NSW Department of Education

Queanbeyan East Public School New Learning Centre

Statement of Environmental Effects

October 2017

Executive summary

This Statement of Environmental Effects has been prepared in support of a Crown Development Application for alterations and additions to the existing Queanbeyan East Public School. The alterations and additions include:

- Removal of 17 trees;
- Removal of nine demountable buildings (6 classrooms, library, canteen, toilet);
- Demolition of one small timber classroom and an unenclosed covered roof area;
- Relocation of the canteen building within the site;
- Provision of a new pedestrian access from Mulloon Street;
- Construction of a new landscaped courtyard with terracing, and;
- The construction of a single storey Learning Centre fronting Mulloon Street containing 11 permanent teaching spaces, a learning common, and amenities.

The existing operational school campus has 10 existing homebases (6 demountable) with an existing equivalent student population of 207 and after the alterations will have 13 permanent homebases and a teaching equivalent space for 322 students. (i.e. an increase of 115 students).

The site is owned by the NSW Department of Education and contains a number of school buildings and facilities.

The site is surrounded on three sides by roads and by a mix of land uses, comprising medium and low density residential properties, industrial buildings, automotive retail, and recreational facilities.

The site is zoned R3 Medium Density Residential under Queanbeyan Local Environmental Plan 2012, and 'Educational establishments' are permissible with consent under this instrument within a R3 zone.

The proposed alterations, including the construction of a single storey learning centre, has been designed to comply with key planning requirements, including CPTED, landscaping, and the NSW school EFSG. – school guidelines.

Having regard to the significant public benefits of the proposal and taking into account the absence of potential adverse environmental, social or economic impacts, and that the proposal represents an appropriate use of well located land; the application is submitted to Council for assessment.

This report is subject to, and must be read in conjunction with, the limitations set out in section 1 and the assumptions and qualifications contained throughout the Report.

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1. Site & Locality Information

The site is legally known as Part Lot A & Part Lot B of DP 412056, Lot 105 & 106 DP 729079, Part Lot 8 & Part Lot 9 Section 49 DP 758862, Part Lot 11 Section 49 DP 758862 and Lot 104 DP 729079, but commonly known as 10 Yass Road, Queanbeyan East. The site has frontage to three streets being Yass Road, Thurralilly Street and Mulloon Street and has a site area of 23,124m^2.

The site is owned by the NSW Department of Education and contains a number of school buildings and facilities.

The site is surrounded by a mix of land uses; comprising medium density residential properties both one and two storeys in height, light industrial properties and a private recreational facility. The majority of these properties contain off street parking.

The school is served by the 832 Queanbeyan City bus route and the 850 bus route to Bungendore. Bus stops are along the Yass Road site frontage and on Kings Highway, which runs one street parallel to Mulloon Street. On street parking is limited in front of the majority of the school site, with Some parking along Yass Road frontage. Thurralilly Street also contains a school drop off zone, including an accessible parking space adjacent the staff carpark site entry.

A staff carpark is accessed from Thurralilly Street, with pedestrian access to the site available from all three streets.

The site contains a number of trees, sixteen of which are proposed to be removed to facilitate the development, as well as one tree outside the site boundary on Mulloon Street verge, as described in Section 3.2 of this report.

The aerial photograph on the following page illustrates the range of land uses adjoining and in the immediate vicinity of the school.

Figure 1 Aerial Photograph (Source Sixmaps 2017)

Images on the following pages show the site and surrounding land uses in context.

Figure 2 Photograph showing one and two storey residential buildings on Mulloon St opposite the site (Source GHD 2017)

Figure 3 Photograph showing light industrial buildings on Thurralilly St opposite the site (Source GHD 2017)

Figure 4 Photograph showing private recreational facilities –a Bowling Club on Yass Rd opposite the site (Source Google Maps 2015)

Figure 5 Site of proposed development viewed from Mulloon St (Source Google Maps 2015) We note that a school fence has since been constructed.

Figure 6 Site of proposed development viewed from Thurralilly St (Source Google Maps 2015)

Figure 7 Site of proposed development viewed from Yass Rd (Source Google Maps 2015)

2. Pre-Lodgement Comments

2.1 DCR Meeting

A Development Coordination and Review Panel (DCR) Meeting was held with Queanbeyan-Palerang Regional Council staff on 20 July 2017 with respect to the proposed development.

The meeting was attended by the following Council staff and project consultants.

Phillip Coman – Building Team Leader (Acting DCR Chair),

Michael Thompson – Portfolio General Manager – Natural and Built Character,

Natasha Abbott – Manager - Environment and Health,

Chelsea Newman – Town Planner,

Keith Davies – Development Engineer,

Jo Fitzpatrick - Minute Secretary,

Peter Russell – GHD Woodhead,

Laarni Balila - GHD Woodhead,

Farhad Edibam – GHD Woodhead, and

Anthony Shaw - Mace Project Management (Phone)

The following table discusses the main issues outlined in the pre-lodgement notes that were provided by Council following the meeting.

Table 1 Responses to Pre-Lodgement Notes

Council Comment	Response
Key issues	
a. Compliance with the State government's School Facilities Standards.	GHDW confirm that the design is being tracked against the Department of Education EFSG Accommodation schedules, and any departures from the requirements would be noted and signed off by the technical stakeholders at the relevant design stage approvals. A design compliance statement accompanies this report. Refer to Appendix E of this report.
b. Setback to Mulloon Street, building appearance and impacts on nearby residences.	The façade along Mulloon Street is articulated with fenestration, deep verandas, split roof form, quality materials and planting in the setback. Existing planting along the verge provides variation and some additional screening.
c. Relocating a storm water main.	The stormwater main which runs across the site from Thurralilly to Mulloon street is proposed to be relocated outside of the site boundary along the Mulloon Street Verge, reconnecting to the exiting stormwater system. Refer to section 1 and Appendix C of this report.
General	

a. Submit a breakdown of the capital investment value of the development with the development application (DA).	Refer to 0 for quantity surveyors cost breakdown.
b. Submit a detailed Statement of Environmental Effects with the DA. This must include how the development complies with the School Facilities Standards.	Response to this item is addressed herein.
c. Submit a Traffic Impact Statement with the DA.	Refer to section 5 of this report for detailed response.
Relevant State Environmental Planning Policy requirements	
a. State Environmental Planning Policy No.55 – Remediation of Land *i. Provide information about any potentially contaminating activities that may have occurred in the part of the site where the development is proposed.*	A Site Contamination assessment has been carried out the findings of this assessment can be found in Appendix G the existing school Asbestos Register has also been included for information, refer to Appendix J.
b. State Environmental Planning Policy (State and Regional Development) 2011 *i. If the proposal is a Crown development with a capital investment value (CIV) of over $5 million, the development is classed as* *Regional Development and the development application (DA) will be determined by the NSW Joint Regional Planning Panel (Southern Region). The DA is still assessed and processed by Council.*	Noted.
c. State Environmental Planning Policy (Infrastructure) 2007 *i. The proposed development involves works to expand an existing educational establishment. This is permissible with consent under this Policy.* *ii. Division 3 – Educational establishments of Part 3 this Policy is applicable.* *iii. Specifically, Clause 32 – Determination of development applications states that the consent authority must take into consideration all relevant standards in the following State Government publications before the proposal can be determined:* *1. School Facilities Standards—Landscape Standard—Version 22 (March 2002);* *2. Schools Facilities Standards—Design Standard (Version 1/09/2006); and* *3. Schools Facilities Standards—Specification Standard (Version 01/11/2008).* *iv. Note: There is an updated standard titled Education Facilities Standards and Guidelines (EFSG). These web based guidelines are available through https://efsg.det.nsw.edu.au/design* *v. Important: The Statement of Environmental Effects must detail how the development complies with the above standards.* *vi. Clause 101 – Development with frontage to classified road is applicable and should be addressed in the Statement of Environmental*	i. Noted. ii. Noted. iii. Noted. iv. Noted. v. GHDW confirm that the design is being tracked against the Department of Education EFSG Guidelines and Accommodation schedules, and any departures from the requirements would be noted and signed off by the technical stakeholders at the relevant design stage approvals. vi. Refer to section 5 of this report for Traffic Statement, which addresses the Yass Road frontage. vii. Refer to section 5 of this report for Traffic Statement.

Effects. DA will be referred to the RMS for their comment. *vii. Clause 104 – Traffic-generating development will be applicable if the development will result in an increased capacity of enlargement of the school results in an increase in capacity of 50 or more additional students. If yes, comments from the RMS will be sought and must be taken into consideration by the consent authority.*	
d. Draft Education and Child Care SEPP *i. The State Government is proposing to introduce a new education based State Environmental Planning Policy and accompanying Better Schools Design Guide. As this draft policy has been publicly exhibited, it must be considered as part the assessment of any DA.* *ii. When the Draft SEPP comes into force it will likely have implications for the current proposal. However, until such time as the Draft SEPP is legislated, the provisions of the Infrastructure SEPP prevail.*	i. Detailed response to the Education and Child Care SEPP has been outlined in detail in section 4.1.3 of this report. ii. The infrastructure SEPP has been taken into consideration in section 4.1.1 of this report.
Relevant Queanbeyan Local Environmental Plan 2012 ("the LEP") requirements	
a. Land is zoned R3 – Medium Density Residential.	Refer to section 4.2.1 of this report for the detailed reponse.
b. Maximum height permitted is 8.5 metres – See Clause 4.3 of the LEP. Proposal appears to comply.	Proposal complies. Refer to section 4.2.1 of this report as well as Appendix A - Architectural Drawings.
Relevant Queanbeyan Development Control Plan 2012 ("the DCP") requirements	
a. Part 2 – All Zones. Most relevant chapters that need to be addressed are: *i. 2.2 – Car Parking;* *ii. 2.3 – Environmental Management;* *iii. 2.6 – Landscaping; and* *iv. 2.9 – Safe Design.*	Refer to section 4.2.2 of this report for detailed response to these chapters.
b. Landscaping: *i. DCP requires submission of a site analysis plan and landscape plan prepared by a Council accredited Category 2 landscape consultant.* *ii. Landscaping needs to take into account Crime Prevention through Environmental Design Principles (refer to Clause 2.9 – Safe Design).* *iii. Show any existing or proposed fencing on the landscape plan.* *iv. Need to also submit a plan identifying all of the trees on site and which ones will be removed.*	Refer to Appendix D - Landscaping plans, which addresses the key DCP requirements listed.
c. Safe Design *i. The Statement of Environmental Effects needs to address this clause and how the development has taken into account Crime*	CPTED has been considered during the landscape and building design process. For detailed response refer to section 3.2 of this report.

Prevention through Environmental Design Principles (CPTED). *ii. DA will be referred to the NSW Police for comments in relation to CPTED.*	
Building Design	
a. Proposal is within close proximity to residential development on Mulloon Street. Need to show how the design of the development has taken into account the potential impacts on nearby residences and the streetscape.	Planting has been incorporated along Mulloon Street within the building setback. The building height has been set to reduce the perceived height of the proposed built form, by lowering the building below NGL at the entry point. The height of the proposed development is consistent with the one and two storey buildings on the facing side of Mulloon St. Articulation of the Mulloon Street façade, with varying roof height, veranda, and glazing breaks up the visual bulk.
b. Assessment of the building design will be based on merits. Matters for consideration include: *i. External Materials;* *ii. Siting and Building Setbacks;* *iii. Efficiency in layout;* *iv. Bulk and Scale; and* *v. Views, Shadowing and Privacy.*	The proposed development is sympathetic to the residential setting, scale, roof form, material finishes and also is designed to integrate with the campus context and the needs of the school.
c. Proposed 3.15m setback to the Mulloon Street frontage. Building length of approximately 38 metres along this frontage. It is preferable to have a larger setback, however, it is acknowledged that the part of the site where the development is proposed is constrained in terms of useable space. Careful attention to the appearance of this façade and landscaping within the setback area is required.	As described in response to "Building Design", item a). The veranda roof form along the two street facing elevations helps to ameliorate the relatively small setback, as will the proposed landscape treatment.
d. One of the drawings indicates a plant room for a boiler being located in part of the building facing Mulloon Street, with a louvered wall along the façade. Be mindful of any noise impacts this could have on nearby residences. May be better located further away from these residences.	Due to progression of the engineering design, the plant room described in no longer required as part of the proposed development.
Section 94 Plan – Development Contributions	
a. None applicable.	Noted
Engineering Advice	
a) Road and Parking *A Traffic & Parking Impact Assessment will be required. The report should detail how it is proposed to continue to emphasise pupil drop off in the local streets (Thurralilly Street and Mulloon Street) rather than the State Road (Yass Road). The impacts of the potential increase in traffic generation / on street parking and pupil drop off associated with the additional pupils should be addressed. RMS will be invited to comment on the report as part of the referral under the*	Refer to section 5 of this report

Infrastructure SEPP.	
b) Water Servicing *A hydraulic consultant should be engaged to determine the adequacy of supply from the existing metered services to the site. A 50mm meter is located on the Yass Road frontage adjacent the traffic signals and a 40mm meter is located near the carpark in Thurralilly Street). If upgrade is required Council will need to be advised of requirements to allow a quotation to be provided for upgrading.*	The proposed development will not require upgrades to the existing water services.
c) Sewer *Proposed drainage will need to be connected to the existing site drainage.*	Noted.
d) Stormwater *A 900mm diameter stormwater main is located across the north-east corner of the site running from Thurralilly Street to Mulloon Street at a low point in the site, as per the enclosed drawing. The proposed additions are proposed to be constructed where the main runs. The main will need to be diverted clear of the proposed building at the developer's full cost. An overland flow path for the 1% AEP storm event will also be required. A design for the deviation will need to be approved by Council.* *It would be appropriate that details of the proposed diversion be provided as part of the DA submission to ensure a satisfactory solution to this issue can be achieved.*	Proposed stormwater diversion is submitted as part of this Development application. Supporting documentation can be found in Appendix C of this document.
e) Section 64 Development Contributions *Section 64 contributions would be sought for the additional demand on Council's service infrastructure at the rate of 0.02 ET per pupil (in accordance with Council's adopted methodology as per Water Directorate Section 84 Determinations of Equivalent Tenements (ET) Guidelines 2009).* *2016/17 ET rates were* *Water (Queanbeyan Zone) $4,233.75* *Sewer (East Zone) $1,420,44* *The rates are subject to CPI indexing for 2017/18 financial year.*	Noted
Building Advice	
• *Single storey building, class 9b, minimum type C construction required.* • *Ensure travel distances to exits comply* • *Fire hydrant system required. Street hydrants may suffice.* • *Provision of male/female toilets*	Refer to Appendix I BCA review report.
Environmental Health Advice	

a) Noise *If an evaporative cooling system is installed be mindful of noise levels*	A mechanical cooling system is not being incorporated as part of this development, in accordance with EFSG requirements.
b) Contamination	Any water collected on site will be treated in accordance with EFSG guidelines prior to re-use. (soil/ asbestos?)
c) Waste Management *Revised waste management plan*	Refer to Appendix H Waste Management Plan

The proposed development has been amended in line with Council's comments to satisfactorily address all the key issues raised and this Statement of Environmental Effects provides detailed justification and context with respect to any outstanding items.

Please refer to the relevant compliance tables below for further discussion. It is also noted that specialist reports as requested by Council are appended to the Development Application and submitted in support of the proposed development.

3. Description of Proposal

3.1 Proposed Development

This Crown Development Application seeks approval for alterations and additions to the existing Queanbeyan East Public School. The alterations and additions include:

- Removal of 17 trees, one of which is outside the site boundary;
- Removal of nine demountable buildings (6 classrooms, library, canteen, toilet);
- Demolition of one small timber classroom and an unenclosed covered roof area;
- Relocation of the canteen building within the site;
- Provision of a new pedestrian access gate and landscaped entry plaza from Mulloon Street;
- A new covered area and canteen adjacent to the existing hall
- Construction of a new landscaped courtyard with terracing, and;
- The construction of a single storey Learning centre fronting Mulloon Street containing 11 permanent teaching spaces opening to a common learning zone, and amenities.

The existing operational school campus has 10 existing homebases (6 demountable) with an existing equivalent student population of 207 and after the alterations will have 13 permanent homebases and a teaching equivalent space for 322 students. (i.e. an increase of 115 students).

It is noted that the application is a 'Crown' development application and Section 89 of the Environmental Planning and Assessment Act 1979 applies.

The following plans and technical reports are submitted to Council to assist with its assessment of the Development Application.

Table 2 List of Plans & Technical Reports

Document	Prepared By
Architectural Drawings	GHDWoodhead
Site Survey	Land Data Surveys
Civil Engineering Drawings	GHD
Landscaping Plans	GHDWoodhead
Geotechnical Report	Douglas Partners
Site Contamination Assessment	Douglas Partners
Civil and Stormwater Management Plan	GHD
Waste Management Plan	GHD
BCA Review Report	BCA Certifiers
Quantity Surveyors Report	Altus Group

3.2 Tree Removal on Mulloon Street verge

It is proposed to remove one street tree which is located outside of the site boundary on Mulloon Street verge. The subject tree is a multi-stemmed eucalyptus species approximately 18.5m tall. The tree is identified on the appended landscaping Tree Removal Plan as tree number '1'. Refer to Appendix D.

The tree is proposed to be removed for two reasons;

1. The tree poses a potential safety hazard to students, staff and members of public due to its proximity to the new pedestrian entrance to the school premises. The area under the tree within the school site boundary is currently in an 'out of bounds' area for students. Access has been limited to the hazardous zone to avoid potential injury or risk of injury or fatality due to falling branches. Previously commissioned tree assessment reports do not comment on this particular tree due to it's location outside of the school fence-line. The multi-stemmed eucalyptus has a number of dead branches and has the potential to drop limbs or entire stems.
2. The most efficient path for redirecting the existing stormwater pipe running across the site from Thurralilly Street to Mulloon Street is to reticulate along Mulloon Street verge. This requires removal of the subject tree due to a conflict with the proposed services path.

The landscape design proposal includes three mature trees to be instated in the vicinity of the tree to be removed, thus maintaining the vegetated aesthetic of the school.

The tree proposed to be removed is pictured in the following figure.

Figure 8 Tree on Mulloon St verge proposed to be removed (Source GHD 2017)

3.3 Crime Prevention Through Environmental Design (CPTED)

The proposed development seeks to reduce the opportunities for crime through the design and management of the built and landscaped environment. This is approached through the following framework objectives;

- create safer places that are less crime prone or can make people feel safer;
  - the school building is located together with existing buildings, with adjacency to surrounding residential areas. This enhances the passive surveillance of the residential street as well as within the active school site areas,

  - utilising existing security fences - the new pedestrian entry point on Mulloon St will match the exiting level of security provided by the newly instated, full perimeter 2.1m high palisade style fence. The fence, while visually permeable, restricts entry to key entry points. This enhances the sense of security within the site,
  - all new building frontages contain glazing to maximise passive surveillance over enclosed courtyard spaces,
- pedestrian thoroughfares that are well lit and do not create places for potential offenders to hide;
  - the site remains visually permeable where possible, with any enclosed spaces to be covered by CCTV surveillance,
  - attractive street frontages which do not contain places for potential offenders to hide may deter loitering and encourage use of the street frontages as thoroughfare,
  - pedestrian access can only be gained during school operation hours during which the site has a good level of passive surveillance across the internal pedestrian networks.
- use of Closed Circuit Television (CCTV) and access control points;
  - GHD has consulted with the Department of Education to formulate a Security strategy for the school site. This includes CCTV and access control points located strategically across the site,
  - CCTV may be effective in reducing some forms of property crime.

4. Statutory Controls

4.1 Statutory Controls

The relevant statutory planning controls include:

- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy No.55 – Remediation of Land
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
- State Environmental Planning Policy (State and Regional Development) 2011

4.1.1 State Environmental Planning Policy – (Infrastructure) 2007

It is noted that clauses 27 -32 of Infrastructure SEPP were removed upon gazettal of the Education and Childcare Sepp 2017 on 1 September 2017.

Clause 104 and Schedule 3 of the I SEPP relate to traffic generating development and certain proposals trigger a requirement for referral to the RMS.

The proposed development does not trigger this requirement as the previous requirement for educational establishments catering for 50 or more students to be referred to the RMS regional traffic committee for input has been removed from this SEPP.

4.1.2 State Environmental Planning Policy No.55 -Remediation of Land

Clause 7 of SEPP 55 provides:

(1) A consent authority must not consent to the carrying out of any development on land unless:

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

A report on *Preliminary Site Investigation with Limited Sampling* has been undertaken on the subject site by Douglas Partners with the following objectives;

- *Assess the potential for contamination at the site based on past and present site uses;*
- *Identify potential areas of environmental concern (PAEC);*
- *Determine the contaminants of concern; and*

Comment on the need for further investigation and/or management (if required) in order to determine the compatibility of the site for the proposed development of additional classrooms at the subject site.

Based on the findings of the assessment, the potential for gross contamination to be present within the site was considered to be low.

Information about any potentially contaminating activities that may have occurred in the part of the site where the development is proposed is detailed in Appendix G.

Accordingly, the Council can be satisfied that the provisions of Clause 7 of the SEPP are satisfied. If any contaminated material or suspected contaminated material is unearthed during the construction process then actions consistent with the legislative requirements and guideline document will be undertaken.

4.1.3 State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

The Department of Planning and Environment exhibited the Draft SEPP between 3 February 2017 and 7 April 2017 and the SEPP was gazetted on 1 September 2017.

Clause 35(1) of the SEPP permits schools to be carried out with consent in a prescribed zone, with clause 29(4) permitting a school to be utilised with consent for community or commercial purposes.

Clause 35(6) of the SEPP requires a consent authority to take into consideration the design quality of the development when evaluated in accordance with the design quality principles set out in Schedule 4.

The following table outlines how the development appropriately addresses the seven design quality principles:

Table 3 Design Quality Principal Responses

Design Quality Principals	Design Responses
Principal 1: context, built form and landscape *Schools should be designed to respond to and enhance the positive qualities of their setting, landscape and heritage, including Aboriginal cultural heritage. The design and spatial organisation of buildings and the spaces between them should be informed by site conditions such as topography, orientation and climate.* *Landscape should be integrated into the design of school developments to enhance on-site amenity, contribute to the streetscape and mitigate negative impacts on neighbouring sites.* *School buildings and their grounds on land that is identified in or under a local environmental plan as a scenic protection area should be designed to recognise and protect the special visual qualities and natural environment of the area, and located and designed to minimise the development's visual impact on those qualities and that natural environment.*	The development appropriately responds to the existing built and natural environment on the site. The siting of the new building maximises natural light and natural cross flow ventilation. A sheltered courtyard is created by utilising existing adjacent buildings within the site. The constrained siting of the building (existing structures and sloping terrain) dictating the setback from the Mulloon Street boundary is treated with verandas, varying roof lines and fenestration to reduce the visual bulk of the building to a more domestic scale along this frontage, in keeping with the residential setting. The brick façade is also in context. The proposed development responds to the heights and of adjoining one and two storey medium density residential properties and is not considered to result in an undue negative impact of the surrounds. Courtyard and plaza planting and terracing responds to the natural slope across the site.
Principle 2: sustainable, efficient and durable *Good design combines positive environmental, social and economic outcomes. Schools and school buildings should be designed to minimise the consumption of energy, water and natural resources and reduce waste and encourage recycling.*	The development incorporates appropriate water sensitive urban design measures including passive stormwater use for new landscaping irrigation. The building is designed to maximise natural ventilation and in accordance with the Department of Education policy does not incorporate mechanical air-conditioning.

Schools should be designed to be durable, resilient and adaptable, enabling them to evolve over time to meet future requirements.	The development maximises natural daylight penetration to reduce the reliance on artificial illumination. The development incorporates solar panels on the roof of the building that will offset the new building's power demand and assist to reduce the schools total demand for electricity. The building is constructed of durable materials that are low maintenance and utilise the Department of Education's experience in minimising on-going maintenance costs. The internal planning of the school building ensures that it is adaptable and contains opportunities for break out spaces and group learning that is consistent with modern educational practices rather than only incorporating traditional class rooms.
Principle 3: accessible and inclusive *School buildings and their grounds should provide good wayfinding and be welcoming, accessible and inclusive to people with differing needs and capabilities.* *Schools should actively seek opportunities for their facilities to be shared with the community and cater for activities outside of school hours.*	Accessible paths of travel are provided from the sites boundaries to school facilities. Ramps are provided from the new pedestrian entry on Mulloon St to the proposed new learning area classrooms. On grade transitions are provided at all new entry points to the new buildings. Maximum ramp grade has been designed at 1:14. The development will incorporate appropriate wayfinding signage to assist visitors and first time users with identifying key areas within the site. Before and after hours use is catered for and a new pedestrian plaza is incorporated to provide a safe and sheltered place for parents to mingle while dropping off and picking up children.
Principle 4: health and safety *Good school development optimises health, safety and security within its boundaries and the surrounding public domain, and balances this with the need to create a welcoming and accessible environment.*	A new site security strategy has been developed in consultation with the Department of Education. Visual connections for passive surveillance and site permeability have been integrated into the landscape and architectural designs. The building maximises access to natural light and ventilation and maximises the provision of outdoor space on the site through siting adjacent existing built forms.
Principle 5: amenity *Schools should provide pleasant and engaging spaces that are accessible for a wide range of educational, informal and community activities, while also considering the amenity of adjacent development and the local neighbourhood.* *Schools located near busy roads or near rail corridors should incorporate appropriate noise mitigation measures to ensure a high level of amenity for occupants.* *Schools should include appropriate, efficient, stage and age appropriate indoor and outdoor learning and play spaces, access to*	The school provides a variety of internal and external learning places that are suitable for formal and informal educational opportunities for students. The new building incorporates appropriate storage spaces for teachers, students and the school. The proposed building has been located to minimise the impact on the outdoor areas available to the school by re-use of the existing areas currently occupied on the site by temporary accommodations (portables).

sunlight, natural ventilation, outlook, visual and acoustic privacy, storage and service areas.	Adequate landscaping and terracing will provide a pleasant outlook from both within the site and for views into the site. The buildings maximise natural light penetration through the appropriate use of glazing and facilitate natural cross ventilation. The buildings incorporate acoustic absorbing Materials and the new hard surfaced play areas are appropriately set back from boundaries, behind built form, to reduce excessive noise transition.
Principle 6: whole of life, flexible and adaptive *School design should consider future needs and take a whole-of-life-cycle approach underpinned by site wide strategic and spatial planning. Good design for schools should deliver high environmental performance, ease of adaptation and maximise multi-use facilities.*	The design of the building considers the future needs of the school and the building has been designed to incorporate both formal learning areas and informal learning spaces, allow for combined educational opportunities and maximise the opportunities for the adaptive use of the building as technology is increasingly used in classrooms by both educators and students. The buildings structural system and proportions allows for long term design and planning flexibility and the building contains smaller rooms to facilitate small group learning.
Principle 7: aesthetics *School buildings and their landscape setting should be aesthetically pleasing by achieving a built form that has good proportions and a balanced composition of elements. Schools should respond to positive elements from the site and surrounding neighbourhood and have a positive impact on the quality and character of a neighbourhood.* *The built form should respond to the existing or desired future context, particularly, positive elements from the site and surrounding neighbourhood, and have a positive impact on the quality and sense of identity of the neighbourhood.*	The new building is designed to be sympathetic to the fabric of the emerging suburb including the nearby commercial and residential zones, while establishing a presence for the school. Practical materials and finishes selections add colour and contribute to an overall stimulating and engaging environment.

4.1.4 State Environmental Planning Policy (State and Regional Development) 2011

If the proposal is a Crown development with a capital investment value (CIV) of over $5 million, the development is classed as Regional Development, and the development application (DA) will be determined by the NSW Joint Regional Planning Panel (Southern Region). The DA is still assessed and processed by Council.

Educational establishments are to be of State significance if they are either a listed site or comply with any one of the following;

(1) Development for the purpose of a new school (regardless of the capital investment value).

(2) Development that has a capital investment value of more than $20 million for the purpose of alterations or additions to an existing school.

(3) Development for the purpose of a tertiary institution (within the meaning of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017),

including associated research facilities, that has a capital investment value of more than $30 million.

As the development is an alteration or addition to an existing school and the capital investment is less than $20 million, the development site is not identified to be State significance under under State Environmental Planning Policy (State and Regional Development) 2011 for the purposes of the Act.

4.2 Policy Controls

The applicable policy control documents are:

- Queanbeyan Local Environmental Plan 2012
- Queanbeyan Development Control Plan 2012

4.2.1 Queanbeyan Local Environmental Plan 2012

As illustrated below, the site is zoned R3, by Queanbeyan Local Environmental Plan (LEP) 2012.

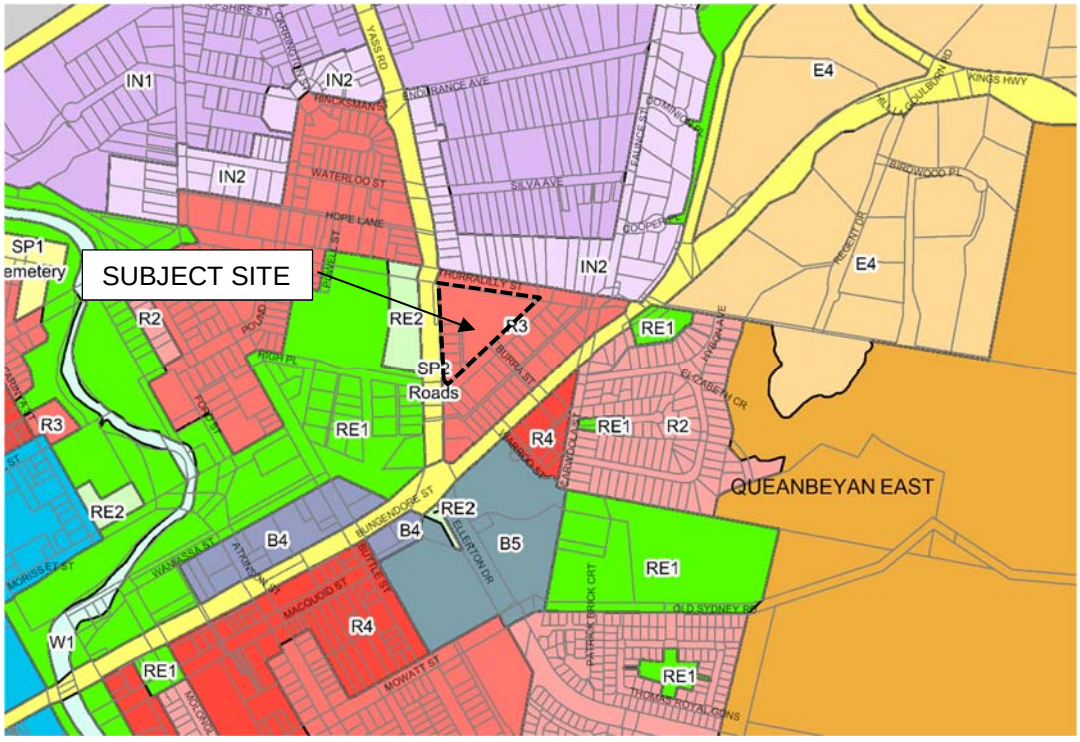

Figure 9 LEP Land Zoning map (source NSW Government *Queanbeyan Local Environmental Plan 2012*)

As illustrated below, the site permissible building height is zoned I2, by Queanbeyan Local Environmental Plan (LEP) 2012.

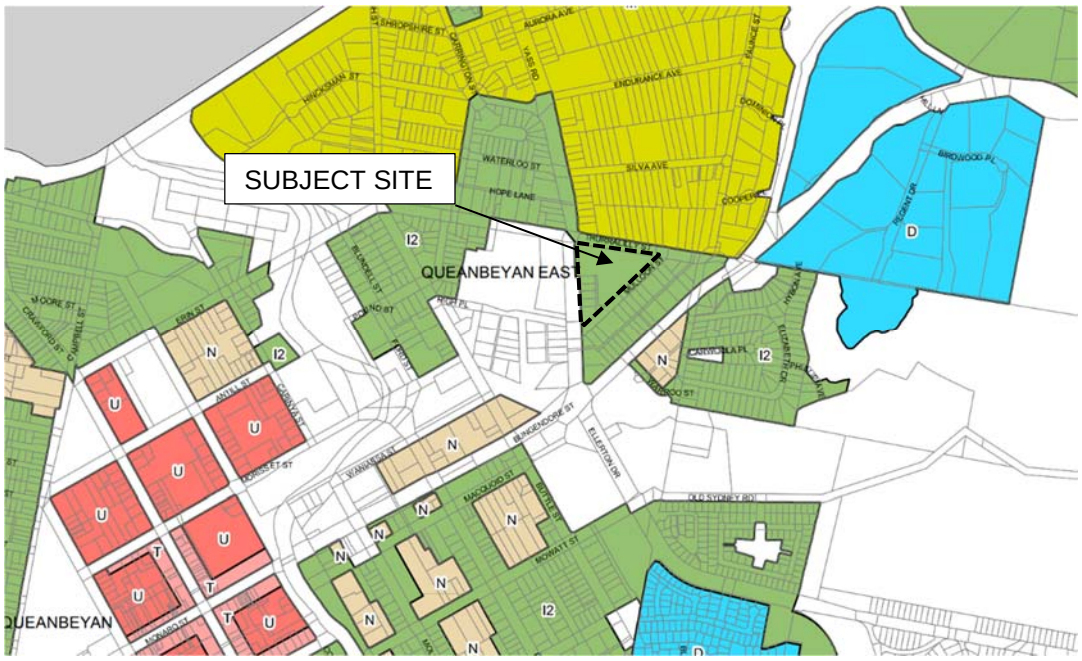

Figure 10 LEP Height of Buildings map (source NSW Government *Queanbeyan Local Environmental Plan 2012*)

The following table outlines the primary planning controls in regards to the LEP.

Table 4 Compliance with Queanbeyan Local Environmental Plan 2012

Clause	Controls	Comment	Complies
2.2	Zoning of land to which Plan applies	Land is zoned R3 – Medium Density Residential.	Yes
2.3	Zone objectives and Land Use Table	The proposal is consistent with the zone objectives of the R3 Medium Density Residential zone.	Yes
2.7	Demolition requires consent	The demolition of a building or work may be carried out only with development consent.	Yes
4.3	Height of Buildings	Land is zoned I2, maximum height permitted is 8.5 metres. Maximum height above NGL of proposed development is 6.95m	Yes
4.6	Exceptions to development standards	The development does not seek to vary any LEP controls. Not applicable.	N/A
5.1	Relevant acquisition authority	The site does not contain land identified for acquisition.	N/A
5.10	Heritage conservation	The site does not contain any heritage items or heritage conservation areas.	N/A
7.1	Earthworks	Development consent is required for earthworks.	Yes
7.2	Flood planning	The site is not identified as “Flood planning area” on the Flood Planning Map.	N/A
7.3	Terrestrial biodiversity	The site is not identified as “Biodiversity” on the Terrestrial Biodiversity Map.	N/A

4.2.2 Queanbeyan Development Control Plan 2012

The following table outlines the primary planning controls in regards to the DCP.

Table 5 Compliance with Queanbeyan Development Control Plan 2012

Clause	Controls	Comment	Complies
2.2	Car Parking	It is not proposed to alter any of the on-site car parking conditions.	Yes
2.2.5 Existing Premises (Replaced or Remodelled)	*b) Where an existing building is to be remodelled or replaced by a new building, i. having a floor area greater than the existing building and/or ii. which will have a different use (other than those specified in subclause (a) and/or iii. where renovations, alterations or additions create potential to generate additional visitor and customer demand car parking is to be provided as calculated under this DCP for the new building area and use.*	The proposed development will have a net increase of 4 equivalent full time staff members on site. The existing staff car park has sufficient existing capacity to accommodate the increase in capacity, and adequate street parking is also available.	Yes
2.2.6 Controls for Car Parking	*a) Car parking is to be provided for all development in accordance with Table 1.*	Table 1 requires – 1 space per each full time employee plus one space for persons with disabilities plus an additional 10% of the total for visitors. The existing car park has 25 total spaces plus one plus one space for persons with disabilities, to cater for a proposed population of 17 equivalent full time staff.	Yes
2.2.7 Design of Service Vehicle Areas	*a) Service vehicle areas are to be designed in accordance with the principles and requirements of the Australian Standards - Parking Facilities (AS2890 Series). b) In relation to service vehicle dimensions, these are to be designed to cater for the largest vehicle servicing the site in accordance with AS/NZS 2890.2:2002 Off-street commercial vehicles facilities.*	It is not proposed to alter the service vehicle type, access, or parking areas as part of the development.	Yes
2.3	Environmental Management		
2.3.3 Energy Efficiency and Conservation	*Compliance with Section J of the National Construction Code*	The proposed development will comply with BCA Section J. Compliance will be assessed by the appointed Building Surveyor.	Yes
2.3.4 Water Conservation	*None applicable*	The development incorporates water sensitive landscape design	Yes

		as well as water saving fittings and fixtures.	
2.3.5 Waste and Recycling	*a) Development applications for all non-residential development must be accompanied by a waste management plan…*	Refer to Appendix H waste management plan.	Yes
2.3.6 Noise and Vibration	*a) Development should be designed to minimise the potential for offensive noise.* *c) Noise sensitive developments such as dwellings should be designed to reasonably protect the proposed development from noise sources such as arterial roads, entertainment venues and the like.*	a) Areas which are likely to generate noise (children's play areas) are located away from the street frontages and are not anticipated to increase the existing site generated noise levels. The outdoor play space is centred around the new courtyard which is located in an area of existing designated play space and screened to the residential street by the proposed new learning area building. There is no proposed noise generating plant equipment. b)The proposed new classrooms are located strategically away from Yass Road frontage, which is a source of traffic generate noise.	Yes
2.6 Landscaping	*This part of the development control plan outlines requirements and procedures for landscape planning and design for development sites.* *Category 2 Accredited landscape consultant required for Educational developments.*	An experienced, qualified, landscape architect has prepared detailed landscaping plans. Application for registration as a category 2 consultant has been submitted for council approval. Refer to Appendix D for Landscaping plans	Under Application
2.8 Guidelines for Bushfire Prone Areas	*This part of the development control plan outlines the requirements for subdivisions and buildings in Bushfire Prone Areas and applies to all development in the Bushfire Prone Area.*	The proposed development site is not within a bushfire prone land area.	N/A
2.9	Safe Design		Yes
2.9.7 Landscaping	*a) Avoid landscaping which obstructs casual surveillance and allows intruders to hide.* *b) Plants such a low hedges and shrubs (1m to 1.2m in height), creepers, ground covers or high canopies, clean trunked trees facilitate natural surveillance.* *c) Avoid medium height vegetation with dense*	a)-e),g)-j) Refer to Appendix D for further detailed information on landscaping and planting palette which includes a range of plants selected for their suitability to the site conditions. f) the new building entry has been set back from the boundary sufficiently to allow for DDA compliant ramping to the entry point.	Yes

	foliage in a location where concealment might occur; *d) Use low ground cover or high canopied trees with clean trunks to a height of 2m around children's play areas, car parks and along pedestrian pathways; Planting beds define space and can direct pedestrian movement to a desired route;* *e) Trees with low dense growth foliage should be suitably spaced and set back from public thoroughfares to avoid a continuous barrier; and* *f) Building entries should not generally be setback more than 10m from the street frontage* *g) Prickly plants can be used as effective barriers: Suggested species include Hakea and Grevillea;* *h) Plant medium height shrubs close to the dwelling if sight lines will not be obscured or low level shrubs where visibility is required. Large trees growing next to first and second storey windows and balconies could provide a means of access. Building fixtures (carports, downpipes etc) can also provide a means of access.* *i) Use vegetation as barriers to deter unauthorized access and entry.* *j) Avoid large trees, shrubs and building fixtures which could enable an intruder to gain physical access to the dwelling or neighbouring dwellings through climbing.*		
2.9.7 Communal / Public Areas	*a) Provide effective natural surveillance for communal and public areas* *d) Communal areas and utilities such as laundries and garbage bays should be easily seen - but not necessarily prominent;* *g) Seating should be incorporated into areas of active use to encourage use.*	Communal areas within the site have natural surveillance through glazed doors and windows from areas inhabited during school hours. Existing utilities are adequately set back from the street frontage; they are not proposed to be altered as part of this development application.	Yes

		Informal seating is proposed throughout the new landscaped areas.	
2.9.7 Entrances	*a) Avoid confusion at entry points* *b) Ensure the entry point to each building is clearly visible* *c) Main entrances/exits should be located at the front of the site and in full view of the street;* *d) All entrances should be designed to provide users with the opportunity to: see in before entering and out before exiting;* *e) Entrances should have clear sight lines and not be obscured by landscaping or other obstacles –tiered structure to planting and regular maintenance will achieve this;* *f) Recessed doorways should be avoided as they can provide opportunities for concealment;* *g) Entrances should be clearly defined through design features and directional signs:* *h) Minimise the number of entry points.*	New building entry point is adequately signed on the face of the proposed building. The existing Thurralilly Street entry and the proposed Mulloon Street entry are both clearly visible from the pedestrian approach along the street. Landscaping to the proposed Mulloon street building entry is designed to be open and inviting, with clear visual connection from the gate to the building entry point. There are no recessed building entrances on the site boundary, which would be accessible to the public. Site entry points have been kept to a minimum, in keeping with the schools existing security features. One new pedestrian entry has been proposed as part of this Development Application.	Yes
2.9.7 Lighting	*Appropriate use of lighting*	External lighting will be located and selected to comply with the Educational Facilities Standards and Guidelines.	Yes
2.9.7 Building Identification	*Ensure buildings are clearly identified*	It is not proposed to change the main delivery and visitor check-in point of the School, which is currently located in the Administration Building, fronting Thurralilly Street. The proposed signage on the new building gives an appropriate sense of ownership, and a point of arrival for school drop-offs. All gate signage will direct visitors to the existing administration building on Thurralilly Street.	Yes
2.9.7 Security	*Appropriate use of security grilles, shutters and doors.*	A site security strategy has been developed in consultation with the Department of Education. The security strategy will incorporate active systems (CCTV) in support of passive systems (surveillance, fencing, door locks, framed glazing louvres)	Yes

2.9.7 Fencing	*i) Fence design should enhance natural surveillance from the street to the building and from the building to the street - reducing the potential for intruders to hide.* *j) Fences should be predominantly open in design to allow sight through the fences e.g. picket fences and wrought iron fencing*	The proposed new pedestrian entry on Mulloon Street will be lockable Palisade style fence, 2.1m high, to match the existing full perimeter security fence which is visually permeable but not climbable.	Yes
2.9.7 Maintenance	*Appropriate maintenance will ensure that an area has the appearance of being cared for and 'defended' as a cared for environment can reduce the committal of crime and the fear of crime.*	The existing school has a pre-existing maintenance regime and allocated personnel who will continue to maintain the property.	Yes
2.9.7 Building and Related Materials	*Use of certain building and related materials will assist in ensuring that an area has the appearance of being cared for and 'defended' as a cared for environment can reduce the committal of crime and the fear of crime.*	All building materials will be selected on a basis of durability, vandal resistance and low maintenance in accordance with the EFSG recommendations and requirements.	Yes

5. Traffic Impact Statement

5.1 Existing Conditions

5.1.1 Current Access Arrangements

Pedestrian access to the existing school campus is provided on Yass Road, Thurralilly Street and Mulloon Street. Vehicle access to the campus is provided from Thurralilly Street and Mulloon Street. The vehicle pick up / drop off zones are also located on Thurralilly Street and Mulloon Street.

A signalised pedestrian crossing is provided on Yass Road and a school pedestrian crossings on Thurralilly Street at the frontage to the school and Mulloon St adjacent the school bus stop and pedestrian access gate to facilitate the safety of students and their parents / guardians.

Bus zones are located on both Yass Road and on Mulloon Street adjacent to the school access points.

The traffic and transport facilities in proximity to Queanbeyan East Public School are presented in the following figure.

5.1.2 Existing Road Network Characteristics

Yass Road

Yass Road is of administrative category 'State/Regional' road, number GG99 30/8/96, holding a 'Main Road' Classification under the Roads and Maritime *Schedule of Classified Roads and Unclassified Regional Roads*. In proximity to the school, Yass Road is classified as a State Road.

State Roads (Roads and Maritime administrative class) – are defined as major arterial links through NSW and within major urban areas. They are the principal traffic carrying roads and fully controlled by Roads and Maritime with maintenance fully funded by Roads and Maritime. State Roads include all Tollways, Freeways and Transitways; and all or part of a Main Road, Tourist Road or State Highway.

In proximity to the school, Yass Road has the following characteristics;

- Two-way carriageway with two travel lanes in either direction.
- Central median strip planted with small trees and grasses.
- One signalised pedestrian crossing outside of Queanbeyan East Public School.
- Concrete footpath on both sides of the road.
- Default speed limit of 60 km/h and a 40 km/h school zone during peak periods of school activity.

Figure 11 View along Yass Road (source Google Maps)

Thurralilly Street

Thurralilly Street is classified as a local road and performs a collector street function, servicing residential and light industrial areas of Queanbeyan East.

In proximity to the school, Thurralilly Street has the following characteristics;

- Two-way carriageway with a single travel lane in either direction.
- Central median strip planted with low shrubs and grasses
- One pedestrian crossing outside of Queanbeyan East Public School.
- Concrete footpath on one side of the road serving the school.
- Default speed limit of 50 km/h and a 40 km/h school zone during peak periods of school activity.

Figure 12 View along Thurralilly Street (source Google Maps)

Mulloon Street

Mulloon Street is classified as a local road and performs a local street function, servicing residential properties and Queanbeyan East Public School, along the subject site boundary.

In proximity to the school, Mulloon Street has the following characteristics;

- Two-way carriageway with a single travel lane in either direction.

- Central median strip planted with low shrubs and grasses
- One pedestrian crossing outside of Queanbeyan East Public School.
- Concrete footpath on one side of the road serving the school. Intermittent concrete footpath on the side of the road opposite the school.
- Default speed limit of 50 km/h and a 40 km/h school zone during peak periods of school activity.
- Road use restricted to vehicles under 5t.

Figure 13 View along Mulloon Street (source Google Maps)

5.1.3 Public Transport

Public Bus Service

The school is served by the 832 Queanbeyan City bus route and the 850 bus route to Bungendore. Bus stops are along the Yass Road site frontage and on Kings Highway, which runs one street parallel to Mulloon Street.

School Bus Service

In addition to the public bus service, QCity Transit (formerly Deane's Buslines) provide school bus services to and from Queanbeyan East Public School. Bus stops in the vicinity of the school are indicated in the following figure.

Figure 14 School Bus Stops Servicing QEPS (Source Google Maps - modified by GHD)

School Bus Stop (pick-up, drop-off)

5.1.4 Active Transport

Bicycle Facilities

There is a shared bicycle / pedestrian path that links the school site to the Queanbeyan River parklands as indicated in figure Figure 15 Active transport networks

No formal bicycle parking is provided on the site.

Pedestrian Facilities

The existing pedestrian facilities in the vicinity of Queanbeyan East Public School consist of;

- A combination of concrete footpaths and grassed verges are provided on the local roads in proximity to the school.
- Concrete footpaths on both sides of the road for Main Arterial Roads such as Yass Road and nearby Bungendore Road.
- Pedestrian crossing facilities in the vicinity of the school are as follows:
  - A signal controlled pedestrian crossing over Yass Road at the access point to QEPS
  - A pedestrian crossing of Bungendore Road/Kings Highway at the intersection with Burra Street pedestrian access.

– A pedestrian crossing of Mulloon Street adjacent to the school entrance.
– A wombat (raised) pedestrian crossing of Thurralilly Street adjacent to the school entrance.

Yass Road Crossing

School children are escorted across Yass Road on school day afternoons by a staff member. Children are assembled in the school outdoor assembly area and are supervised while crossing the signalised pedestrian crossing on Yass Road.

Figure 15 Active transport networks

Pedestrian crossing

Pedestrian crossing - wombat

Pedestrian crossing - signalised

Pedestrian access network - footpath

Shared bicycle / pedestrian path

Grassed verge

5.1.5 On and Off-Street Parking

On-Street Parking

The on-street parking arrangements in the vicinity of the school include the following restrictions;

- Unrestricted parking
- No Stopping zones immediately adjacent pedestrian crossings
- No Parking (drop-off zones)

- Bus Zones

The pick-up drop-off zones for Queanbeyan East Public School are located along Thurralilly Street and Mulloon Street.

Off-Street Parking

There is no off-street parking provided for public use. There is a staff car-park which provides 27 car spaces, one of which is accessible. The car park is located adjacent the administration building and pedestrian crossing on Thurralilly Street. Visitors to the school use on street parking.

There is free parking available along Thurralilly Street (opposite the school), Mulloon Street and Yass Road. The residences along Mulloon Street have access to private off street parking, as do the recreational facilities and most of the light industrial businesses along Yass road and Thurralilly Street.

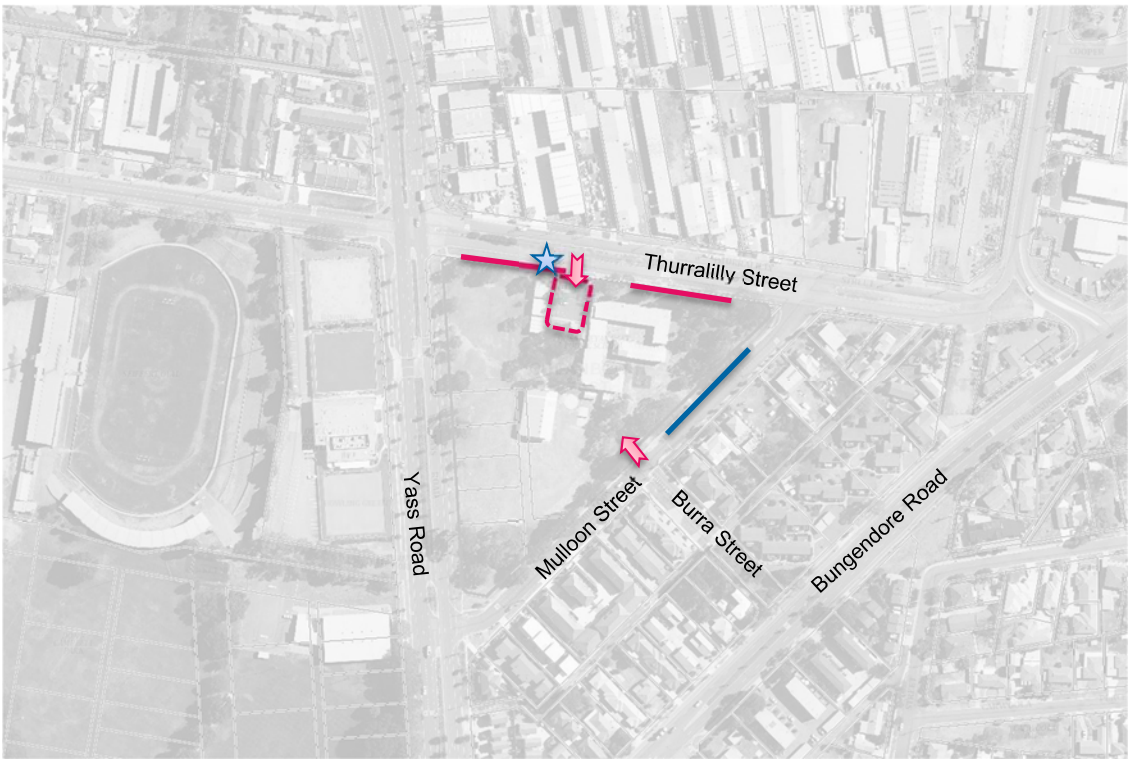

Figure 16 Parking Arrangements

Existing on-site staff parking

On street accessible car park

Vehicular site access points (staff and service vehicles only)

No Parking Zone/Drop-off zone (drop off times)

Bus zone (school times)

5.1.6 Assumed mode of transport

Assumptions within this section are made based on information provided by Queanbeyan East Public School.

As the catchment zone for Queanbeyan East Public School is predominantly rural, it is assumed that a substantial proportion of students rely on private vehicle, with a portion utilising the bus services, and a portion of students walking to school. The current student population is 207 students. For the purposes of this report, the following distribution of transport modes have been assumed;

Private Vehicle 70%: 145 students

Bus service 15%: 31 students

Active transport (walk/cycle/scooter) 15%: 31 students

Due to the location of the school buildings, and frontage of administration building, the majority of private vehicle drop-offs are assumed to occur on Thurralilly Street, with a smaller number of drop-offs occurring on Mulloon Street.

5.2 Impact of Proposed Development

5.2.1 Population increase

The proposed development will increase the student population by 115 students and 4 full time staff.

Assuming the current distribution of transport modes are maintained, the increase in population will incur a 55% net increase in vehicle traffic during peak school times, with no anticipated increase in vehicle traffic during off-peak times.

The anticipated distribution of transport modes for the new student population of 322 students as follows.

Private vehicle 70%: 226 students.

Bus service 15%: 48 students.

Active transport (walk/cycle/scooter) 15%: 48 students.

5.2.2 Siting of development

The proposed development is located adjacent the existing campus buildings between Mulloon Street and Thurralilly street, with a new entry point with DDA access to the proposed new classroom building on Mulloon street. The proposed development is situated in the corner of the site furthest from Yass Road frontage.

The proposed development encourages private vehicle drop-offs on Mulloon street due to the proposed new building frontage pedestrian entry point to the street.

5.2.3 Pick-up and Drop-off capacity

Thurralilly Street

The main pick-up and drop-off facility (No Parking zones) for the school campus is located in indented parking bays on Thurralilly Street adjacent to the front entrance of the school. These bays are approximately 92 m in total combined length (12 m + 40 m + 40 m).

Assuming that a parked car requires a length of six meters, this facility can currently accommodate about fourteen vehicles.

Based on a conservative estimate of a two minutes waiting period per vehicle, the drop off facility could accommodate up to approximately 420 vehicles per hour (or 105 vehicles every 15 minutes).

The current assumed demand at the pick-up / drop-off facility of 145 (approx. 37 vehicles every 15 minutes) occurs in the AM and PM peak, and the student population is expected to increase by fifty-five percent or 226 students. Thus, the current facility is typically expected to be able to accommodate the demand associated with the school expansion without changes to the existing road design.

Mulloon Street

An additional length of 80 m of pick-up and drop-off facility is located along Mulloon street between the existing pedestrian crossing and the intersection with Thurralilly Street. It is anticipated that there will be an increase of pick-up / drop-off in this zone due to the proposed new pedestrian entry point.

Yass Road

Due to the classification of Yass road (State Road classification), it is not proposed to encourage utilisation of this area for pick-up / drop-offs due to safety concerns. This is reflected in the siting of the proposed new school building. The proposed new building is near the corner of Thurralilly Street and Mulloon Street - the area furthest form Yass Road. The proposed new building entry on Mulloon Street emphasises an identity in this corner of the site.

5.2.4 Congestion & wait times

It is anticipated that there will be a nominal increase in wait times on Thurralilly street and Mulloon Street at the intersections with Yass rd. This is due to the increase in student drop-offs along these street frontages.

It not anticipated that the increase in wait times would have a significant effect on the traffic flow at these intersections for left turning traffic.

Existing wait times for turning right onto Yass road from Thurralilly or Mulloon Street are substantial and undesirable. Due to the existing extended wait times for right turning traffic at these intersections, it is assumed that a portion of the vehicle traffic would opt to turn left onto Yass Road, then perform a U-turn at one of the median strip breaks near Mulloon Street, or at the roundabout intersecting Bungendore Road.

5.2.5 Conclusion

Although there will be an anticipated increase in traffic generated by the proposed development; this will occur only at peak pick-up and drop-off times on school days and will not have a detrimental effect on the amenity, parking, or flow rates of the surrounding streets and roads.

6. Stormwater Management

6.1 Site Management

The key features that form part of the stormwater management design are as follows:

- Collection of stormwater runoff from roof and downpipe;
- Collection of stormwater runoff from pavements, pathways and hardstand areas within the new school building areas;

The proposed stormwater pipe network is designed to manage flows from the proposed impervious areas up to the 10 Year ARI storm event. The pipes are sized accordingly. Refer to Appendix C, External Services Plan, for pipe sizes and classification.

6.1.1 Land Use

The existing land use of the new building siting for QEPS is predominantly impervious with existing built and paved areas to make way for the new building. The existing pervious area east of the new building will become impervious; thus an On-site Stormwater Detention (OSD) tank will be needed to comply with council's requirements.

6.1.2 On Site Detention

The OSD size has been determined using ACT parameters and coefficients. The rainfall depth applicable for this calculation is 28mm. Assuming runoff coefficient for pre-urban areas of 0.4 and a runoff coefficient of 0.9 for impervious areas, the quantity of increase runoff per 100m² of impervious areas would be 1.4 kL for the 3 month ARI storm. The calculated OSD tank capacity for the new building is approximate 45 kL.

There is an existing on site stormwater tank that will be re-commissioned and assumed to accommodate the additional catchment from the new building (of nominal capacity of 120kL). The water from the tank will be repurposed to supply landscaped areas.

6.1.3 Overland Flow

Overland flow at north east side will be towards the new buildings will be managed with the use of cut-off drains to intercept flows. These cut-off drains will be ACO style drains with heel safe grates that are DDA complaint. Overland flow at south side of the new building will be falling away from the new building.

It is expected that water quality issues associated with the new building will be minimal. However, the key water quality issue associated with the school site will likely be the management and collection of gross pollutants. This will be managed through the installation of litter basket upstream of the tank. Regular maintenance and removal of basket should be done to dispose the captured pollutants at an approved waste disposal facility.

6.2 Overland Flow and External Site Works

6.2.1 Discharge

Stormwater captured from the school site will be discharged to Queanbeyan Municipal Council network in Mulloon Street.

With general fall for the QEPS being across the site from the north east to south west and the design intent to retain this topography, the existing overland flowpaths will generally be retained and managed.

There is no overflow of stormwater onto the site from the existing DN 900. The existing manhole is being relocated outside the school zone along Thurralilly Street. The new manhole will overflow along Thurralilly Street towards the west going to Yass road.

The overflow performance of is not significantly change. The existing DN 900 within the site and is approx. 50 years old and likely be affected by the roots of the large tree.

6.2.2 Stormwater Pipe Relocation

The proposed stormwater relocation design removes the existing stormwater pipe from within the Queanbeyan East Public School block and into the verges of Thurralilly and Mulloon Streets.

New pits installed in the verge as part of the proposed design will have screw down lids fitted to ensure that any surcharge water will be contained within the roadway, rather than flow through the school.

Refer to Appendix C for supporting civil engineering drawings.

6.3 Design Standards

The stormwater network has been designed in accordance with the following standards and requirements:

- AS 3500.3-2015 – Plumbing and drainage Part 3 – Stormwater Drainage
- AS 3996 (2006) – Access cover and grates
- AS/NZS 4058 – Precast Concrete Pipe
- AS/NZS 3725 (2007) – Design for installation of buried concrete pipes
- AR&R – Australian Rainfall and Runoff
- Queanbeyan Development Design Specification – D5 – Stormwater Drainage Design
- Handbook of Drainage Design Criteria - Queanbeyan
- Educational Facilities Standards and Guidelines (EFSG)

7. Limitations

7.1 Purpose of this report

The purpose of this report is to provide a Statement of Environmental Effects as part of the development application to Queanbeyan-Palerang Regional Council for alterations and additions to the existing Queanbeyan East Public School, at 10 Yass Road, Queanbeyan East. The development application is tendered to Queanbeyan-Palerang Regional Council by GHD on behalf of the NSW Department of Education.

7.2 Scope and limitations

This report: has been prepared by GHD for NSW Department of Education and *may only be used and relied on by NSW Department of Education for the purpose agreed between GHD and the NSW Department of Education as set out 1 of this report.*

GHD otherwise disclaims responsibility to any person other than NSW Department of Education arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

Appendices

Appendix A - Architectural Drawings

- 23-16004-A-QEPS-DA-AR-0000 [B]
- 23-16004-A-QEPS-DA-AR-0011 [B]
- 23-16004-A-QEPS-DA-AR-0050 [B]
- 23-16004-A-QEPS-DA-AR-0200 [B]
- 23-16004-A-QEPS-DA-AR-0500 [B]
- 23-16004-A-QEPS-DA-AR-1000 [B]
- 23-16004-A-QEPS-DA-AR-1010 [B]
- 23-16004-A-QEPS-DA-AR-2101 [B]
- 23-16004-A-QEPS-DA-AR-2102 [B]
- 23-16004-A-QEPS-DA-AR-3000 [B]
- 23-16004-A-QEPS-DA-AR-3100 [B]
- 23-16004-A-QEPS-DA-AR-4101 [A]
- 23-16004-A-QEPS-DA-AR-4102 [A]
- 23-16004-A-QEPS-DA-AR-5000 [B]
- 23-16004-A-QEPS-DA-AR-9001 [B]

Appendix B - Site Survey

- 14199.01_DT_001_REV_A A0 300

Appendix C - Civil & Hydraulic Engineering Drawings

- 23-16004-C005-RA
- 23-16004-C020-RA
- 23-16004-C021-RA
- 23-16004-C080-RA
- 23-16004-QEPS-DA-H003

Appendix D - Landscaping Plans

- 23-16004-QEPS-SD-L0001
- 23-16004-QEPS-SD-L0002

Appendix E - Design Compliance

- QEPS Statement of Compliance with EFSG - Architecture
- QEPS Statement of Design Compliance - Landscape

Appendix F - Geotechnical Report

- 88406.00.R.001.DftA.Geotech Report

Appendix G - Site Contamination Assessment

- 88406.01.R.001.Rev0.PSI

Appendix H - Waste Management Plan

- 2316004-LET-B-WMPLetterReport
- 2316004-LET-A_WMPLetterReport_AppendixA - 23-16004-A-QEPS-DA-AR-0200 [B]
- 2316004-LET-A_WMPLetterReport_AppendixB - 23-16004-A-QEPS-DA-AR-1000 [B]

Appendix I - BCA Review Report

- Queanbeyan East Public School BCA Review Report

Appendix J - Asbestos Register

- Asbestos Register_Hazardous Materials and Risk Assessment_QEPS

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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
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