

ABERNETHY ROAD, 575 (L218) OAKFORD – PROPOSED EDUCATIONAL ESTABLISHMENT

Form 1 – Responsible Authority Report (Regulation 12)

DAP Name:	Metro Outer Development Assessment Panel	
Local Government Area:	Shire of Serpentine Jarrahdale	
Applicant:	Element Advisory Pty Ltd	
Owner:	Free Reformed School Association	
Value of Development:	\$60 million <input checked="" type="checkbox"/> Mandatory (Regulation 5) <input type="checkbox"/> Opt In (Regulation 6)	
Responsible Authority:	Shire of Serpentine Jarrahdale	
Authorising Officer:	Andrew Trosic	
LG Reference:	PA23/588	
DAP File No:	DAP/23/02545	
Application Received Date:	16 August 2023	
Report Due Date:	24 November 2023	
Application Statutory Process Timeframe:	90 days with an additional 22 days agreed	
Attachment(s):	<ol style="list-style-type: none"> 1. Development Plans 2. Summary of Submissions 3. Clause 67 Assessment 4. Transport impact Assessment 5. Supplemental Transport Impact Assessment 6. Council Minutes 	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	<input type="checkbox"/> Yes	Complete Responsible Authority Recommendation section
	<input type="checkbox"/> N/A	
	<input type="checkbox"/> No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer Development Assessment Panel resolves to:

1. **Refuse** DAP Application reference DAP/23/02545 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the Shire of Serpentine Jarrahdale Local Planning Scheme No.3:

Reasons

1. The development is considered to have an adverse impact on the existing road network, due to the volume of traffic generated by the development relying primarily on a single intersection to access the site.
2. The proposed development has not provided sufficient information to demonstrate appropriate road infrastructure will be provided to address traffic generated.
3. Inadequate provision of pedestrian infrastructure has been provided, inconsistent with Operational Policy 2.4 - Planning for School Sites.

Details: outline of development application

Region Scheme	Metropolitan Regional Scheme
Region Scheme - Zone/Reserve	Rural
Local Planning Scheme	Local Planning Scheme No.3
Local Planning Scheme - Zone/Reserve	Rural
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	'Educational Establishment' – 'D' or discretionary
Lot Size:	37.3 hectares
Existing Land Use:	Vacant land
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

The application seeks approval for an 'Educational Establishment' comprising of the following components:

- An ultimate capacity of 1,200 students across the primary and secondary campus:
 - 432 primary school students (Years K-6) - two streams;
 - 768 secondary school students (Years 7-12) - four streams;
 - 45 primary school teachers;
 - 80 secondary school teachers;
 - 25 Administration staff.
- A staged development, which would see the construction of the secondary school component developed prior to the primary school.
- Operational hours:
 - Students arriving at the site at approximately 8:15am;
 - First classes beginning at 8:40am;
 - School finish times 3:00pm for primary and 3:15pm for secondary;
 - Unspecified extracurricular or outside of school hour activities are likely to occur during evenings or on weekends.
- A series of classrooms and learning facilities including; science buildings, a library, visual arts and music;
- Administrative buildings;
- Courtyards and hardcourt play areas;
- Ovals for sporting activities and events;
- Maintenance facilities;
- 564 carparking bays;
- Internal road network on the periphery of the site; and
- Landscaping and a central vegetated drainage corridor.

The site plan and perspectives of the proposal are shown following. The development plans in full are contained within **attachment 1**.

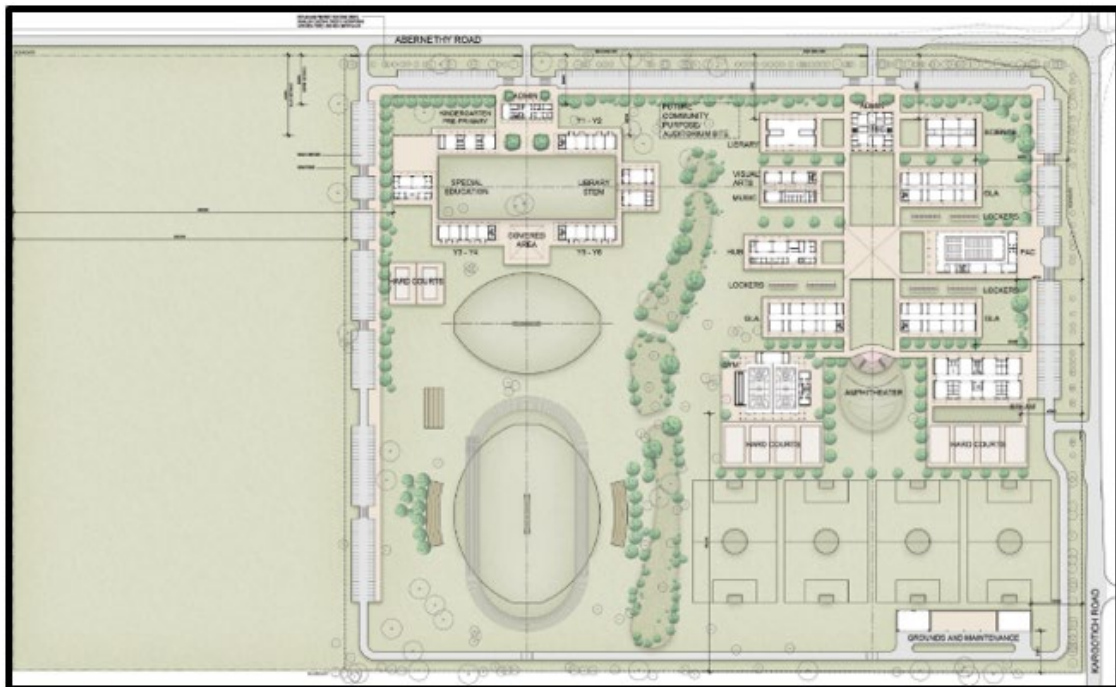


Figure 1: Site layout plan



Figure 2: Perspective of the gymnasium



Figure 3: perspective of a secondary classroom

Background:

The subject site is approximately 37.31ha in area and located within the rural area of Oakford. The site is zoned 'Rural' under Local Planning Scheme No. 3 (LPS3) and adjoins 'Rural Residential' zoned land to the east. The site is bound by Kargotich Road to the east and Abernethy Road to the north. The site features undeveloped pastureland and scattered mature trees. There are strands of vegetation along the lot boundaries and fence lines. The subject site can be viewed following:

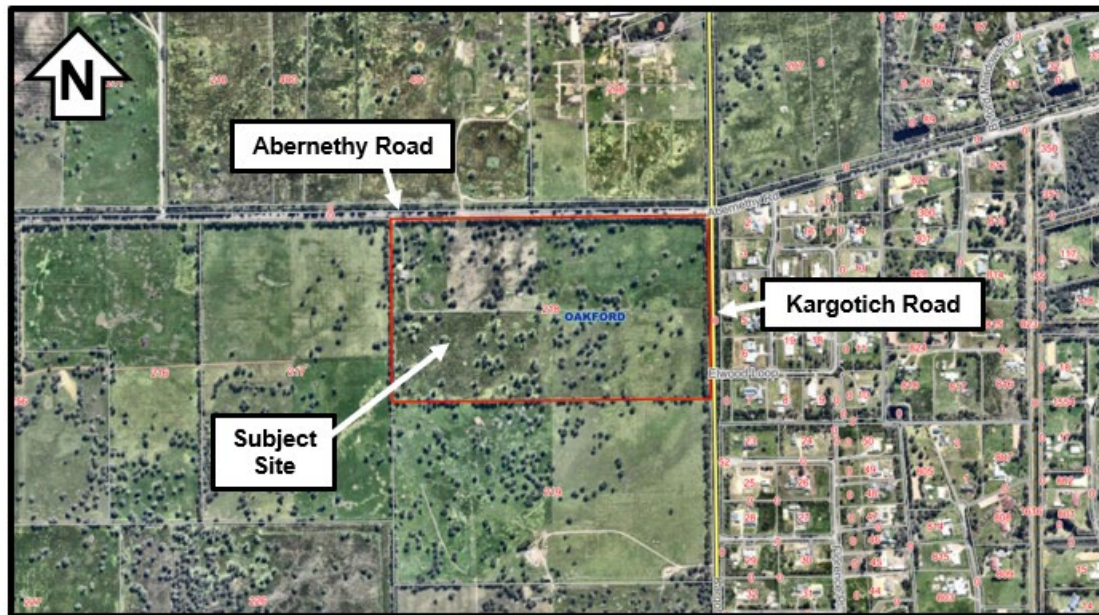


Figure 4: Aerial locality

Legislation and Policy:

Legislation

- *Planning and Development Act 2005;*
- *Planning and Development (Local Planning Schemes) Regulations 2015;*
- *Environmental Protection (Noise) Regulations 1997;*
- Metropolitan Regional Scheme;

State Government Policies

- State Planning Policy 2.5 - Rural Planning;
- State Planning Policy 3.7 - Planning in Bushfire Prone Areas;
- State Planning Policy 7.0 - Design of the Built Environment;
- Operational Policy 2.4 - Planning for School Sites;

Local Policies

- Shire of Serpentine Jarrahdale Local Planning Strategy (Strategy);
- Shire of Serpentine Jarrahdale Local Planning Scheme No.3 (LPS3);
- Local Planning Policy 1.4 - Public Consultation on Planning Matters Policy (LPP1.4);
- Local Planning Policy 1.6 - Public Art for Major Developments (LPP1.6);
- Local Planning Policy 2.4 - Water Sensitive Design (LPP2.4);
- Local Planning Policy 4.15 - Bicycle Facilities Policy (LPP 4.15);
- Local Planning Policy 4.16 - Tree Retention and Planting (LPP4.16);
- Draft Local Planning Policy 4.26 - Development in the Rural Zone (LPP4.26).

Consultation:

Public Consultation

The application was advertised for a period of 21 days from 21 August 2023 to 11 September 2023 to surrounding landowners within a 500m radius of the subject site, in accordance with LPP1.4 - Consultation for Planning Matters. The application was also advertised on the Shire's website for the same period. At the conclusion of the consultation, 63 submissions were received. This consisted of 44 submissions either objecting or raising concerns with aspects of the proposal and 19 submissions in support of the proposal, or that did not object to it.

The objections and concerns relate to the following issues which are discussed under the relevant headings of the report:

Issue Raised	Officer comments
Orderly and proper planning principles - lack of a Local Structure Plan or appropriate zoning/designation for this site;	This matter has been addressed in the Land Use and Local Planning Strategy and Local Planning Scheme No.3 sections of this report.
Traffic safety and existing road infrastructure capacity;	This matter has been addressed in the Traffic section of this report.
Visual amenity and rural character;	This matter has been addressed in the Form of Development section of this report.
Noise and vibrations;	This matter has been addressed in the Noise section of this report.
Privacy impacts to nearby residents;	Officers note that the concern regarding privacy relates to the increase in the number of people in the locality due to the prospective school. This relates to impacts of amenity and character of the locality, which were considered in the Local Planning Strategy and Local Planning Scheme No.3 sections of this report. There are however no specific planning controls regarding loss of privacy
Contradicts the intent for the Rural zone in the Local Planning Strategy;	This matter has been addressed in the Local Planning Strategy and Local Planning Scheme No.3 section of this report.
Strain on groundwater supply;	Water licences are issued by Water Corporation.
Increase to bushfire threat;	This matter has been addressed in the Bushfire section of this report.
Tree removal and revegetation - impacting local fauna and rural character;	This matter has been addressed in the Environment section of this report.
Environmental impacts;	This matter has been addressed in the Environment section of this report.
Burden to telecommunications infrastructure; and	This is not a valid planning concern. A matter such as this is to be addressed by telecommunication companies.
Lack of direct benefit to the local community.	This matter has been addressed in the Local Planning Strategy and Local Planning Scheme No.3 section of this report.

The full submissions and the applicant's response and Officer comments is contained within **attachment 2**.

Main Roads Western Australia (MRWA)

MRWA provided a submission that raised no objections to the development. MRWA provided supplemental comments and principles to guide assessment of the Traffic Impact Assessment, which was incorporated in the Officer assessment.

Department of Water and Environmental Regulation (DWER)

DWER do not support the development in its current form. However, DWER made recommendations to address issues including groundwater management, DWER's works licence process, site and soil evaluation, flood management, native vegetation clearing and stormwater management. Advice was also provided from DWER's Noise Branch providing considerations relating to amenity impacts of the proposal. This advice of DWER has been provided to the applicant and where relevant considerations informed the Officer's report.

Department of Fire and Emergency Services (DFES)

DFES provided a submission that raised no objections to the development. DFES provided advice regarding the assessment of the Bushfire Emergency Plan and a minor modification to the Bushfire Attack Level assessment. Officers consider these matters could form conditions of determination if a favourable recommendation is contemplated by Council or the MODAP.

Department of Health (DoH)

DoH provided comments on wastewater management, drinking water management, mosquito management and chemical hazards. These matters have been considered in the assessment of the proposal.

Department of Education (DoE)

DoE provided a submission that raised no objections to the development.

Water Corporation

Water Corporation provided a submission advising that the development is situated 2.5km from the nearest extension of the water network and 3.2km from the nearest suitable connection point to the sewer network. This advice was forwarded to the applicant and considered as part of Officers assessment of the proposal.

Planning Assessment:

Clause 67 of the Deemed Provisions lists matters to be considered in the determination of development applications. A full assessment was carried out against the planning framework in accordance with Clause 67 of the Deemed Provisions which can be viewed within **attachment 3**.

Orderly and Proper Planning

Several of the objections received against the development during the advertising period raised concern that the development was not consistent with Clause 5.1.1(a) of the Shire's previous Town Planning Scheme No.2 (TPS2). TPS2 was the scheme at the time the application was advertised. Clause 5.1.1 stated:

"5.1.1 The power conferred by this Clause, and Clause 67 of the Deemed Provisions, may only be exercised if the Council is satisfied that:

- a) approval of the proposed development would be consistent with the orderly and proper planning of the locality and the preservation of the amenity of the locality;"*

There is no equivalent provision within the newly gazetted Local Planning Scheme No.3 (LPS3). However, orderly and proper planning principles are still relevant to the assessment of this application, in accordance with Clause 67(2)(b) of the *Deemed Provisions*. Therefore, Officers have undertaken a detailed assessment of the proposal, considering all relevant planning instruments in accordance with the principles of orderly and proper planning.

Land Use

The proposal falls within the 'Educational Establishment' land use. This is defined under LPS3 as follows:

Educational Establishment – “means premises used for the purposes of providing education including premises used for a school, higher education institution, business college, academy or other educational institution.”

The subject site is zoned ‘Rural’ under the Shire’s LPS3. The ‘Educational Establishment’ land use is ‘D’ or discretionary within the ‘Rural’ zone. The use may therefore be permitted subject to a merits-based assessment.

Local Planning Scheme No.3 (LPS3) and Local Planning Strategy (LPS)

The Shire’s Local Planning Scheme No.3 (LPS3) provides several objectives for the ‘Rural’ zone which guide development in the zone. These objectives are addressed following:

“To provide for the maintenance or enhancement of specific local rural character.”

The subject site is characterised by broad open paddocks purposed for the grazing of animals. The site features scattered vegetation and dense strands of trees along lot boundaries and fence lines. This is also typical of land to the west, north and south of the site. Within the locality there are scattered rural farmsteads with clustered development and equine activities. Another key feature of the locality is the nearby rural residential estate to the east. This sees properties range from one to two hectares in area. The locality also features arterial rural roads that are bordered by dense tree strands, such as Kargotich Road and Abernethy Road. Several of these features are identified as follows:

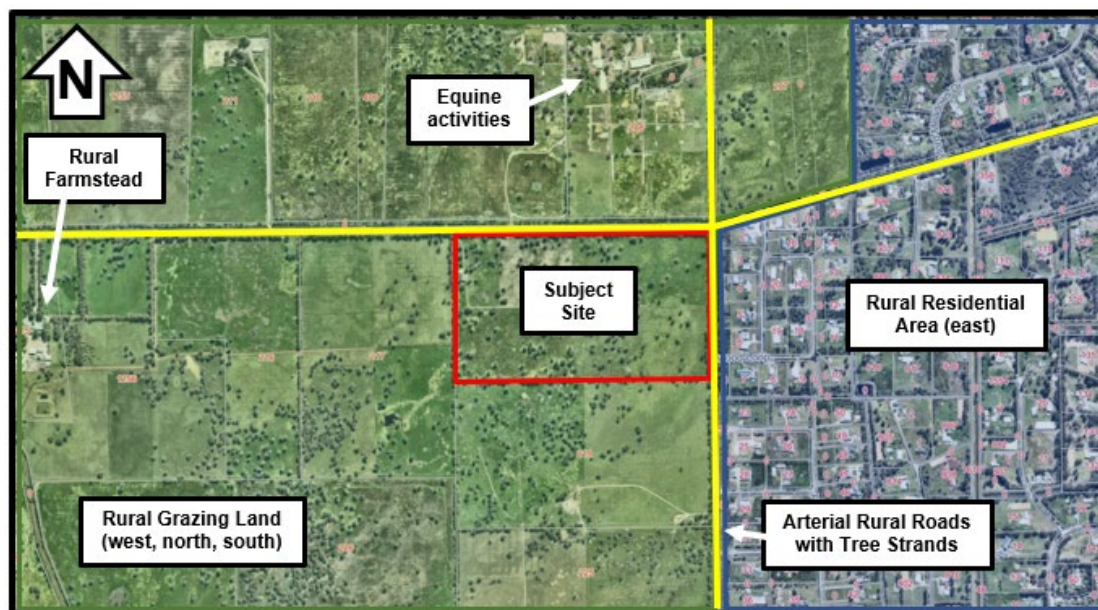


Figure 5: Local character

A key concern raised in objection to the development is that it would not be consistent with the existing local rural character. Whilst the proposal by way of land use, is a land use that can be considered within the ‘Rural’ zone, careful consideration should be given to the form, scale, degree and extent of development to ensure that it would not detract from the locality. This is discussed further within the ‘Form of Development’ section of the report.

To protect broad acre agricultural activities such as cropping and grazing and intensive uses such as horticulture as primary uses, with other rural pursuits and rural industries as secondary uses in circumstances where they demonstrate compatibility with the primary use.

The intent of this objective is to ensure the preservation of rural land for productive rural pursuits and land uses. This aligns with the objectives of the Shire’s Local Planning Strategy (LPS). Provision 4.9 of the LPS identifies that a careful balance is required when considering development in the ‘Rural’ zone. This is due to challenges resulting from the competition of land for productive rural uses and

non-productive rural uses (i.e. residential, landscape and environmental purposes). Varying forces including industrial and urban land uses further vie for rural land. Of specific relevance to this proposal, provision 5.4 of the LPS identifies that, “Pressure for non-rural activities to locate on rural zoned land (eg: private schools) due to unavailability of suitable and/or affordable land in urban locations”. Officers consider that for the proposal to be contemplated, careful consideration should be given to its impact on surrounding rural land uses.

In terms of established rural uses in the locality the dominant productive rural use is grazing. The LPS identifies that 50-70% of the site has a moderate to high capability for grazing activities. This is shown through the extract below:

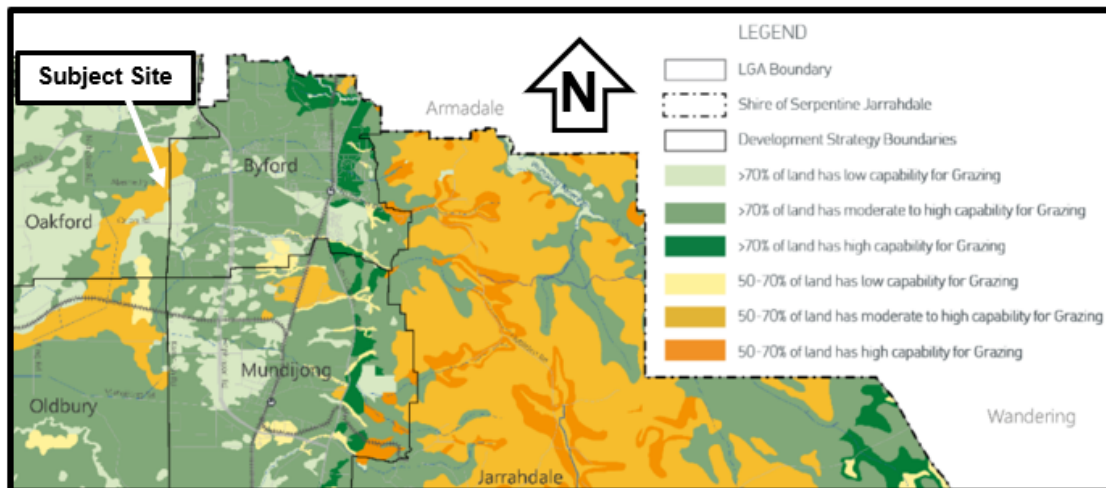


Figure 6: Extracted map from the LPS identifying grazing capability

The LPS mapping of this site for other rural uses generally shows low capacity for annual horticulture, perennial horticulture and dryland cropping activities. It is evident, based on the Local Planning Strategy, that capability would exist for productive rural use in the form of livestock grazing.

To maintain and enhance the environmental qualities of the landscape, vegetation, soils and water bodies including groundwater, to protect sensitive areas especially the natural valley and watercourse systems from damage.

The site is in an environmentally sensitive area, being within a ‘floodplain’. Additionally, the site features scattered local native *Casuarina Obesa* or Swamp She-Oaks trees. Consideration has been given to matters pertaining to the environment within the ‘Environment’ section of the report.

To provide for the operation and development of existing, future and potential rural land uses by limiting the introduction of sensitive land uses in the Rural zone.

The above objectives of the ‘Rural’ zone seek to ensure that appropriate land uses are located within rural areas. These land uses should not compromise future rural development in the locality. The proposal introduces a new sensitive land use. It is not certain to predict what may occur in the rural zoned land over time which adjoins to the north, south and west of the land. If, for example, an intense rural type industry was proposed (i.e. such as a feedlot or abattoir) Officers consider such rural uses would be limited as a result of an educational establishment being approved. The presence of the school may also compromise the ability of neighbouring lots to be used for grazing purposes (i.e. cattle, sheep, horses), depending on scale and intensity of farming proposed. The proposed development may therefore be potentially at odds with this objective.

To provide for a limited range of non-rural land uses, only where they have demonstrated a direct benefit to the local community and are compatible with surrounding rural uses.

While the proposal does not provide specifically for a productive rural or agricultural use, the intent of the zone under LPS3 is to allow for land uses which provide benefit to the local community and do not adversely impact surrounding rural uses. Officers consider the proposal for an 'Educational Establishment' could be consistent with this. In terms of local community benefit, Officers note that the applicant's intent for the development is to enable relocation of an existing private high school premises (John Calvin School, Byford) to the subject site. It is considered that the development would facilitate the expansion of this existing private community-based facility within the Shire. Officers consider in this regard the proposal demonstrates a potential benefit to a potential portion of the local community.

Local Planning Policy 4.26 - Development in the Rural Zone (LPP4.26)

At the Ordinary Council Meeting of 18 September 2023, Council endorsed the draft Local Planning Policy 4.26 - Development in the Rural Zone (LPP4.26) for the purpose of advertising. This was prepared in light of the new LPS3 coming into affect. Advertising is currently underway, and as such may be considered in light of this proposal, especially as the draft LPP aims to further articulate the interpretation of the objectives of the Rural zone pertaining to non-rural uses.

LPP4.26 acknowledges that a wide range of 'non-rural' land uses can be considered for approval within the 'Rural' zone, according to LPS3. LPP4.26 assists with the consideration of these 'non-rural' land uses in that it identifies potentially beneficial uses, which 'Educational Establishments' are identified as. Potentially beneficial land uses are to be assessed against the following considerations according to LPP4.26:

- A benefit analysis of the proposal to ensure the development is beneficial to the local community;
- Whether rural uses are impacted by the proposal on the site or on surrounding land;
- Built form character;
- Impacts to traffic, amenity and other external impacts.

These considerations provide additional guidance to decision makers, expanding on the objectives of the zone under LPS3. Officers consider that broadly the development as a private 'Educational Establishment' provides a degree of benefit to the local community. There is however a concern pertaining to the size and extent of the proposal, as most of the site (25.7ha of the 37.3ha) is to be utilised for the school which creates uncertainty as to the capability of balance rural uses to occur. It is noted, however, that grazing of livestock could still take place on the balance 11.57ha. Built form character is considered to reflect rural character, with an approach which adopts expansive yet simple building forms, mimicking elements like large rural sheds. There is primarily a concern held pertaining to impacts to traffic and amenity, as described following in the report.

Form of Development

The relevant built form standards applicable to this development are contained within Schedule 4 of LPS3. Section 4.2 requires development in the 'Rural' zone to be set back 20m from the primary street lot boundary and 10m to other lot boundaries. The proposed site layout is compliant with this requirement. The development is spaced out generously across the site. The nearest building is an admin block, set back 36.9m from the Abernethy Road (primary street) lot boundary. Additionally, buildings are set back from one another, ensuring sufficient space for the planting of trees and landscaping areas between buildings. Officers consider that this form of development would ensure a maintenance of rural character. The moderated built form of the school through the appropriately spacing out development ensures broad views of rural and natural features can be maintained. The built form of the site would therefore not dominate the streetscapes adjacent to the site, ensuring opportunities for natural landscape features such as rows of trees and vegetation to be prominent.

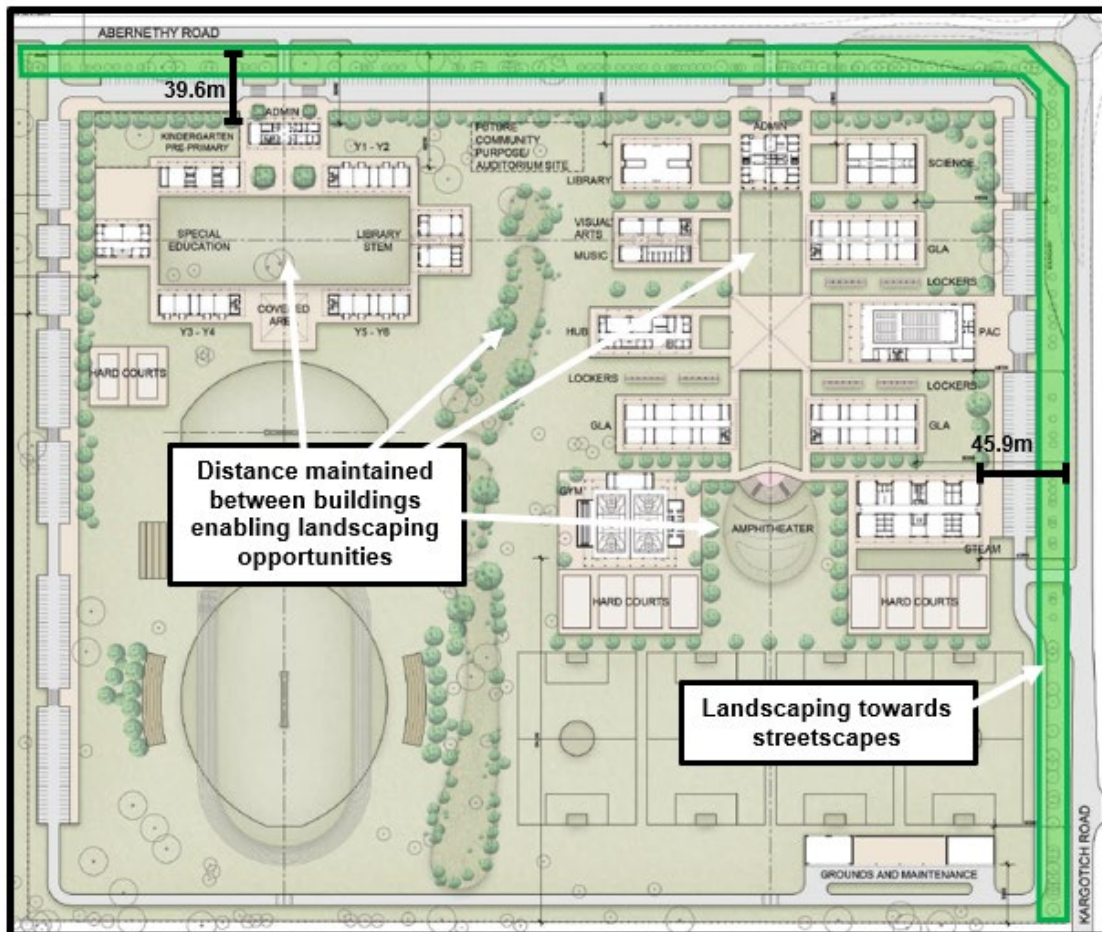


Figure 7: Buildings are sited and spaced out to enable maintenance of rural aesthetic

The development proposes mostly a functional form and height of buildings, enabling sufficient space for school activities. The incorporation of design elements such as large, pitched roofs and verandahs assists with a maintenance of a rural aesthetic in the design. This is not dissimilar to the form of large rural farm sheds. Furthermore, the proposal would mainly consist of materials such as rammed earth walls and colourbond roofs (which resemble tin roofs). The use of earthy tones and materials ensures rural character is maintained.

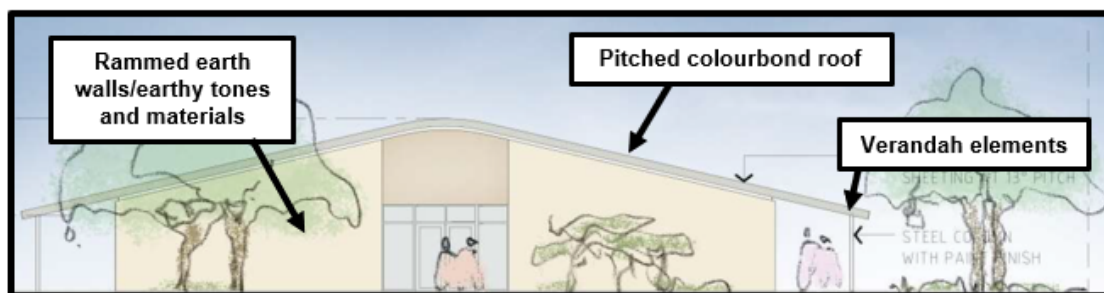


Figure 8: Design of buildings

Officers consider this built form design compliments the rural characteristics of the locality, consistent with the previously mentioned objective of the zone:

“To provide for the maintenance or enhancement of specific local rural character.”

The proposal seeks to install a black steel post, garrison styled fence of a 2.4m height on the perimeter of the school site. Officers note that while the fence is visually permeable, the height, form and material of the fence is not commonly associated with a rural landscape. The fence would be obtrusive and impact the visual amenity, especially to the adjoining streetscapes and the rural

residential estate to the east. Should the development be considered for approval, the approach to fencing would be recommended to change, insofar that a fencing style such as earth blocks or rammed earth structure be adopted, with the infill garrison sections being a less dominant aspect.

Operational Policy 2.4 - Planning for School Sites (OP24)

In 2022 the Western Australian Planning Commission (WAPC) prepared OP24 to guide planning for and the development of school sites. The relevant objectives of OP24 have been detailed and addressed as follows:

OP2.4 Objectives Assessment	
Objective	Officer Comment
<ul style="list-style-type: none"> • <i>To make provision for school sites and other education facilities and services related to community needs;</i> • <i>To establish the preferred location and design elements for school sites and other education facilities;</i> 	<p>OP24 acknowledges that the development of private or independent schools, such as the proposed, often draw students from a larger area. Demand for these sites does not often occur until after neighbourhoods have been developed. It is acknowledged there is an increase in demand and need for the provision of private educational facilities. Such models are becoming increasingly popular and as such appropriate planning is required to avoid adverse outcomes.</p> <p>School sites are best identified and planned for through structure planning. However, with the subject proposal on a piece of land not designated for further subdivision or development, structure planning will not take place. This places detailed consideration of structural elements, like infrastructure coordination, on the development assessment stage.</p> <p>In this regard, Officers consider there to be a lack of coordination and certainty in respect of infrastructure, specifically pertaining to the current road and pedestrian access arrangements being insufficient to accommodate either a part or full development of the school. While Officers have already identified the need to upgrade the intersection of Abernethy Road and Kargotich Road to a full roundabout, there is no certainty as to when this will occur.</p> <p>There is no State or Federal funding allocated for this project, nor any contribution proposed by this development. This is expected to cost at least \$5m, taking account of the need for land acquisition and utility changes. In the opinion of Officers, it is not considered reasonable to condition this requirement on the development to deliver.</p> <p>The original and updated traffic assessment does correctly identify concerns pertaining to the approach along Abernethy Road, from the east. In the technical opinion of Officers, it is concluded that the intersection is not capable of adequate safe operation, given level of service E (for right and through movements without upgrade) and level of service D and C (for right and through movements with minor upgrade of a right turn pocket on Abernethy Road approach). These levels of service and average delay during peak times, are discussed further in this report.</p> <p>These objectives of OP24 highlight the necessity of detailed assessment through the development application process to</p>

OP2.4 Objectives Assessment	
Objective	Officer Comment
	ensure the suitability of the site and the impact of the development on the locality.
<ul style="list-style-type: none"> • <i>To ensure that school sites are developable, serviceable and have suitable and safe access;</i> • <i>To ensure that the design and layout of the movement network around school sites provides for the safety of pedestrians, cyclists and road users, and encourages active transport.</i> 	<p>The impact to the road network is a key consideration for this proposal, given the large volume of traffic expected to be generated at AM and PM peak times. This is an important consideration, given the site is proposed to be located in the rural area of the Shire. In such areas, and specifically in this area, the road infrastructure is not designed to cater for a level of demand proposed by a large traffic generating land use like a 1,200 pupil school, requiring careful assessment regarding infrastructure performance, upgrades, safety, service levels and assumptions. Technical Officer assessment, including by the Shire's Traffic Engineer, is explained further in the report.</p> <p>In respect of the objective for safe pedestrian and cyclist movement, Officers considering that the proposal is not acceptable on the basis that it includes no detail of extending the existing path network to connect to the development. While the applicant does advise that visitation to the school is through private car and bus methods, Officers note that OP2.4 provides provisions including 3.5.6 as follows:</p> <p><i>3.5.6 School sites should prioritise pedestrian and bike movement networks, and where appropriate, pedestrian paths are to be provided on both sides of the roads that are in close proximity to school sites. These networks should lead as directly, conveniently and safely as possible to the school. If there is a need to cross significant distributor roads, careful consideration should be given to the nature of the crossing, whether it is by grade-separation, controlled lights, intersection separation, manned crossing or other acceptable alternatives.</i></p> <p>This is further discussed following.</p>

In summary, OP24 heightens the importance of ensuring that appropriate siting and infrastructure is provided to ensure a successful school site. The following section of the report details Officers considerations in this regard.

Traffic, transport and pedestrian access issues

As part of the application, a Transport Impact Assessment (TIA) was submitted (**attachment 4**). The existing local road network includes Abernethy Road to the north and Kargotich Road to the east. Abernethy Road is an 'Access Road' classification with a speed limit of 80km/hr to the east of Kargotich Road and "50km/h in built up areas or 110km/h outside built up areas" adjacent to the site. Kargotich Road is a 'Regional Distributor' classification with a speed limit of 90km/hr. It is acknowledged the speed limits would be reduced, per the program of 40km/hr limits during set times around schools. The local road network is shown in the following Figure:



Figure 9: Existing local road network

The main intersection near to the site is the intersection of Kargotich Road/Abernethy Road, to the north-east of the site. This is a four-way intersection with stop signs at the Abernethy Road ends, giving priority to traffic on Kargotich Road.

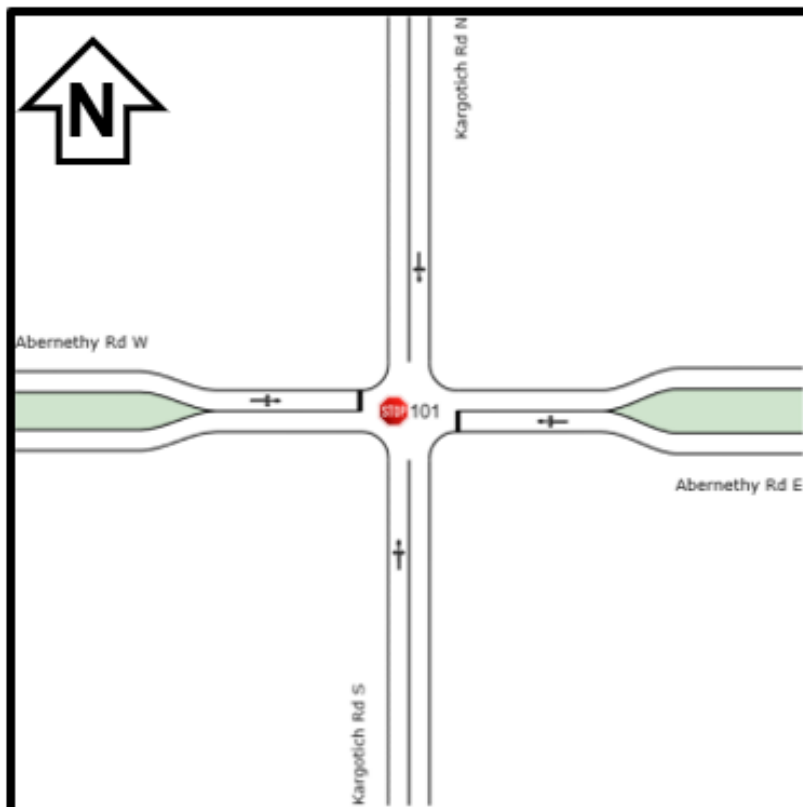


Figure 10: Intersection layout

In terms of the background traffic volumes, it is identified that there are currently hundreds of vehicles travelling through the intersection of Kargotich Road/Abernethy Road during the peak periods. Existing traffic counts for the intersection are shown in the following Figure, which distinguished the peak AM period movements in the lighter shaded boxes and the peak PM period movements in the darker shaded boxes:

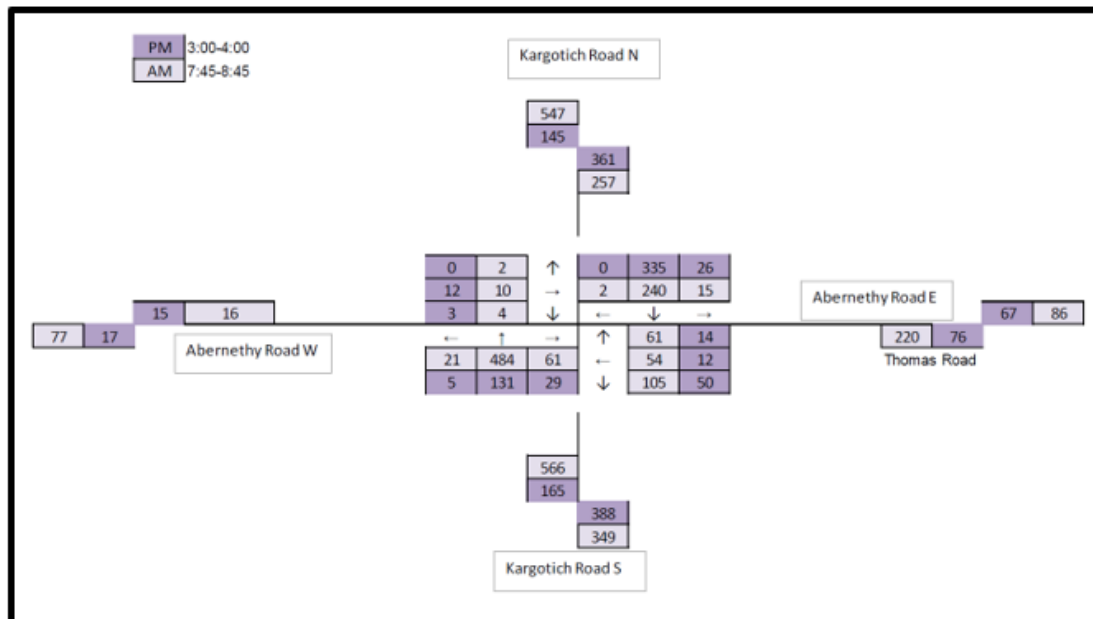


Figure 11: Existing traffic at the Kargotich Road/Abernethy Road intersection during peak periods

The recorded crashes at this intersection in the last five years shows one which occurred on 5 May 2022 at 08:35 hours. This was a right angle intersection crash, hospital grade severity. Along the full extent of Kargotich Road, between Thomas Road and Mundijong Road, there have been 24 crashes in the past five years including:

- Four property damage minor;
- 12 property damage major;
- Three medical treatments required;
- Five hospital treatment required.

Some upgrades to Kargotich Road are occurring, with Council's recent decision at the October 2023 meeting noting the scope of the Kargotich Road upgrade, from Rowley Road to Orton Road. This does not include any upgrade to, inter alia, the intersection of Abernethy Road and Kargotich Road. That report in October discussed (refer page 133):

"It should be noted that construction of the roundabouts at Abernethy Road, Orton Road and Gossage Road plus the upgrade of the straight sections of Kargotich Road between Orton Road and Bishop Road are not included in the current budget and will not be delivered until further funding becomes available in future. Additional funding from the State Government or any other funding source, such as the Black Spot program, should be considered for the construction of the remaining stages. It is particularly important to prioritise the construction of roundabouts at the intersection of Abernethy and Orton Road when seeking future funding in the coming years as both these intersections are known Black Spots. The suggested enhancements, including upgrading the intersections to roundabouts will have a substantial positive impact on road safety and must be given top priority."
(Emphasis added)

Proposed Upgrades to the Road Network

In the broader locality, Main Roads Western Australia (MRWA) are undertaking upgrade works to Thomas Road to the north of the site. This includes the installation of a roundabout to the intersection of Thomas Road and Kargotich Road, which will likely attract further traffic to utilise the regional distribution function of Kargotich Road (considering also the roundabout at Mundijong Road). Furthermore, to the east of the site, MRWA is also undertaking the extension of Tonkin Highway. With Abernethy Road not having direct connectivity with Tonkin Highway, it is forecast that traffic may utilise outbound and inbound movements to Byford via the Abernethy Road / Kargotich Road / Thomas Road path as shown following:

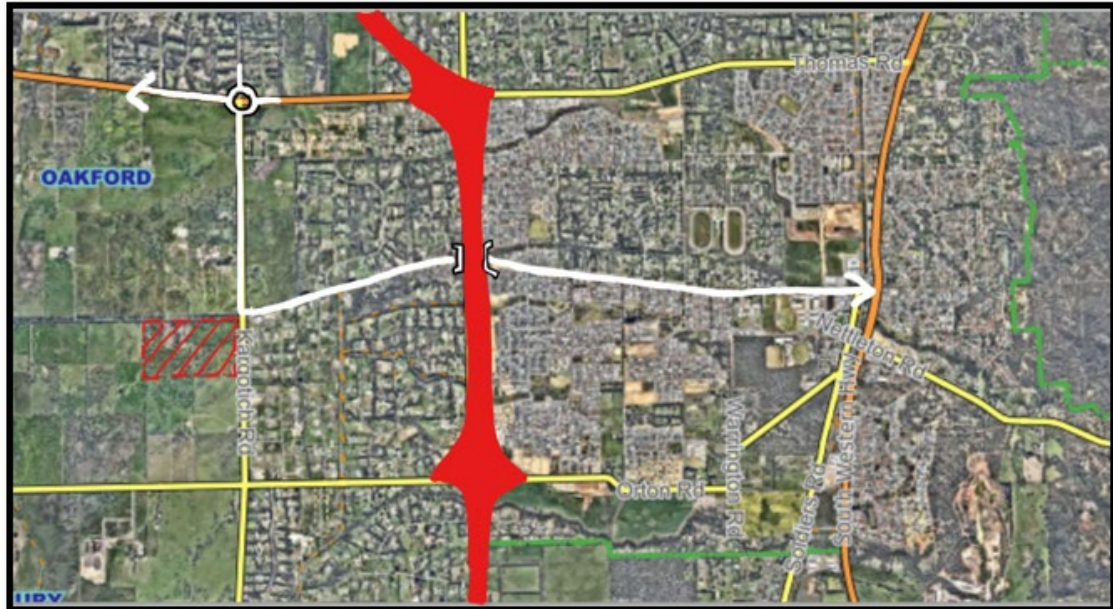


Figure 12: Proposed Upgrades to the Road Network

This movement can be safely achieved, once roundabouts are installed at all key cross roads. This includes:

- Abernethy Road and Hopkinson Road (to be delivered by MRWA);
- Abernethy Road and Kargotich Road (uncertain).

This would also be a utilised movement to and from the school.

At the time the application was being prepared, the applicant consulted with MRWA regarding the upgrade of Kargotich Road. The advice provided was that Kargotich Road was to be upgraded by the Shire. As already discussed in this report, the scope of the Kargotich Road upgrade does not address or include the Abernethy Road intersection upgrade.

In terms of the project to upgrade the intersection, extensive service relocations and land acquisition processes are required to be able to construct the roundabout. There is no detail cost estimate beyond an expected starting cost of circa \$5m. The land acquisition process is still being undertaken in the background to facilitate a future roundabout, but delivery is reliant on either State or Federal funding. This results in this proposal being unable to rely upon any future roundabout, given the lack of certainty to it eventuating.

Traffic Volumes

In line with Clause 67.2(s) of the *Deemed Provisions*, the impact of traffic generated by the development is a material consideration in the assessment of development applications. A total of six traffic accidents have occurred near the site between 2018 and 2022. As already discussed, the most recent traffic accident at the intersection was on 5 May 2022, during the AM peak, and resulted in hospitalisation.

Given additional traffic would be generated by the development, careful consideration of its impact is required to ensure vehicle safety is not further compromised. A significant number of community objections received raise serious concerns that the proposal would adversely impact the locality by way of traffic volume, safety and congestion.

The TIA identifies that the traffic generated by the proposed development would generally comprise of standard passenger vehicles. The application states that eight school buses (57 seats) and other delivery vehicles would also attend the site. The greatest volume of traffic generated by schools are usually during drop-off/pick-up periods. Peak periods of traffic generation by the development would be 7:45am to 8:45am during the AM peak and 3:00pm to 4:00pm during the PM peak.

The TIA states that once fully developed and at full capacity the proposed school would generate “a total of approximately 1000 vehicles during the AM peak hour and 1000 vehicles during the PM peak hour”. This accounts for the two movements involved in school drop-offs/pick-ups, or in other words 500 vehicles attend the site and then those same 500 vehicles leave. It is unclear from the TIA’s assumptions whether this accounts for not only vehicles associated with students, but also staff and bus vehicle movement.

The trip distribution analysis projects that the majority of traffic would attend the site from the north on Thomas Road (30%) and from the east on Abernethy Road (40%). This for both inbound and outbound traffic, of which the inbound is displayed in the below Figure. Furthermore, most vehicles will enter the site via the Abernethy Road entry points.



Figure 13: Inbound traffic distribution

The TIA’s traffic distribution modelling suggests that the majority of the traffic associated with the development would utilise the intersection of Kargotich Road/Abernethy Road. This equates to approximately an additional 700 vehicles travelling through the intersection during the peak AM and PM hour, at the full capacity scenario. This is a significant increase to traffic utilising the intersection, and cannot be safely accommodated in the technical opinion of Officers, including traffic engineering assessment.

A SIDRA analysis was undertaken to analyse the performance of the intersection, with the installation of a roundabout. The results of the SIDRA analysis in this scenario identified that the intersection would generally perform at a sufficient level to manage traffic generated by the proposal

at full buildout. This accounts for existing traffic and projected background increases. A good level of service would be provided, with minimal waiting periods and queue backs at the intersection. This is agreed by Officers, which is the basis for pursuing the roundabout solution.

As mentioned earlier, the roundabout implementation is uncertain and must be discounted from consideration. The applicant has then modelled a scenario where there is no roundabout. In response, the applicant provided a supplemental TIA, containing additional SIDRA analysis (**attachment 5**). The amended SIDRA analysis modelled the efficiency of the existing intersection in 2028, when Stage 1 of the school is developed (being the secondary school). Stage 1 would involve the relocation of the secondary school from the Byford campus to the subject site, comprising 568 students. In this scenario the results are as follows:

Intersection Approach		Weekday AM Peak				Weekday PM Peak			
		DOS	Delay (s)	LOS	95% Back of Queue (m)	DOS	Delay (s)	LOS	95% Back of Queue (m)
South: Kargotich Rd S	L	0.357	7.4	A	2.7	0.207	7.4	A	2.7
	T	0.357	0.0	A	2.7	0.207	0.0	A	2.7
	R	0.357	12.9	B	2.7	0.207	13.0	B	2.7
East: Abernethy Rd E	L	0.846	24.4	C	24.3	0.311	10.8	B	4.1
	T	0.846	35.7	E	24.3	0.311	15.7	C	4.1
	R	0.846	45.4	E	24.3	0.311	21.9	C	4.1
North: Kargotich Rd N	L	0.296	7.6	A	3.9	0.320	7.6	A	3.3
	T	0.296	0.6	A	3.9	0.320	0.6	A	3.3
	R	0.296	15.6	C	3.9	0.320	10.3	B	3.3
West: Abernethy Rd W	L	0.467	10.9	B	7.0	0.381	9.0	A	6.2
	T	0.467	20.5	C	7.0	0.381	16.3	C	6.2
	R	0.467	30.1	D	7.0	0.381	21.2	C	6.2
All vehicles		0.846	11.6	NA	24.3	0.381	7.1	NA	6.2

Figure 14: SIDRA results - scenario with no intersection upgrade and Stage 1 of the school implemented

The Level of Service (LOS) categories identified in the above Figure range from 'A' to 'F'. The east approach along Abernethy Road is modelled as having a 'level E' LOS, which is defined to include unreasonable and undesirable delays, and intersection close to failure. Specifically it shows:

- An undesirable saturation level (above 0.8);
- A delay of 35s for through traffic, 45s for right hand turn traffic and 24s for left turn traffic;
- Traffic ques of around 24m.

Officers are also concerned by the suggested que length of only 24m. Given the compounding delays of 45s for right hand turn movements and 35s for through movements, the technical assessment by Officers is that ques may be in excess of this.

The delays experienced during the morning peak at a right turn movement from Abernethy Road east are also 5s from reaching a 'level F' category, which in that case the intersection would be intersection failure.

This makes the proposal unacceptable from the traffic impact and safety perspective. Such would cause significant delays for vehicles travelling through the intersection. Movements associated with the western approach to the intersection from Abernethy Road are considered to be mostly generated by the school. The SIDRA results indicates that this traffic movement exiting the school will find difficulty in travelling through to Abernethy Road eastbound, or turning right onto Kargotich

Road southbound. Furthermore, Officers consider these significant delays may result in greater queuing times that what is modelled above.

These impacts are considered to have the potential to adversely impact driver behaviours. Behavioural impacts include an increased likelihood that vehicles will attempt to take risky manoeuvres or timing when enter the intersection. Unsignalised intersections are generally considered less safe compared with roundabouts or signalised intersections, which adds to this vehicular safety concern. Officers further note that the applicant anticipates several private bus services being used by students. The above modelling appears to account for light (i.e. passenger) vehicles only. Movement of school buses through the intersection would further compromise traffic safety through increased queuing lengths and delay times than that indicated in the modelling.

The modelling in Figure 11 was based on the first stage of development. Even with one stage, the school is unable to safely be accommodated based on the current intersection and lack of certainty to any intersection improvements. To contemplate either a staged or full development approval, would not represent orderly and proper planning.

Officers conclude that the intersection would need to be upgraded to operate in an effective manner, to accommodate the first stage of the development. As discussed earlier, the funding of the roundabout has not been secured and the timeframe of its construction is uncertain. It is considered that the roundabout is fundamental to an approval of the development and without it the road network is incapable of adequately facilitating the traffic generated.

Officers have also noted that it would not appear reasonable to load the cost of a roundabout on the applicant. Not only is this cost unknown, and likely more than \$5m, there is no certainty as to the conclusion of land acquisition processes and the applicant has no ability to affect such acquisition of third party land.

Based on this discussion with the applicant, the applicant has recommended an additional potential solution to install a right turn lane on the eastern approach along Abernethy Road to its intersection with Kargotich Road. The intention of this is to alleviate pressure on the intersection resulting from a build-up of traffic from the east. The design treatment is depicted following:

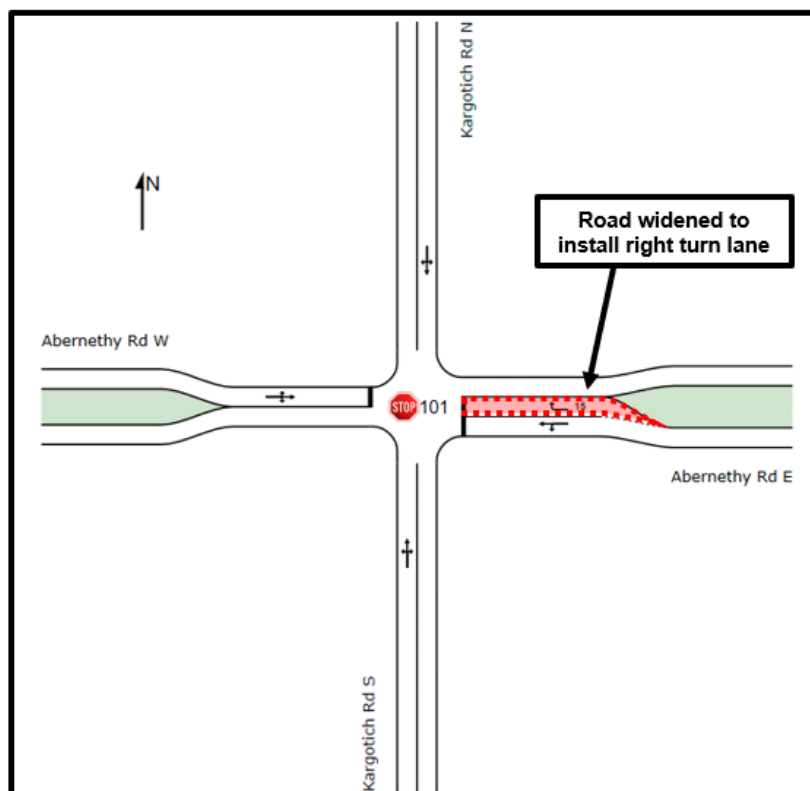


Figure 15: Proposed additional 15m long turning lane

The applicant provided amended SIDRA modelling for this intersection, based on the scenario with the additional lane. This shows, according to the applicant, a reduction in queuing at the eastern end of the intersection. This results in the LOS being slightly improved to 'level D' and a reduction in the degree of saturation experienced at this end of the intersection.

Intersection Approach		Weekday AM Peak				Weekday PM Peak			
		DOS	Delay (s)	LOS	95% Back of Queue (m)	DOS	Delay (s)	LOS	95% Back of Queue (m)
South: Kargotich Rd S	L	0.358	7.4	A	2.7	0.208	7.4	A	2.7
	T	0.358	0.0	A	2.7	0.208	0.0	A	2.7
	R	0.358	12.7	B	2.7	0.208	12.8	B	2.7
East: Abernethy Rd E	L	0.489	12.2	B	8.1	0.282	10.5	B	3.6
	T	0.489	22.0	C	8.1	0.282	15.4	C	3.6
	R	0.366	27.1	D	4.0	0.034	18.3	C	0.3
North: Kargotich Rd N	L	0.297	7.6	A	4.0	0.321	7.6	A	3.4
	T	0.297	0.6	A	4.0	0.321	0.6	A	3.4
	R	0.297	15.3	C	4.0	0.321	10.0	A	3.4
West: Abernethy Rd W	L	0.480	11.0	B	7.2	0.390	9.1	A	6.5
	T	0.480	20.7	C	7.2	0.390	16.4	C	6.5
	R	0.480	30.0	D	7.2	0.390	21.0	C	6.5
All vehicles		0.489	8.7	NA	8.1	0.390	7.0	NA	6.5

Figure 16: SIDRA modelling of the intersection based on the additional turning lane

Despite the proposed additional lane, the change of service to 'level D' changes from 'over capacity' to 'just under capacity'. The turning lane is only 15m in length, therefore only two or three vehicles could utilise it. Given the still significant wait times for traffic turning right from Abernethy Road onto Kargotich Road northbound, traffic may still queue beyond the turning lane, reducing the intersection back to a single lane in any case. This design solution is based upon the first stage of the school only and does not address the full capacity of 1,200 students proposed.

Officers consider that if a turning lane is provided at the east side of the intersection, then it is reasonable to expect that a mirrored treatment should be installed on the west side of the intersection for vehicles leaving the site. The required widening, tree removal and service relocation required to facilitate this is not documented by the proposal, with no information that depicts whether this is practical or if the applicant agrees to fund this full cost impact. Officers also consider it to be inconsistent with orderly and proper planning to relocate infrastructure, only then to require the same infrastructure to be relocated again to accommodate the roundabout.

Officers are not confident that the proposed turning lane would address safety, congestion or saturation to the extent suggested by the application. Officers are also not certain as to the ability to construct the infrastructure, and the applicant has not documented a 15% full designed and costed proposal, which would need to form the basis of a clear commitment to be included as part of a competent development application.

As part of these additional measures, the applicant proposes to require their school buses to leave the site in a west direction on Abernethy Road. The intent is to reduce the number of vehicles entering the intersection during peak period. On review, the road quality to the west of the site on Abernethy Road is not of a sufficient quality to cater for the buses. Neither would this significantly reduce the number of vehicles or delays at the intersection, given the large volume of traffic expected to be generated by parents leaving the site.

To the west, Abernethy Road is rated as a very poor asset. Further, it is very limited and highly restricted in terms of upgrading, given the significant arch of trees, known as the 'cathedral of trees', which require protection. Accordingly, it would be unsafe for bus movements to be

direction in a west bound direction. The following image shows the extensive 3m pavement that exists.



Figure 17: Abernethy Road - west direction

Another factor to consider is the efficacy of vehicles turning into the site. The three access points would be located off Abernethy Road. With the number of vehicles likely generated by the proposal it is important to ensure vehicles do not queue back onto Abernethy Road, further compounding impacts to the nearby intersection. The distribution data shows a relatively even spread of vehicles across these access points (Figure 11).

Officers consider the provision of an auxiliary turn lane of approximately 32m would support efficient access to the site. As shown below, the traffic turning into the high school (red) would not result in queue backs impacting buses or traffic moving to the primary school entry (blue). The SIDRA analysis indicates that all access points would operate at a good level, with no quee backs or service delays.

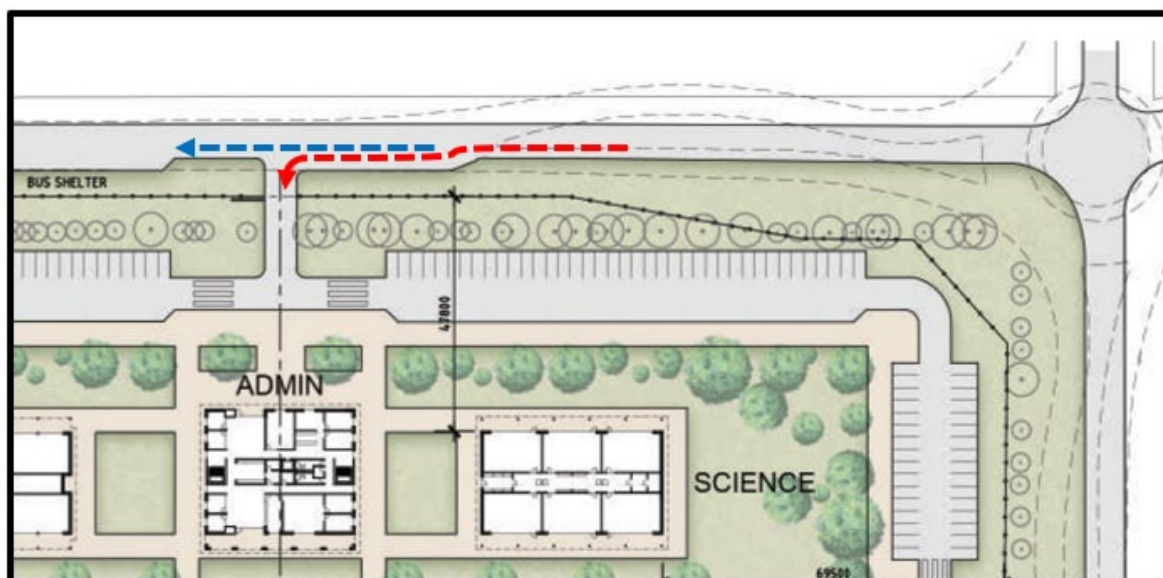


Figure 18: Provided auxiliary turn lane into first access point

Pedestrian Access

There is a low level of pedestrian infrastructure in the locality due to the rural setting of the site. The provision of safe and sufficient pedestrian infrastructure is considered vital in planning for successful school sites. This is reiterated within clause 3.5.6 of OP24 which states:

“School sites should prioritise pedestrian and bike movement networks, and where appropriate...These networks should lead as directly, conveniently and safely as possible to the school.”

The applicant anticipates that students would not ride or walk to the school and would rather use the private buses provided by the school if they are not driven by parents. This appears at odds with State Government policy in the planning of school sites. Officers consider that a number of students could ride to the school from surrounding suburbs. This is the case with other private school sites within the Shire such as Court Grammar, where students ride to school despite the school being set on the periphery of the urban area. Therefore, in line with the relevant policy framework, provision of suitable connection to existing pedestrian infrastructure on Thomas Road (to the north) and Byford (to the east) should be required. However, this has not been proposed by the applicant. Officers are not of the view that such is an incidental aspect to condition, and therefore as a result of the applicant choosing to omit this infrastructure, the application cannot be supported.

In concluding the analysis of traffic, transport and pedestrian access aspects, there are a number of issues which are unresolved by the application. These contribute to the recommendation for refusal, due to the development being inconsistent with the planning framework.

It should be noted that an Option 2 has been provided by Officers, should Council seek an option for recommending approval.

It is important to ensure that this option seeks to impose valid planning conditions, in aiming to address relevant planning aspects. This is particularly relevant to the noted infrastructure issues, which are considered substantial and a challenge in striking an effective balance to ensure conditions are valid. This test of validity is specifically:

1. it must have a planning purpose;
2. it must relate to the development to which it is applied, and
3. it is not unreasonable, in that no reasonable planning authority could have imposed it.

With regard to the infrastructure issues, there needs to be Conditions which address the inadequacies associated with:

1. Intersection treatment of Kargotich Road and Abernethy Road;
2. Upgrading to the section of Abernethy Road, between Kargotich Road and Nicholson Road; and
3. Provision of footpath connectivity, linking the surrounding neighbourhoods to facilitate safe pedestrian access.

The Conditions are based upon the following:

1. Contribution to the intersection upgrade based on proportional contribution of the school's traffic to this intersection. This is a contribution given the works involve a proportional Shire funding component.
2. The applicant undertaking the full upgrade to the section of Abernethy Road, between Kargotich Road and Nicholson Road.
3. The applicant undertaking the full construction of a new footpath connection along Abernethy Road, between Kargotich Road and Hopkinson Road.

4. The applicant undertaking the full construction of a new footpath connection along Kargotich Road, between Thomas Road and Abernethy Road.

With regard to the intersection of Kargotich Road and Abernethy Road

Prior to the issue of a building permit, the applicant shall pay an intersection upgrade contribution to the Shire of Serpentine Jarrahdale of \$2,720,348.20, which is based upon the proportional contribution of additional traffic that the development generates through the intersection of Kargotich Road and Abernethy Road, at the critical AM and PM peak times which directly result in the requirement to upgrade that intersection. This contribution is based on the following application information:

Existing traffic during AM peak approaching intersection	1059
Existing traffic during PM peak approaching intersection	617
Additional traffic during AM peak approaching intersection	1000
Additional traffic during PM peak approaching intersection	1000
Total traffic	3676
Proportion from school	54%
Cost of upgrade	\$5,000,000
Required contribution	\$2,720,348.20

With regard to the upgrade of Abernethy Road, between Kargotich Road and Hopkinson Road

Prior to the commencement of operations, the existing road pavement of Abernethy Road, between Kargotich Road and Nicholson Road, is to be widened to a 6m asphalt standard with 1m compacted gravel shoulders. This however does not include the section of road beneath the 'cathedral of trees', which is instead to be upgraded to only the width possible that will not adversely impact the health or survivability of any of the trees whatsoever. Plans are to be submitted to and approved by the Shire, prior to the issue of a building permit, and must include a detailed arborist assessment of the cathedral of trees section of the road, that indicates how that section of road upgrade will occur in a viable way without impacting any of the trees.

With regard to the Abernethy Road footpath

Plans are to be submitted to and approved by the Shire of Serpentine Jarrahdale prior to the issue of a building permit, demonstrating the provision of a suitable footpath on the southern side of Abernethy Road, which links the development to the extent of footpath which exists on Abernethy Road, east of Hopkinson Road. The footpath shall be fully constructed by the applicant at its sole cost, and must be completed prior to the commencement of the school's operations.

With regard to the Kargotich Road footpath

Plans are to be submitted to and approved by the Shire of Serpentine Jarrahdale prior to the issue of a building permit, demonstrating the provision of a suitable footpath on the eastern side of Kargotich Road, which links the development to the extent of footpath being currently built by Main Roads WA as part of the Kargotich Road / Thomas Road roundabout. The footpath shall be fully constructed by the applicant at its sole cost, and must be completed prior to the commencement of the school's operations.

Carparking

Under LPS3 an 'Educational Establishment' is required to provide 14 parking bays per 100 students. As the ultimate capacity for the proposal is to accommodate 1,200 students, this equates to a requirement for 168 parking bays. The proposal incorporates the provision of 546 parking bays, including those bituminised and onsite grassed areas capable of use as overflow parking. Officers consider the parking provision is sufficient for the development.

Bicycle Parking Facilities

Under LPS3 the requirements for bicycle parking are to provide one bay per four students for an 'Educational Establishment'. The proposal does not incorporate the provision of any bicycled bays

currently. The justification for this is that the proposal is not within a walkable or rideable catchment, so no students will ride bikes. As discussed previously, Officers consider students would still ride or walk to the school despite the school being set on the periphery of the urban area. Being only 4km from the centre of Byford, riding appears feasible. Officers consider that should support for the development be considered, then suitable provision of bicycle parking and end-of-trip facilities should be required as a condition of determination.

Noise

Several objections were received during the advertising period relating to noise. Officers consider that the protection of rural amenity for neighbours is a key consideration during the planning assessment, in accordance with Clause 67(2)(n) of the *Deemed Provisions*.

The applicant has provided an acoustic report to address the requirements of the *Environmental Protection (Noise) Regulations 1997 (Noise Regulations)*. The acoustic report states that the proposal as an educational facility would be exempt from the requirements of the Noise Regulations, as it is classified as 'Community Noise'. However, if the community noise is increased and has a detrimental effect on the environment so that it exceeds the benefit to the community of the activity that gives rise to that noise, then the DWER may serve a noise control notice on the owner or occupier. Notwithstanding this, the mechanical services associated with the educational facility need to comply with the *Noise Regulations*. Furthermore, the requirements of the *Noise Regulations* are key in determining the amenity impact of the development on the locality by way of noise. The closest neighbouring residences are found in the rural residential areas to the east, as depicted below:

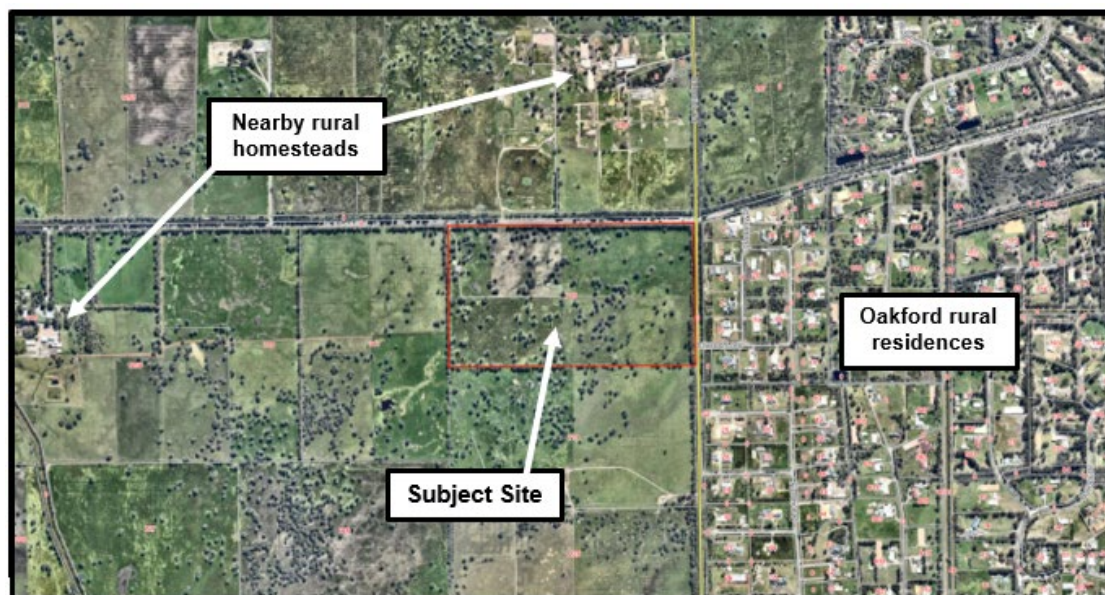


Figure 19: Image of the nearby sensitive receptors to this development

The acoustic report provided by the applicant considers the following key noise sources for this development:

- Noise from vehicle movements within the development;
- Outdoor play areas such as basketball courts;
- Mechanical services such as plant noise;
- Breakout noise from the gymnasium and associated activities; and
- Outdoor noise from the amphitheatre.

Modelling is used to determine whether these noise generating activities comply with the requirements of the *Noise Regulations*. Factors that are input into this modelling include; meteorological information, the geography of the locality, existing background noise from nearby roads and standard noise (decibels) generated by the above listed activities.

The following series of Figures are extracted from the acoustic report. These display the acoustic map modelling undertaken for each of these noise sources. The noise levels emanating from the sources are depicted in relation to their proximity to nearby residences. In addition, there are different types of noise sources considered which are as follows:

- L_{A10} - This is noise with a duration of 10% of the measured period (for example, they would occur for 6 minutes in an hour). They are typically low impulsive noises, which have a high frequency or longer duration. The L_{A10} considered to represent the “intrusive” noise level.
- L_{A1} - This is noise with a duration of 1% of the measured period (for example, they would occur for 36 seconds in an hour). They are typically more impulsive, though less frequent. The L_{A1} is typically used to measure the averages of the maximum noise level.
- L_{Amax} - This is the singular maximum noise level during the measurement. These types of noises typical last a very short period, though are highly impulsive.
- L_{Aeq} - This relates to noise sources that measured of a specified period, usually 4, 8 hours or 16-hour noise average. Typically, this is applied to sources such as traffic noise from a road, which occurs over a long period of time.

The first noise source considered relates to noise generated from mechanical equipment and services. This is projected to result in a noise level of 37 decibels (dB) being received at the nearest sensitive receptors. This is compliant with the assigned level of 45dB for L_{A10} noise. It is noted that this only relates to the day-period (7:00am to 7:00pm). Officers consider that any out of hours activities occurring on site that would make use of the mechanical services would likely exceed acceptable assigned levels. Therefore, further design elements (i.e. noise shielding) would need to be applied to further mitigate noise.

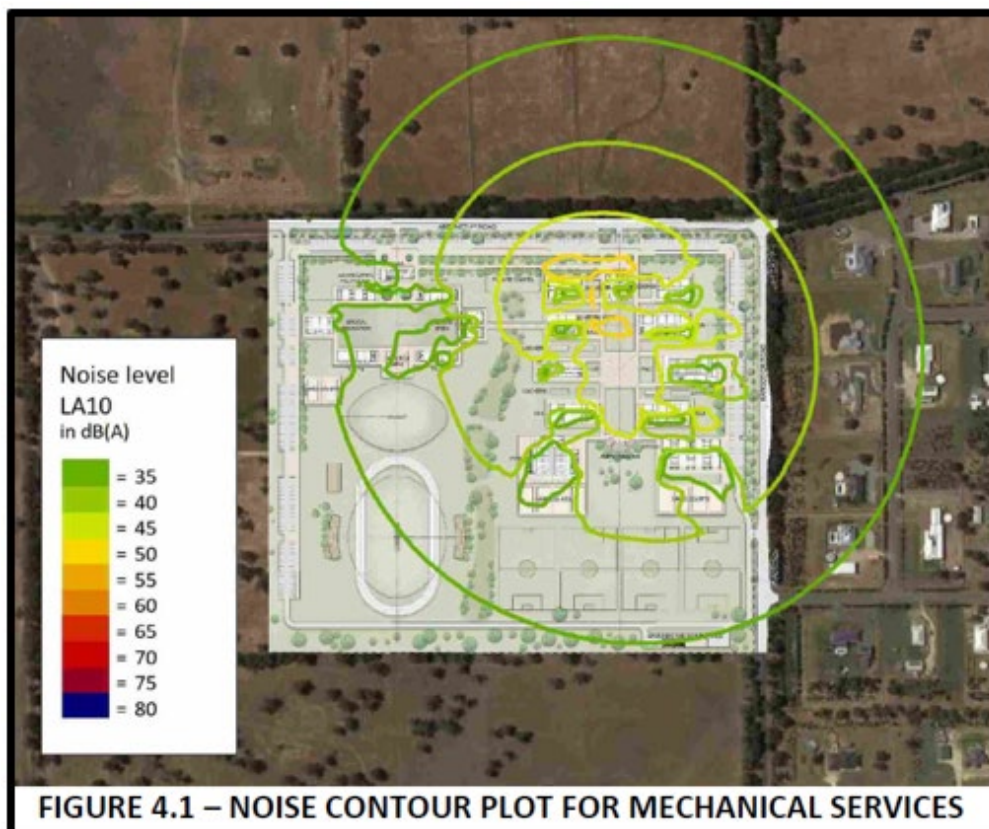


Figure 20: Noise modelled for mechanical services and equipment

The next noise source modelled was relating to outdoor activities, of which the acoustic report indicates the basketball courts would be the most impactful. Officers note that there are basketball courts proposed to the south and east of the site, situated approximately 140m from nearby

residences to the east. Noise is modelled to be received at these residences at 42dB, complying with the 55dB requirement for L_{A1} noise.

Officers consider that given basketball activities may occur for extended periods during recess, lunch, during sports classes or after school, the L_{A10} noise category may be more applicable. Despite this, the modelling would still suggest compliance with the *Noise Regulations* as the requirement would be to meet 45dB of L_{A10} noise. While the projection of 42dB complies, Officers consider it is close to the assigned levels. Therefore, additional design considerations such as the provision of a noise wall are considered applicable to assist in managing the amenity of nearby residents effectively.

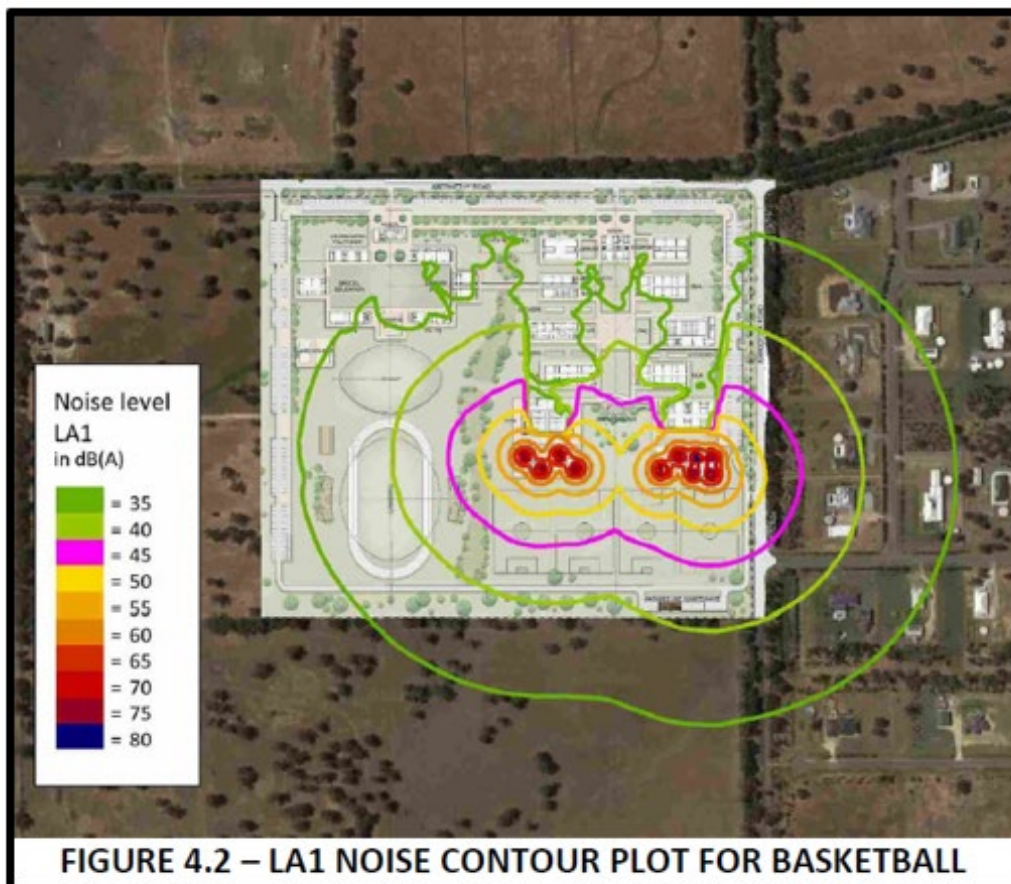


Figure 21: Noise modelled from the noisiest outdoor activities (basketball)

Noise modelling was also undertaken for other outdoor activities, specifically the use of the amphitheatre. This may include the use of sound systems should events occur outdoors. The modelling suggests noise of 38dB would be received at sensitive receptors for this source. This is compliant with the assigned 45dB for the applicable L_{A10} noise category.

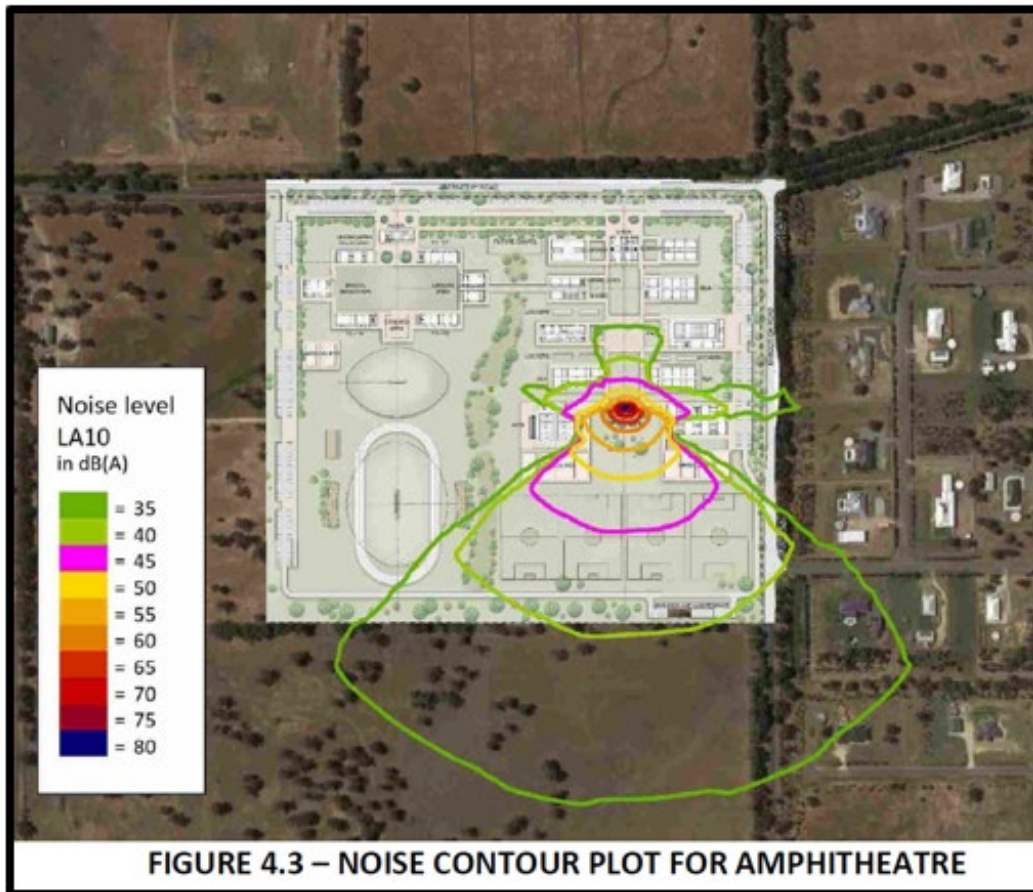


Figure 22: Noise modelled from the noisiest outdoor activities (amphitheatre)

Noise modelling was also undertaken for car movements associated with the site. This primarily includes vehicles as they move internally, within the carpark of the site. The modelling suggests noise of 39dB would be received at sensitive receptors for this source. This is compliant with the assigned 55dB for the applied L_{A1} noise category. Officers dispute the use of the L_{A1} noise category, considering L_{A10} would be more applicable given noise from car movements is likely to occur over a more extended period. This is especially the case during school drop off and pick up times. Regardless, the modelled 39dB would still comply with the L_{A10} assigned level of 45dB.

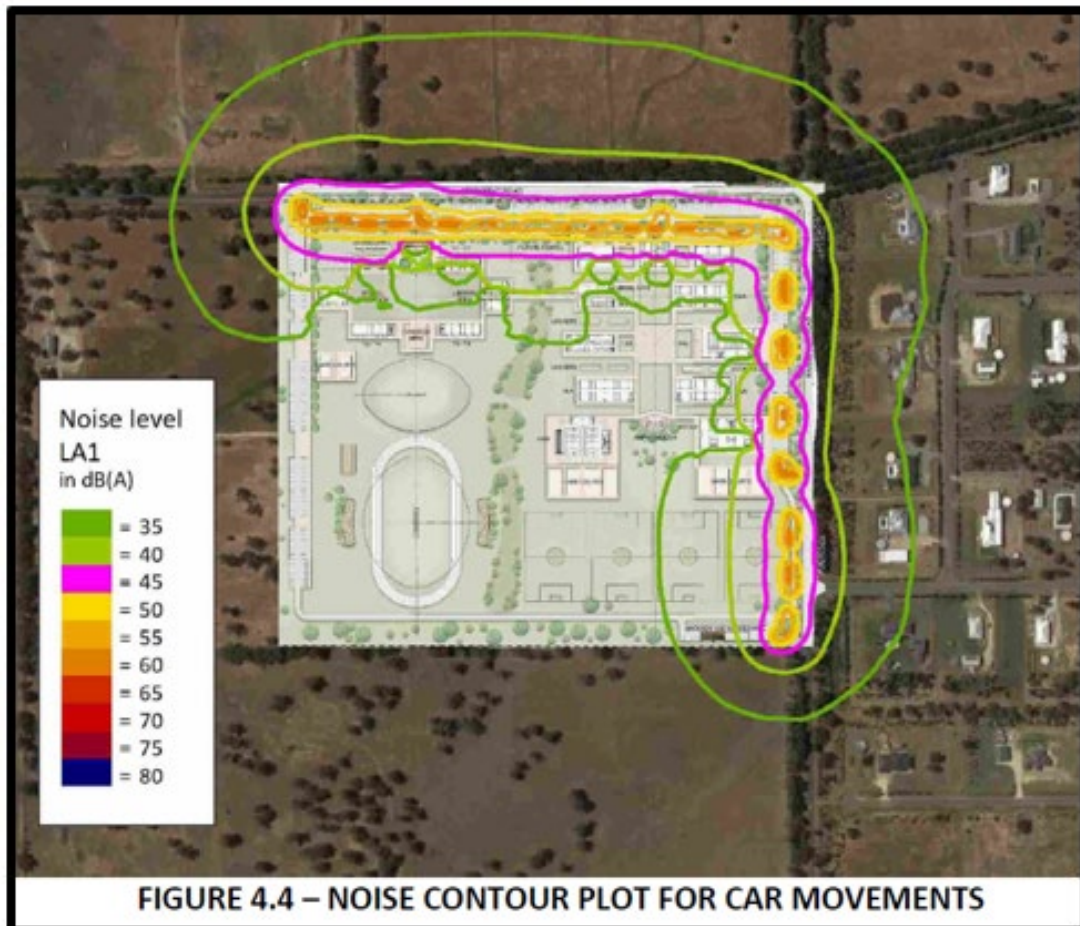


Figure 23: Noise modelling for internal car movements

In summary, the acoustic report provides a depiction of all noise generated accumulatively by the development in the following Figure.

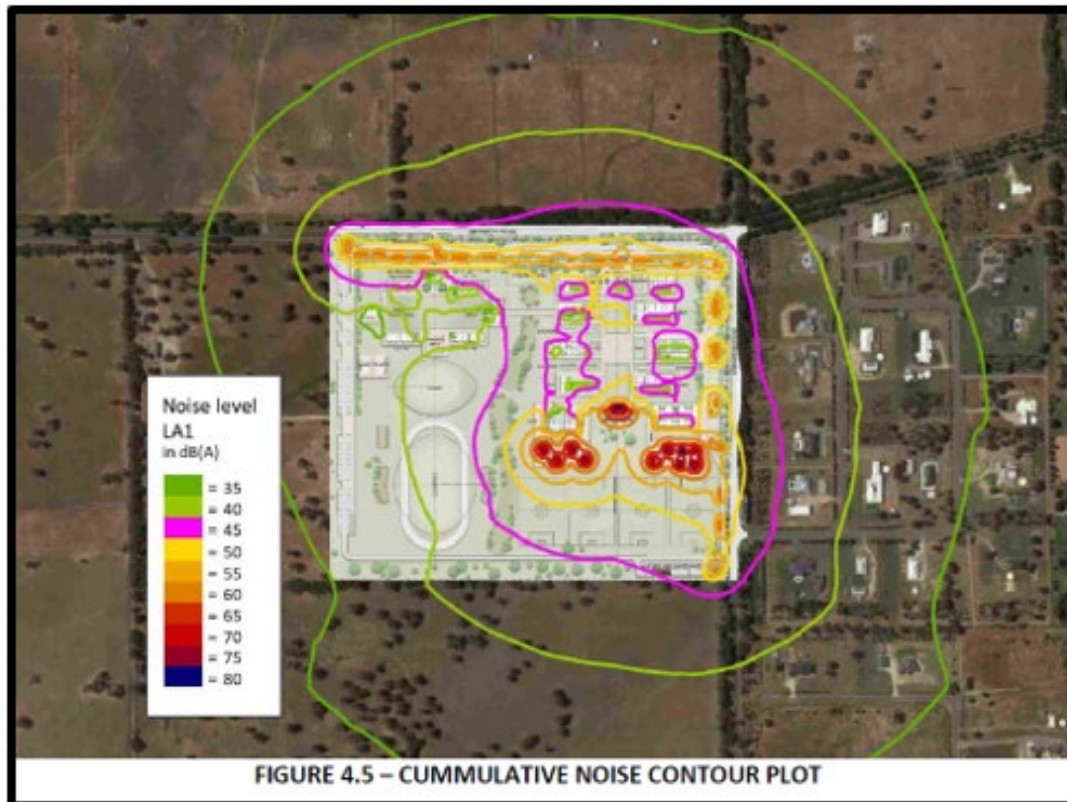


Figure 24: Cumulative noise generated by the development

The modelling within the acoustic report demonstrates a general level of compliance with the *Noise Regulations*. The highest noise level received at the closest nearby residences would be between 40-45dB. This meets the assigned noise level for L_{A10} and L_{A1} noise which are 45dB and 55dB respectively. By way of additional justification, the acoustic report rationalises that the noise generated by existing traffic on Kargotich Road (50-55dB) is greater than that which would be generated by the development. The assertion in this regard is that noise levels generated by the school would be masked and exceeded by existing traffic noise from Abernethy Road and Kargotich Road. This is displayed in the Figure below:

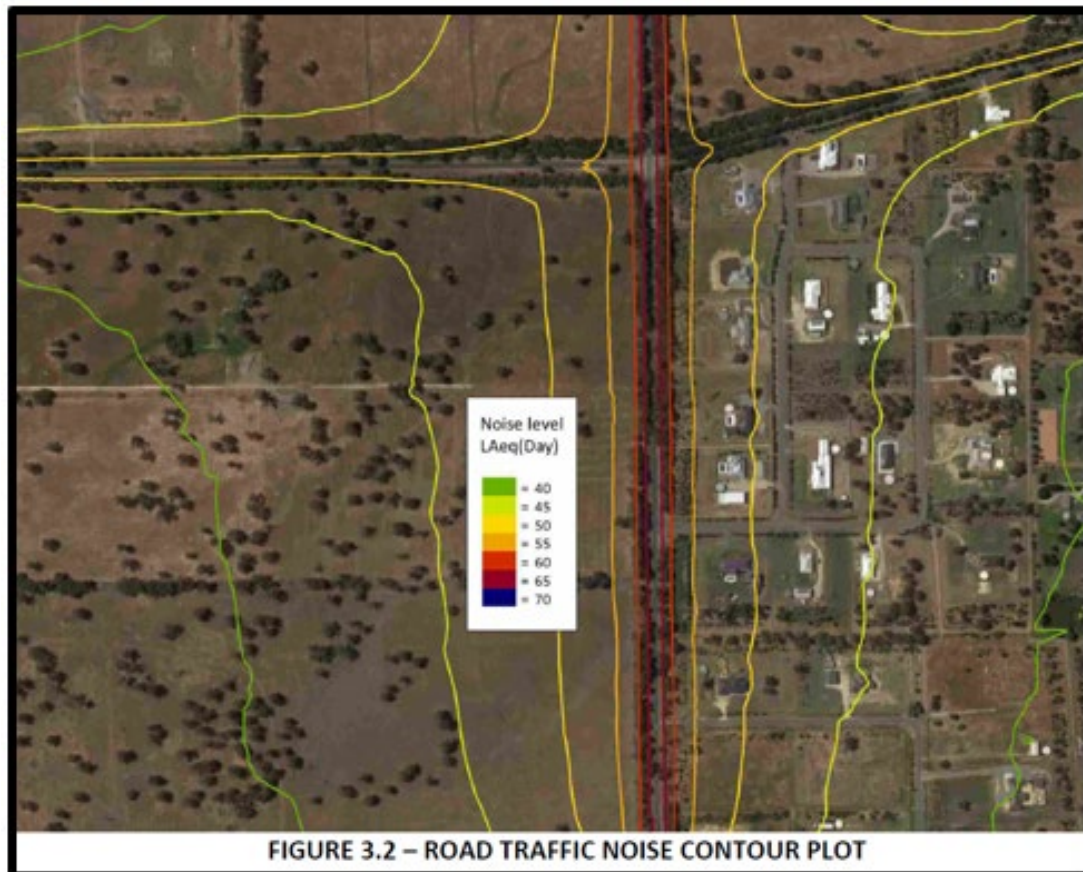


Figure 25: Noise levels generated by existing traffic in the locality

Officers consider that despite complying with the *Noise Regulations*, the modelled noise only just meets the assigned levels. Furthermore, comparing noise generated from the traffic on Kargotich Road and Abernethy Road (L_{Aeq}) and noise generated by the school (L_{A10} or L_{A1}), is not considered a relevant comparison. This is given noise under L_{Aeq} may only reach its maximum average over a four, eight or 16-hour period. Meaning there are far longer periods between when noise from this source would be noticeable, compared with the more frequent and intense noise generating activities of the school.

Officers consider as the development maintains general compliance with the *Noise Regulations* it would be in keeping with the expected amenity of the locality, by way of noise. However, it is considered reasonable that additional design measures be applied to further reduce and mitigate noise levels received by sensitive receptors in the locality. Therefore, should Council recommend support for the development a condition has been provided to require a detailed Noise Management Plan be prepared by an accredited acoustic consultant.

Environment

Clause 67 of the *Deemed Provisions*, specifically (o) requires consideration of the effect of the development on the natural environment and any measures proposed to protect or mitigate impacts.

Geomorphic Wetland

The entire site is classified as a 'Multiple Use' category wetland according to the Department of Biodiversity, Conservation and Attractions (DBCAs) database. The 'Multiple Use' category is a classification of wetland refers to those wetlands that have very few or limited remaining environmental values. Many of the former environmental functions of the wetlands in the Oakford area were historically compromised by farming activities in the region.

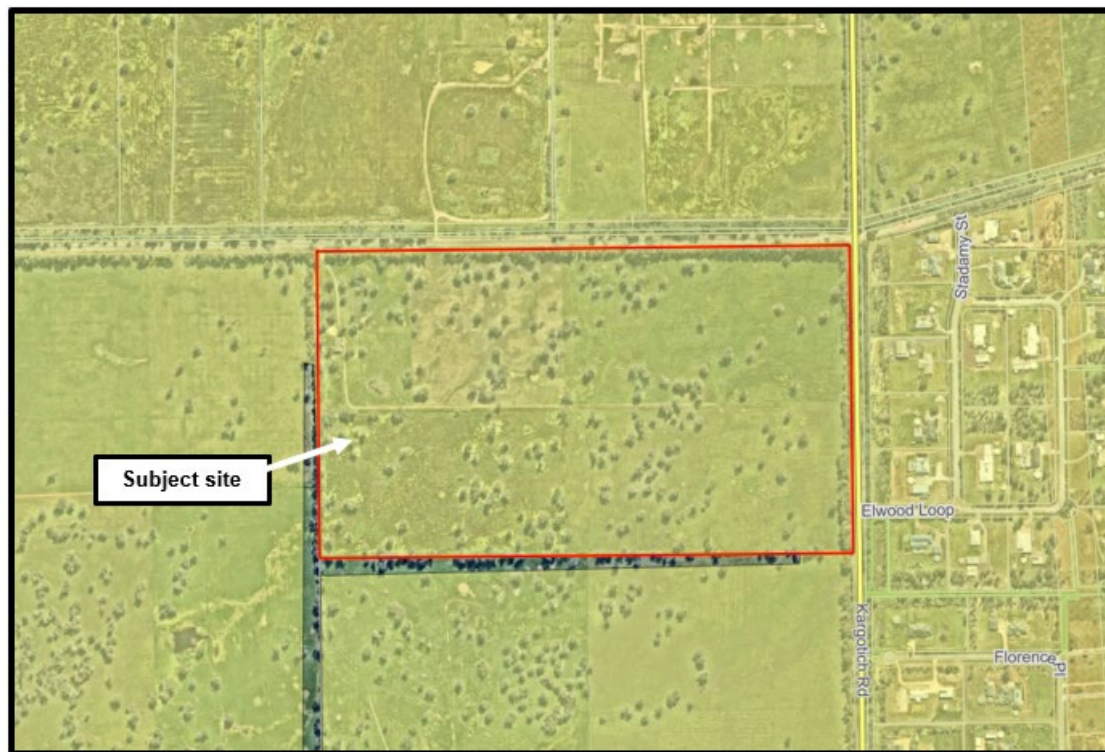


Figure 26: 'Multiple Use' category wetland on the site (yellow overlay)

As the wetland in the area no longer provides those significant environmental value and functions, the wetland value of the site would not further be compromised by the proposed development.

Removal of Vegetation

Officers note that several submissions have been received relating to the impacts of the development on the rural landscape features of the site. These raise concern relating to the possible impacts on local fauna and removal of habitat for endangered Black Cockatoos.

The site features local native *Casuarina Obesa* or Swamp She-Oaks trees scattered broadly across the centre of the site. There are also significant rows of *Corymbia Calophylla* or Spotted Gum trees along the northern and eastern lot boundaries of the site that make up a significant part of the landscape characteristics of the locality. The application proposes to broadly develop the site, which will result in the removal of a significant portion of the trees. The intent of the proposal is to retain the significant rows of trees on the lot boundaries, as well as proposing significant revegetation across the site.

The Shire's Local Planning Policy 4.16 - Tree Retention and Planting (LPP4.16) provides relevant considerations where development proposes tree removal. Importantly, the objectives and relevant principles to be considered from LPP4.16 include; ensuring managing impacts to the rural landscape, consideration of local native vegetation and habitats for animals, and revegetation.

The application would impact several native She-Oaks, scattered centrally within the site. The environment section of the applicant's preliminary site investigation report details that these native She-Oaks may provide nesting habitat for Black Cockatoos. However, the report also acknowledges that the site was historically cleared of vegetation for the purposes of farming and grazing. The earliest aerial imagery (70 years ago) indicates that overtime scattered regrowth has occurred, meaning many of the trees have been established for some time. This regrowth has been compromised overtime as some trees were removed. As there is not a significant volume or community of trees, it is considered there would be limited quality nesting habitats.

Officers consider that while removal of existing vegetation is proposed, which does form part of the character of the locality, the site is zoned 'Rural' enabling land uses to be contemplated that require the clearing to facilitate the use. Furthermore, the application provides a concept landscape

masterplan which would see significant revegetation efforts undertaken throughout the site. This includes the provision of a central landscaping corridor and additional vegetation to be planted as screening along lot boundaries. Furthermore, the development would be sited to enable landscaping between classrooms and other buildings. Officers consider that this provides opportunity to ensure local native vegetation is replaced in the locality and so a detailed Landscaping Plan would be required to achieve this and should the development be supported. Therefore, Officers consider the proposal is consistent with the objectives and requirements of LPP4.16.

Stormwater

The geology of the site is characterised by clayey soils with a low capacity for water infiltration. During winter months it is not uncommon for prolonged waterlogging and ponding of water in localised surface depressions to occur. Furthermore, the site is noted as being within a 'floodplain'. This means there is only a small separation between the groundwater and natural ground level. It ranges across the site, being 0.1m below ground level at its highest and 0.6m at lowest. As the site has a low infiltration rate, surface water moves in a slow manner from the north-east to the south-west of site resulting from the gentle fall of the land. These features are described below:

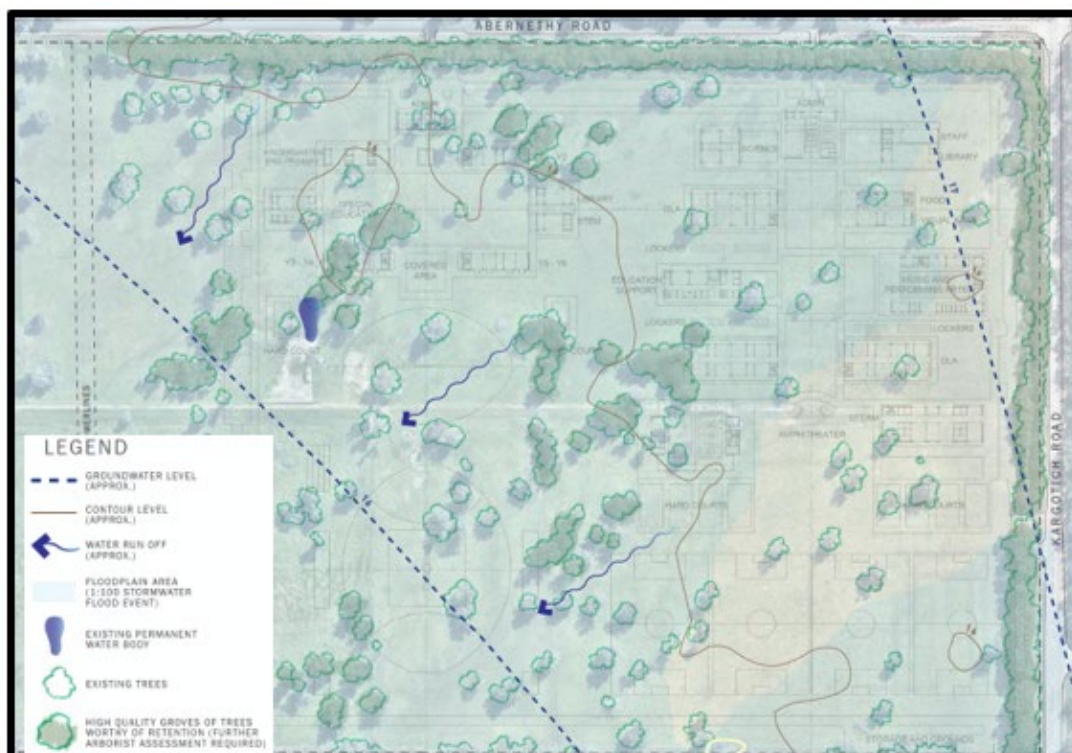


Figure 27: Map showing the whole site as a floodplain and surface water movements

Given this context of the site, careful consideration of stormwater management is required for this development. The applicant has supplied a Water Management Strategy (WMS) which is prepared by JDA Consultant Hydrologists. The WMS acknowledges that detailed engineering and the preparation of a stormwater management system is required to be undertaken yet. This would form a Stormwater Management Plan (SWMP). However, the WMS proposes the following methodology:

- Creation of a 'living stream' centrally to the site, acting as a drainage swale to detain stormwater events.
- The grading of the drainage swale from the north down to the south, to prevent extended ponding of water and to maintain the natural direction of surface water movement.
- Overflow from large storm events to be discharged at a release point to the south of the drainage swale.
- Managing water quality through filtering stormwater via grassed swales and the vegetated drainage swale.

- Minimum habitable building floor levels having a 0.3m clearance from the top water level of the drainage swale.

The following Figure identifies the central 'living stream' concept:

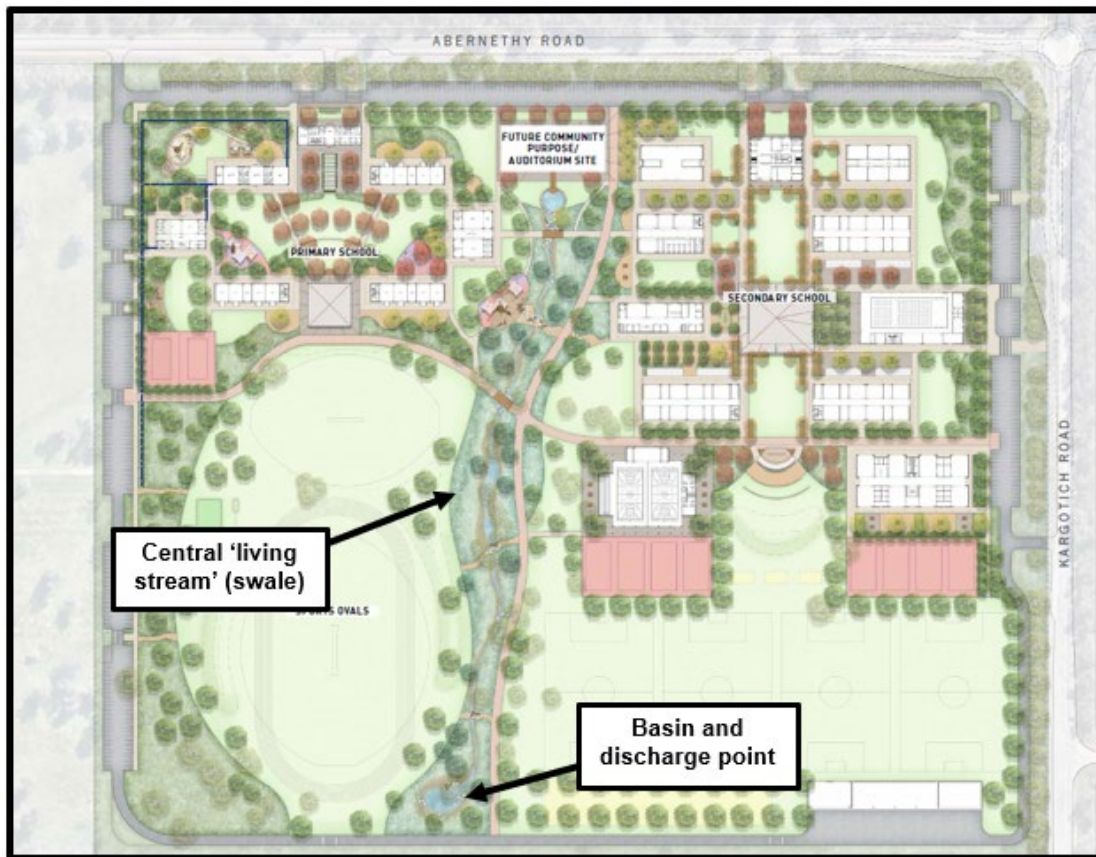


Figure 28: Location of proposed 'living stream' or drainage swale



Figure 29: Concept image of the 'living stream' or drainage swale

Officers consider that in principle there is merit to the methodology of stormwater management proposed. The 'living stream' concept provides a model consistent with the 'wetland' nature of the site. Furthermore, it would provide opportunity the planting of native vegetation which can strip nutrients and contaminants, managing the quality of water entering the ground. The proposal in its current form would need additional details regarding the following:

- The amount of fill required across the site to ensure suitable separation from groundwater.
- The required capacity of the 'living stream' to be able to function as an effective drainage basin for storm events.

- What the impact of the overflow outlet will be on the adjoining property to the south.
- How water quality will be effectively managed given runoff of hydrocarbon particles from carpark areas and the volume of fertiliser application required resulting from the large oval areas.

The methods identified in the WMS can be supported in principle, though their effectiveness would need to be confirmed through undertaking site analysis, engineering assessment and preparation of a detailed SWMP. Officers recommend should the development be supported, then a condition requiring a detailed SWMP be prepared and approved by the Shire should be included in the determination.

State Planning Policy 3.7 - Planning in Bushfire Prone Areas (SPP3.7)

The subject site is located within a Bushfire Prone Area and subject to assessment under SPP3.7, which classifies Educational Establishments as ‘vulnerable’ land uses requiring the submission of a Bushfire Management Plan (BMP) to be jointly endorsed by the local government and the Department of Fire and Emergency Services (DFES). As previously stated, DFES has provided a submission not objecting to the development. The BMP is required to achieve consistency with the Guidelines for Planning in Bushfire Prone Areas (Guidelines). An assessment against the elements of the Guidelines follows.

Concern was raised through the community submissions that the development would increase bushfire risk to the adjoining residences to the east. However, Officers note that the proposed management plan includes commitment to managing the vegetated and grassed areas of the site. Officers therefore consider the development would not result in an increased bushfire risk to the locality.

Location, Siting and Design:

The BAL contour map provided within the BMP assessed the impact of vegetation on the lot boundaries and surrounding properties. The highest risk buildings of the development would be in an area with a BAL rating of BAL-12.5. This is subject to maintaining all land within the lot boundaries as an asset protection zone (APZ).

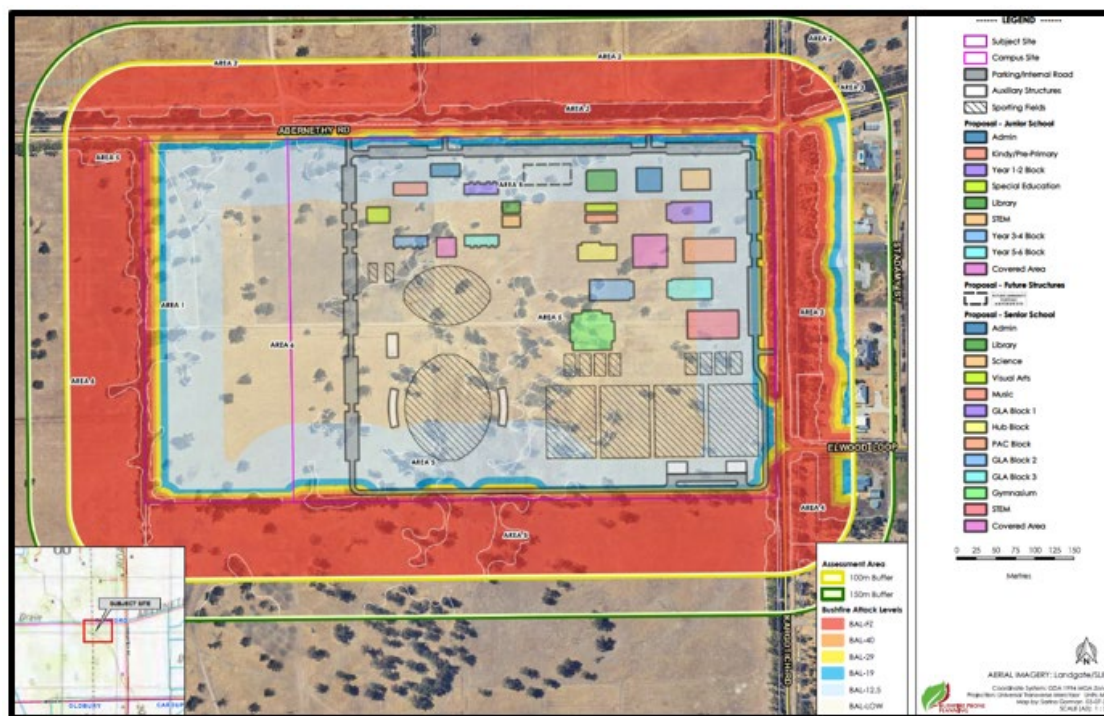


Figure 30: BAL contour map identifying BAL12.5 as the highest risk-rating for buildings

Vehicular Access:

The Guidelines require for development to have suitable two-way egress from a site in case of a bushfire. The subject site has direct access to Abernethy Road which is constructed of bitumen, and

not less than 6m wide. Abernethy Road provides access to Kargotich Road, which enables a north or south escape. Additionally, Abernethy Road provides means of escape in a west direction towards Thomas Road and then Kwinana Freeway, as well as in an east direction to Byford. Therefore, the location of the site and existing road network permit suitable access and egress for the community and emergency services personnel in the event of a bushfire.



Figure 31: Two-way emergency egress directions identified in the BEP

Provision of Water:

The BMP identifies that in terms of providing a water source, a future reticulated water supply will be established at the site. Appropriately located hydrant connection points will be provided for the use of emergency services.

In summary, the BMP demonstrates consistency with the provisions and elements of the Guidelines relating to Siting, Location, Access and Water.

Bushfire Emergency Plan:

DFES also commented on the Bushfire Emergency Plan (BEP) provided within the application, highlighting that the considerations within Clause 5.5.4 of the Guidelines would be relevant to the BEP. As mentioned before the site has suitable capacity for emergency evacuation due to the multiple directions available to egress from the site. Additionally, overall the BEP identifies the gymnasium and covered areas as suitable locations where onsite sheltering can occur, which has a

low bushfire risk (BAL-Low). The BEP would also suitably rely on early warning and response methods to remove students and teachers as soon as an emergency is identified. Despite this, Officers consider the BEP provides insufficient detail in relation to the following aspects of Clause 5.5.4 of the Guidelines:

- Details of evacuation or onsite sheltering procedures, accounting for the significant number of students and teachers at the facility;
- Whether there are people with disability, medically dependent, young children or the elderly attending the site;
- Methods of warning and communication;
- Noting there is no direct vehicle access to the onsite shelter locations, how will safe transition from onsite shelters to evacuation occur;
- How emergency services are to access the internal buildings of the site given the access roads are on the periphery of the site;
- The means of transport that would be provided to ensure evacuation occurs in a safe and timely manner;
- Identified of persons to coordinate emergency procedures and responsibilities of staff and personnel during an emergency.

Therefore, should Council support the development, Officers recommend a condition requiring an amended BEP be provided to fully address the requirements of Clause 5.5.4 of the Guidelines.

Local Planning Policy 1.6 - (LPP 1.6) - Public Art for Major Developments

The objectives of LPP 1.6 - Public Art is to facilitate public art to enhance public enjoyment, engagement and understanding of places through the integration of public art. The policy sets out the requirements for physical and financial contributions for public art for any development valued at \$1 million or greater. A condition should be imposed requiring the applicant to contribute towards public art in accordance with the policy in the event of an approval.

Servicing strategy

The application includes the following details:

6.8 Servicing

The campus is proposed to be connected to the reticulated water, power networks and an appropriate wastewater disposal solution.

The development will be required to fully fund the construction of either a private pumping station or an approved onsite effluent disposal system to the satisfaction of the Department of Health. A private pressure main and pump would connect and discharge to the existing gravity sewer network managed by the Water Corporation within Byford, approximately 3.2km east of the subject site. Alternatively, onsite effluent disposal may be accommodated onsite, subject to approval by the Department of Health.

Water Corporation has advised that to provide a potable water service to the development, a new water main would need to be extended to the site and would involve constructing approximately 2.5km of DN150 water main along Abernethy Rd to connect into Water Corporation's existing DN200 water main at the intersection of Abernethy Rd and Tourmaline Boulevard. All costs associated within this water extension are the responsibility of the client (FRSA).

The existing Power network currently has capacity to service the proposed development. The site will require at least two HV feeders to be extended to the development and it is likely that the development will require Western Power network reinforcement/augmentation. With consideration of potential staging of the proposed development, the initial portion (High School and Administration) will have an estimated load of 600kVA. Given this and the subsequent primary school load, a minimum of one 1000kVA Non MPS transformer will be required. Furthermore, the site will require a minimum of one HV switchgear kiosk to bring the HV power network into the development in both instances.

Further detail regarding the servicing requirements for the school campus are contained within the servicing report prepared by JDSi.

Refer to Appendix K – Servicing Report

Refer to Appendix L – Site and Soil Evaluation

Conclusion:

The application seeks approval for an 'Educational Establishment' at the subject site. Officers consider that, while some limited merit to the development exists, there are substantial planning issues that are not adequately addressed or overcome by the proposal. On this basis it is recommended for refused by the MODAP.

Alternatives

In accordance with clause 17(4) of the Regulations, the JDAP may determine an application by either approving the application (with or without conditions) or refusing the application.

Should the JDAP resolve to approve the application, this determination needs to include valid planning conditions as outlined under clause 67 of the Planning and Development (Local Planning Schemes) Regulations 2015 and as set out in the Development Assessment Panel Practice Notes: Making Good Planning Decisions. The Shire recommends inclusion of the following conditions in that instance:

- a. The development is to be carried out in compliance with plans and documentation listed below and endorsed with the Shire of Serpentine Jarrahdale stamp, except where amended by other conditions of its consent.

Plans and Specification	Development Plans dated June 2022; Traffic Impact Assessment dated July 2023; Supplemental Traffic Impact Assessment dated October 2023; Water Management Strategy dated July 2023; Acoustic Report dated October 2023; Bushfire Management Plan and Bushfire Emergency Plan dated July 2023.
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- b. Prior to lodgement of a Building Permit, a detailed Stormwater Management Plan must be submitted to and approved by the Shire of Serpentine Jarrahdale, on advice of the Department of Water and Environmental Regulation. The Stormwater Management Plan must be developed in accordance with Local Planning Policy 2.4: Water Sensitive Urban Design Guidelines.
- c. The vehicle parking areas, accessways, internal roads and crossover must:
- i. Be designed in accordance with the relevant Australian/New Zealand Standard;
 - ii. Include a suitable number of car parking spaces dedicated to people with disability designed in accordance with the relevant Australian/New Zealand Standard;
 - iii. Be constructed, sealed, kerbed, drained, marked and thereafter maintained.

Plans depicting these works are to be submitted to and approved by the Shire prior to the issue of a Building Permit. The works are to be completed prior to operation of the development, and thereafter maintained.

- d. Prior to lodgement of a Building Permit, a Lighting Plan is to be submitted to and approved by the Shire of Serpentine Jarrahdale. The Lighting Plan shall demonstrate the provision of lighting to all access ways, car parking areas, the exterior entrances to all buildings and the extent to which light from all external light sources is cast. The Lighting Plan must demonstrate lighting not causing an adverse amenity impact on the surrounding area. Once approved, lighting is to be installed and maintained in accordance with the Plan.
- e. Prior to lodgement of a Building Permit, plans of public art shall be provided to and approved by the Shire of Serpentine Jarrahdale, in accordance with Local Planning Policy 1.6 - Public Art. Such art is to be established prior to occupation of the development.

- f. Prior to issue of a Building Permit, an application to construct or install an apparatus for the treatment of sewage and the disposal of effluent and liquid wastes must be submitted and approved by the Shire of Serpentine Jarrahdale, in accordance with the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974*.
- g. Prior to issuing of a Building Permit, a Signage Strategy must be submitted to and approved by the Shire of Serpentine Jarrahdale. The Strategy shall demonstrate compliance with Local Planning Policy 4.11 - Advertising Signs. Once approved, signage shall be displayed and maintained in accordance with the strategy.
- h. Prior to the commencement of the development, a Waste Management Plan must be submitted to and approved by the Shire. Once approved, development must be in accordance with the approval Waste Management Plan.
- i. Prior to the commencement of the development, a Construction Management Plan must be submitted and approved by the Shire. The Construction Management Plan must be prepared to address dust and noise from construction and traffic management during the peak periods. Once approved, the Construction Management Plan shall be adhered to in its entirety.
- j. Prior to the lodgement of a Building Permit, an amended Bushfire Attack Level Assessment shall be provided to the Shire of Serpentine Jarrahdale. An updated vegetation and topography map and table shall be provided identifying separation distance measurements from buildings to the classified vegetation, to the satisfaction of the Shire of Serpentine Jarrahdale.
- k. Prior to the lodgement of a building permit, a Landscaping Plan shall be submitted to and approved by the Shire of Serpentine Jarrahdale. The Landscaping Plan shall detail the following, to the satisfaction of the Shire of Serpentine Jarrahdale:
 - i. Provision of vegetative landscaping within the adjoining verges of the site;
 - ii. Detailed planting regime and plans, identifying the number of plants, species, size of tubs; and
 - iii. A schedule of planting including the how vegetation is planted, monitored for failure and replaced where required.

Once approved, the Landscaping Plan shall be implemented prior to occupation and maintained thereafter.

- l. Prior to the lodgement of a building permit, a Development Plan shall be submitted to and approved by the Shire of Serpentine Jarrahdale. The Development Plans shall detail the following to the satisfaction of the Shire of Serpentine Jarrahdale:
 - i. Amended fencing in keeping with rural character and aesthetic;
 - ii. An amended layout of pedestrian infrastructure connecting the school site to car park areas, the bus stop locations and the required connection to upgraded pedestrian infrastructure the streetscape; and
 - iii. Provision of bicycle parking and end-of-trip facilities in accordance with the requirements of Local Planning Scheme No. 3.
- m. Prior to the commencement of the development, a Mosquito Management Plan must be submitted to and approved by the Shire. The Mosquito Management Plan shall demonstrate appropriate management of artificial water bodies or drainage basins created as part of the development.
- n. Prior to the lodgement of a building permit, a detailed Noise Management Plan prepared by a suitably qualified acoustic consultant shall be submitted to and approved by the Shire of Serpentine Jarrahdale. The Noise Management Plan shall address the following to the satisfaction of the Shire of Serpentine Jarrahdale:
 - i. Adoption of recommendations of the stamped Acoustic Report;
 - ii. Provision of additional design measures to mitigate amenity impacts to nearby sensitive receptors; and

- iii. Appropriate restrictions and measures to manage noise generated from afterschool activities or events that occur outside of normal school hours.

Once approved, the Noise Management Plan shall be implemented prior to occupation and maintained thereafter.

- o. Prior to the commencement of the development, a revised Bushfire Emergency Plan shall be submitted to and approved by the Shire. The Bushfire Emergency Plan shall demonstrate appropriate emergency management measures in accordance with State Planning Policy 3.7 - Planning in Bushfire Prone Areas and Clause 5.5.4 of the Guidelines for Planning in Bushfire Prone Areas.
- p. Prior to the issue of a building permit, the applicant shall pay an intersection upgrade contribution to the Shire of Serpentine Jarrahdale of \$2,720,348.20, which is based upon the proportional contribution of additional traffic that the development generates through the intersection of Kargotich Road and Abernethy Road, at the critical AM and PM peak times which directly result in the requirement to upgrade that intersection. This contribution is based on the following application information:

Existing traffic during AM peak approaching intersection	1059
Existing traffic during PM peak approaching intersection	617
Additional traffic during AM peak approaching intersection	1000
Additional traffic during PM peak approaching intersection	1000
Total traffic	3676
Proportion from school	54%
Cost of upgrade	\$5,000,000
Required contribution	\$2,720,348.20

- q. Prior to the commencement of operations, the existing road pavement of Abernethy Road, between Kargotich Road and Nicholson Road, is to be widened to a 6m asphalt standard with 1m compacted gravel shoulders. This however does not include the section of road beneath the 'cathedral of trees', which is instead to be upgraded to only the width possible that will not adversely impact the health or survivability of any of the trees whatsoever. Plans are to be submitted to and approved by the Shire, prior to the issue of a building permit, and must include a detailed arborist assessment of the cathedral of trees section of the road, that indicates how that section of road upgrade will occur in a viable way without impacting any of the trees.
- r. Plans are to be submitted to and approved by the Shire of Serpentine Jarrahdale prior to the issue of a building permit, demonstrating the provision of a suitable footpath on the southern side of Abernethy Road, which links the development to the extent of footpath which exists on Abernethy Road, east of Hopkinson Road. The footpath shall be fully constructed by the applicant at its sole cost, and must be completed prior to the commencement of the school's operations.
- s. Plans are to be submitted to and approved by the Shire of Serpentine Jarrahdale prior to the issue of a building permit, demonstrating the provision of a suitable footpath on the eastern side of Kargotich Road, which links the development to the extent of footpath being currently built by Main Roads WA as part of the Kargotich Road / Thomas Road roundabout. The footpath shall be fully constructed by the applicant at its sole cost, and must be completed prior to the commencement of the school's operations.

Officer Recommendation

That the Metro Outer Development Assessment Panel resolves to:

1. Refuse DAP Application reference DAP/23/02545 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the Planning and Development (Local Planning

Schemes) Regulations 2015, and the provisions of the Shire of Serpentine Jarrahdale Local Planning Scheme No.3:

Reasons

1. The development is considered to have an adverse impact on the existing road network, due to the volume of traffic generated by the development relying primarily on a single intersection to access the site.
2. The proposed development has not provided sufficient information to demonstrate appropriate road infrastructure will be provided to address traffic generated.
3. Inadequate provision of pedestrian infrastructure has been provided, inconsistent with Operational Policy 2.4 - Planning for School Sites.