requirements (as detailed in **Table 10**) have been calculated to accommodate the waste needs of the schools.

Table 10 Estimated Volumes of General Waste and Recycling				
Recommended provision	Melonba new primary school	Marsden Park new high school		
General Waste Bin Size (L)	1,100	1,100		
General Waste Bins Per Week	14	38		
General Waste Collections per week	3	3		
Total General Waste Bins Required	5	13		
Recycling Bin Size (L)	1,100	1,100		

Table 10 Estimated Volumes of General Waste and Recycling		
Recycling Bins Per Week	19	28
Recycling Collections per week	3	3
Total Recycling Bins Required	7	10

The OWMP indicates that general waste and general recycling can be further divided into more specific waste and recycling streams to increase recovery. Annual waste audits are also recommended to assist with better understanding of the composition and total volumes of each waste stream generated during the operational phase of the schools.

The groundkeeper, waste collection staff and cleaners will be the only personnel with access to the bin room. All transportation of waste and recycling must be co-ordinated with the groundskeeper or cleaners.

The cleaners will circulate throughout the campus after hours and empty waste and recycling receptables situated throughout the school and transport the waste and recycling to the bulk bins in the bin room.

A private waste collection contractor will be responsible to service the waste and recycling bins as per agreed schedule. Entry to and exit from the site will be from Galah Street and the vehicle is to be parked in the loading bay adjacent to the bin storage area from where the waste collection staff will collect the bins.

6.10.2 Construction Waste Management

The Construction and Demolition Waste Management Plan prepared by Elephant's Foot Consulting (**Appendix AA**) adopted the following waste management strategies for the subject site:

- **Promote responsible source separation** to reduce the amount of waste that goes to landfill by implementing convenient and efficient waste management systems.
- Ensure adequate waste provisions and robust procedures that will cater for potential changes during the operational phase of the development.
- **Comply** with all relevant Australian Standards, council codes, policies and guidelines.

The plan encourages where practical, the following waste management practices for the duration of the construction stages of the development:

- Re-use of excavated material on-site and disposal of any excess to an approved site;
- Green waste mulched and re-used on-site as appropriate, or recycled off-site;
- Bricks, tiles and concrete re-used on-site as appropriate, or recycled off-site;
- Plasterboard waste returned to supplier for recycling;
- Framing timber re-used on site or recycled off-site;
- Windows, doors and joinery recycled off-site;
- All asbestos, hazardous and/or interactable wastes are to be disposed of in accordance with WorkCover Authority and EPA requirements;
- Plumbing, fittings and metal elements recycled off-site;
- Ordering accurate quantities of materials and prefabrication of materials where possible;
- Re-use formwork; and

Careful source separation.

The plan recommends the following measures to be taken to improve construction waste management:

- Compare projected waste quantities with actual waste quantities produced;
- Conduct waste audits of current projects (where feasible);
- Note waste generated and disposal methods;
- Look at past waste disposal methods;
- Look at past disposal receipts; and
- Record this information to help in waste estimations for future waste management plans.

The site is currently vacant and the only 'demolition' associated with the proposal is the removal of excavation material (22,034 tonnes) and green waste (6,365 tonnes). Most of this material would be reused on site, being 100% and 80% respectively.

Small quantities of building material waste would be generated during construction, the vast majority of which would be recovered.

6.11 Heritage Significance

6.11.1 Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Assessment (ACHAR) (**Appendix CC**) 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.*

Aboriginal community consultation was conducted in accordance with OEH's Aboriginal Cultural Heritage Consultation Requirements for Proponents. A total of 39 Registered Aboriginal Parties (RAPs) were consulted for the assessment. Full details of the parties and their involvement is provided in the ACHAR.

Searches of the AHIMS database, site surveys, test pits, and test excavations were undertaken to confirm the presence of any Aboriginal artifacts and appropriate actions. A number of test pits were dug on or in close proximity to the schools site (Pits 42, 43, 44, 45, 47, 80 and 81) but no artefacts were found in these pits. No artefacts are known to exist within the boundaries of the site.

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).

As recommended by the ACHAR, the AHIP sets requirements for unexpected finds requirements and salvage operations. Compliance with the conditions of the AHIP is included in the mitigation measures table at **Appendix E**.

Connection to Country

A Connection to Country report (**Appendix DD**) has been prepared by Comber which summarises consultation and engagement undertaken with Aboriginal community representatives and their input. The associated design responses at outlined in detail in the Architectural Design report prepared by NBRS Architecture (**Appendix H**) and is summarised in **Section 6.1** of this EIS.

6.11.2 European Heritage Significance

The site does not contain any State or local listed heritage items and is not within a heritage conservation area. There are no heritage items or heritage conservation areas in the vicinity of the site.

6.12 Social Impact

A Social Impact Assessment (SIA) has been prepared by WSP (**Appendix EE**) in accordance with the *Social Impact Assessment Guidelines for State Significant Projects*. The key considerations and findings of this report are summarised below.

The SIA has considered the site within the context of a state, regional and school catchments level. It has relied on a review of available documentation, stakeholder engagement, analysis of demographic data and a site visit.

Social Baseline

Some key findings of the SIA include:

- 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 significant number of childcare providers in the area provides evidence of large numbers of children who will be primary school aged in the years ahead.
- There is considerable community concern regarding the capacity of existing local primary schools, namely Marsden Park Public School, Northbourne Public School and Riverstone High School and the presence of demountables on these sites.
- There is considerable community concern with existing and worsening traffic conditions in the area including a difficulty of buses to turn on local streets.
- The community feel there is a lack of existing sports facilities in the area.

Assessment of Impacts

The proposal will result in considerable positive social impacts. The proposed works will provide new, purpose designed learning spaces that make use of the latest technology and deliver ESD principles to provide for the educational needs of a growing community. A new local primary school and high school will foster a greater sense of community among children and their families by providing a new communal centre in the heart of the neighbourhood. This is further supported by new facilities on site that will be available for community use.

The new buildings have been designed and located to minimise amenity impacts to neighbouring properties and to be suitably sympathetic to the existing streetscape. The works will be undertaken in accordance with recommendations of specialist reports to ensure appropriate Connection to Country, traffic and acoustic outcomes are achieved, just to name a few. The proposed works have been designed to, and will be carried out in the interests of the public and will provide safe and efficient access for children, staff, visitors and service personnel.

Changes to existing school catchments will require some students currently enrolled at Northbourne Public School and Riverstone High School be to re-enrolled at Melonba new primary school and Marsden Park new high school. This presents some challenges for students and families, and requires appropriate management and communication. This will have a social benefit to the wider community by reducing pressure on existing local schools that are oversubscribed.

There is potential for irritation to surrounding residents as a result of changed traffic and parking patterns. During busy periods there is potential for vehicles to park in front of private residences and stop over driveways while dropping off/picking up children or waiting for

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children to come out of school. Appropriate management of traffic and communication with parents will be important for minimising these impacts.

Opportunities for the community to continue to provide feedback through the design, construction and operation of the two (2) new schools should be provided to address community demands and foster a stronger sense of community ownership in the project.

Mitigation measures

To minimise negative social impacts, the SIA has outlined a number of recommendations and mitigation measures that can be implemented. A Social Impact Management Plan (SIMP) has been developed by WSP and is provided as an attachment to the SIA. The SIMP provides an assessment of all identified impacts both pre and post mitigation or enhancement measures. The full list if mitigation measures is provided in the mitigation measures table at **Appendix E**.

6.13 Infrastructure and Utilities

The following is a summary of existing and required utility services associated with the site and the proposal. It demonstrates that the site can provide the required services to accommodate the proposal.

6.13.1 Electrical and Communications

Steensen Varming has prepared an Infrastructure Delivery report to detail electrical and telecommunication services for the proposal (**Appendix GG**).

Existing Electrical Infrastructure

The report confirms that there is existing Endeavour Energy HV networks in the vicinity of the site.

Proposed Electrical Services

The maximum demand estimated to be required by the new high school in Marsden Park is in the order of 2603 Amps and 1175 Amps for the new primary school in Melonba totalling 3778 Amps. The estimate was based on a preliminary maximum demand rate of 80VA/m² of floor space.

Based on the estimated maximum demand 2 x 1500KVA PM Substations are proposed to serve the site.

As advised by Endeavour Energy, some network augmentation is required to provide the required capacity for the new development.

The location of the substation is being finalised and to ensure early procurement of the substation the final design application will be lodged with Endeavour Energy.

Provision for the required substations is being pursued under a separate approval pathway.

Existing Telecommunication Services

It has been confirmed that there is existing NBN Co network in the vicinity of the development.

Proposed Telecommunication Services

The Department of Education is to submit applications to NBN Co for a new fibre optic telecom service providing internet and public telephone connectivity for the schools.

The Telecom Service providers will be responsible for supplying, installing and terminating the incoming fibre optic cabling, while the customer will be responsible for providing an appropriate cable pathway within the lot.

Conduits and pits within the property is to be provided as part of the development work. Separate lead-ins are required for the primary and high school.

6.13.2 Hydraulics

JHA has prepared a Hydraulics Services report to detail electrical and telecommunication services for the proposal (**Appendix FF**). The report provides an overview of the existing hydraulic service infrastructure (potable water, sewer and gas) available and its suitability to service the proposal.

The report finds that Sydney Water infrastructure has sufficient capacity in the potable water and sewer services connections to the site to cater for the anticipated demand.

The site is services by Jemena gas mains which are appropriate for the proposed science lab and food technology uses at the new high school in Marsden Park. The use of gas is not proposed at the new primary school in Melonba.

6.14 Other Environmental Issues

An assessment of other environmental issues associated with the proposed development is provided in **Table 11**.

Table 11 Assessment of Other Environmental Issues		
Issue	Assessment Findings	
Bushfire	The site is not identified as bushfire prone land. The nearest bushfire prone land is located to the south approximately 580 metres away.	
Aviation	The site does not contain, does not propose, and is not adjacent to a helicopter landing site.	
Aircraft Noise	The site is not affected by aircraft noise.	
Wind Impacts	The proposed development is limited to three (3) storeys and therefore a wind environmental assessment is not required by the SEARs and is not considered necessary.	
Building Code of Australia	The project has been informed by BCA, accessibility and fire safety requirements through the development of its design. As evidenced by the BCA Assessment report (Appendix K) and Accessibility Report (Appendix L) both prepared by MBC Group, the proposed development can achieve compliance with the Building Code of Australia.	
Staging	Construction and occupation staging is not proposed.	

6.15 Contributions and Public Benefit

6.15.1 Contributions

Blacktown City Council's Section 7.11 Contributions Plan No.21 - Marsden Park applies to the site. In accordance with Section 1.8, the plan applies to all developments requiring a development application or complying development certificate. The plan does not specify any exemptions from the application of a Section 7.11 levy.

The proposal includes open space, sporting and recreation facilities to meet the demands of the schools. The schools do not need to rely on open space or community facilities within the precinct.

The proposal includes facilities that may be able to be used by community, however this will be subject to future separate agreements.

The proposal will provide the following local infrastructure:

- Seven (7) pedestrian crossings;
- Road widening to accommodate a 'kiss & ride' bay on Swallowtail Street (approximately 16 vehicles) and associated footpath adjustments;
- Road widening to accommodate a 'kiss & ride' bay on Kaluta Avenue (approximately 16 vehicles) and associated footpath adjustments;

6 Assessment of Impacts

- All relevant signage and line marking (anticipated to be 'No Parking' zones during peak periods); and
- Replacement of street trees (which are required to be removed as a result of the aforementioned road widening and vehicle access points) with a net gain of nine (9) trees in the public domain.

Section 7.11(1) of the EP&A Act states that:

If a consent authority is satisfied that development for which development consent is sought will or is likely to require the provision of or increase the demand for public amenities and public services within the area, the consent authority may grant the development consent subject to a condition requiring—

- (a) the dedication of land free of cost, or
- (b) the payment of a monetary contribution,

or both.

Section 7.11(2) of the EP&A Act states that:

A condition referred to in subsection (1) may be imposed only to require a reasonable dedication or contribution for the provision, extension or augmentation of the public amenities and public services concerned.

Noting the works are wholly associated with the provision of public educational establishments to service the local population (whose dwellings have been levied), it would not be considered fair or reasonable to impose a Section 7.11 contribution levy to any approval for this SSD.

Furthermore, it is noted that no development contribution was imposed on the approval of SSD-9809 New Marsden Park Public School (now known as Northbourne Public School) which is subject to the same plan.

6.16 Public Interest

In accordance with Section 4.15(1)(e) of the EP&A Act, the proposed development is in the public interest as it:

- Will meet the current and future education demands for residents of Melonba and Marsden Park;
- Will deliver essential infrastructure as envisaged by the State government to support in 10,300 additional dwellings across the North West Growth Centre;
- Provides opportunities for joint use of certain facilities at the schools for public and community use;
- Will provide high quality learning and teaching spaces with flexible layout arrangements and durable finishes ensuring the proposal operates as a long-life, high utility and low maintenance educational establishment;
- Has been designed in accordance with the visions, objectives and expectations of the community, the Department of Education and design experts;
- Incorporates appropriate design responses as a result of considerable stakeholder engagement;
- Is permissible in the land use zones and is generally consistent with relevant planning controls and legislation;
- Will provide a substantial net increase in the number of trees across the site with urban heat island, amenity and biodiversity benefits;
- Delivers on the principles for ecologically sustainable development and achieves a 5star green star rating;

- Will minimise the potential for environmental amenity impacts through both the construction and operational phases;
- Achieves appropriate environmental performance outcomes including in relation to acoustic amenity, solar access, traffic movements, stormwater drainage and waste management; and
- Will be provided with adequate connection to necessary infrastructure and servicing to ensure the development operates efficiently at full capacity.

7.1 Economic Impacts

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**). 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**).

7.2 Environmental Impacts

The environmental impact of the proposal has been assessed in detail in **Section 6** of this report with key matters summarised as follows:

- Height The building exceeds the maximum height of building control of nine (9) metres applicable to the site by 50% (4.5 metres). Privacy, overshadowing and impacts to the streetscape are considered acceptable as outlined in this EIS.
- Visual Privacy The proposed buildings have significant separation from adjoining residential properties, well in excess of minimum setback requirements. The design has employed mitigation measures such as windows screening and boundary landscaping.
- Visual Impact The proposal is appropriately scaled and positioned to site comfortable within the existing streetscape. The school buildings will create an interesting and attractive streetscape by providing an articulated placement of buildings with varied façade treatment and significant screen planting.
- 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.
- **Traffic** Access, parking and traffic 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.
- **Parking** 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.
- 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.
- **Flooding** Filling of the site undertaken in association with its subdivision has satisfied this minimum FPL requirement and the site will not materially impact flood conditions.
- **Trees** The site is biodiversity certified and has been cleared of all significant vegetation. The proposal will plant 444 new trees to be planted as well-advanced trees to achieve considerable canopy cover. These trees will assist with cooling the heat island effect, providing shade for comfort and sun safety, providing connection to nature, and reintroducing biodiversity values to the site.

7 Justification of Project

7.3 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 as addressed in **Section 6.12** of this EIS.

7.4 Principles of ESD

The principles of ESD (as set out under Clause 193 of the *Environmental Planning and Assessment Regulation 2021*) are addressed in **Section 6.4** of this EIS.

The proposal is targeting a 5 star Green Star rating. The ESD Report prepared by Steensen Varming (Appendix) demonstrates a strategy for the proposal to achieve the required performance standards.

7.5 Statutory Compliance

The proposal complies with the relevant statutory planning considerations as summarised in **Appendix C** and in **Section 4** of this EIS.

7.6 Strategic Context

The proposed development is consistent with the strategic context as outlined in **Section 2** of this EIS including State, regional and local plans and policies. The proposal will provide two (2) new schools and employment opportunities in a greener (greater tree canopy and other measures), safe (CPTED and other principles), energy efficient (ESD principles), healthy (outdoor place space and active transport initiatives), inclusive (accessible design), connected (local catchment and active transport initiatives) and high-quality learning environment.

7.7 Community Views

The project team has carried out consultation in accordance with the SEARs including with community and public authorities. The process and outcome of this consultation is provided in **Section 5** of this EIS.

7.8 Compliance

Subject to the implementation of the mitigation measures in **Appendix E** there is not considered as specific need for this project for any ongoing compliance monitoring.

7.9 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.

7.10 Uncertainties of Assessment

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

8 References

Better Placed Design Guide for Schools, Government Architect NSW, 2018.

Blacktown Local Strategic Planning Statement, Blacktown City Council, 2020.

Central City District Plan, Greater Sydney Commission, 2018.

Connecting with Country Draft Framework to improve planning, design, and delivery of built environment projects in NSW, Government Architect NSW, 2021.

Draft Greener Places Design Guide, Government Architect NSW, 2020.

Environmental Design in Schools, Government Architect NSW, 2018.

Future Transport Strategy 2056, Transport for NSW, 2021

Greater Sydney Region Plan: A metropolis of three cities, Greater Sydney Commission, 2018.

Greener Places, Government Architect NSW, 2020.

Healthy Urban Development Checklist, NSW Health, 2009.

Marsden Park Precinct Plan State Environmental Planning Policy (Sydney Region Growth Centres) Post-exhibition Planning Report, Department of Planning and Infrastructure, 2013.

Marsden Park Precinct Traffic and Transport Assessment, AECOM, 2013.

Marsden Park Residential Precinct Post Exhibition Water Cycle & Flood Management Strategy Report, J. Wyndam Prince, 2013.

NSW Planning Guidelines for Walking and Cycling, Transport for NSW, 2021.

NSW Road Noise Policy, NSW Department of Environment, Climate Change and Water, 2011.

NSW State and Premier's priorities, Department of Premier and Cabinet, 2019.

Social Impact Assessment Guidelines for State Significant Projects, Department of Planning and Environment, 2021.

Staying Ahead: State Infrastructure Strategy 2022-2042, Infrastructure NSW, 2022

Sustainable Transport, Green Building Council of Australia, 2015.

Sydney's Bus Future 2013 – simpler, faster, better bus services, Transport for NSW, 2013.

Sydney's Cycling Future 2013 - Cycling for everyday transport, Transport for NSW, 2013.

Sydney's Walking Future 2013 – Connecting people and places, Transport for NSW, 2013.