



8 September 2022

Enquiries: Rhys Hazell

Project No: 301400263

St Philip's Christian Education Foundation Ltd
c/- Barr Planning
92 Young Street
CARRINGTON NSW 2294

Attention: Rebecca Johnston

Dear Rebecca

**RE: Request for Additional Information- Transport Engineering
St Philip's Christian College, Cessnock Campus (SSD-10360337)**

This letter has been prepared in response to stakeholder submissions seeking further information in relation to St Philip's Christian College, Cessnock.

Correspondence received includes the following:

- Cessnock City Council (Council) letter to Department of Planning and Environment, dated 10 March 2022¹
- Department of Planning and Environment letter to St Philip's Christian College dated 21 March 2022²
- Transport for NSW (TfNSW) letter to Department of Planning, Industry and Environment, dated 1 April 2022³

This letter should be read in conjunction with the St Philip's Christian College, Cessnock – Transport and Accessibility Impact Assessment (Transport Report) prepared by Stantec (formerly GTA Consultants) dated 27 January 2022⁴.

As part of the response to submissions process, the project team has proactively responded to a range of queries of which transport is a key component. As a result, this response considers the revised architectural plans and information that will form part of the broader response to submissions.

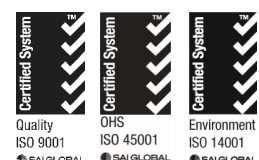
¹ State Significant Development Advice - 52/2022/1/1 letter from Sarah Hyatt (Principal Development Planner), Cessnock City Council, 10 March 2022

² Response to Submissions letter from Aditi Coomar (Team Leader School Infrastructure Assessments as delegate for the Planning Secretary), Department of Planning and Environment, 21 March 2022

³ SSD-10360337 – St Phillips Christian Cessnock College – Alterations & Additional and Increase to 1,732 Students - 10 Lomas Lane & 210 Wine Country Drive Nulkaba letter from Damien Pfeiffer (Director Development Services Community and Place | Region North), Transport for NSW, 1 April 2022

⁴ St Philip's Christian College, Cessnock – Transport and Accessibility Impact Assessment Stantec Australia, 27 January 2022

Design with community in mind



Cessnock City Council letter to Department of Planning and Environment, dated 10 March 2022

Key Issues

3. Traffic

Wine Country Drive is a classified (state) road and the relevant roads authority for Wine Country Drive is Transport for NSW (TfNSW). Whilst TfNSW should be consulted specifically in relation to intersection and road upgrades proposed, Council would make the following comments:

- The proposed southern access should be constructed as part of Stage 1, and*
- Construction of the roundabout should occur in Stage 2.*

This comment is noted and agreed. The proposed southern access is proposed to be constructed as part of Stage 1A and the upgrade of the Wine Country Drive/ Lomas Lane intersection is now proposed to be brought forward and delivered as part of Stage 1B.

Given the land acquisition constraints and potential impact on staging, the preferred intersection layout at Wine Country Drive and Lomas Lane is traffic signals. The proposed signalised intersection layout would meet the TfNSW requirements provided to date, including addressing safety concerns and absorbing all future background traffic growth. Furthermore, traffic signals would provide wider benefits along Wine Country Drive by creating vehicle platoons and hence 'gaps' in the northbound and southbound traffic flows for the benefit of the surrounding local road intersections.

The footprint associated with a compliant roundabout requires significant property acquisition and is likely to impact the ability to deliver the required road network upgrades in the early stages of Stage 1B.

Department of Planning and Environment letter dated 21 March 2022 – Attachment 1 Key Issues

6. Traffic and car parking

The Department requests the RtS address the following discrepancies in the Transport and Accessibility Impact Assessment (TAIA) and matters associated with traffic and car parking:

- section 2.3 outlines the circumstances of a previous transport study. This study is considered to be inaccurate as it forecasts a population of 1500 students, as opposed to the 1732 students proposed as part of the SSD. Consequently, a revised traffic analysis with the correct forecast is required to be undertaken.*

Section 2.3 of the TAIA provides a summary of the previous transport study to ensure appropriate context. The revised traffic analysis in the TAIA focuses on a future student population of 1,732 and makes no reference to the earlier 1,500 student population.

- section 2.5 identifies that the school currently provides private bus services with 11 bus movements in the morning and 13 bus movements in the afternoon. The TAIA should confirm if additional bus movements are required to support the proposed increase in student numbers.*

The requirement for additional bus services will be monitored as the student population increases. The proposal includes an expansion of the bus storage facilities and formalisation to better cater to both existing and any such increase in bus travel demand. In addition, and as part of the green travel plan, new bus services and routes will be identified and considered to further reduce the reliance on travel by private car.

- section 2.8 and section 6.1 incorrectly identify the existing number of students. The table must be amended to reflect the true number of existing enrolments.*

This comment is noted and agreed. Table 2.2 and Table 6.3 have been updated to reflect the existing student enrolment and shown as follows.

Table 2.2: Existing school operation

Facility	General Hours of Operation	Students	Staff
Junior School (K-4)	8:00am to 3:00pm	424	131
Middle School (5-8)		378	
Senior School (9-12)		341	
DALE Special School		55	20
School Sub-Total		1,198	151
Prep (4-5)	7:00am to 6:00pm	40	6
Narnia		43	10
Child Care Sub-Total		83	16
TOTAL		1,281	167

Table 6.3: Anticipated total AM and PM peak half hour vehicle trips

Mode of Travel	Travel to School		Travel from School	
	Existing	Anticipated Number (Future Year)	Existing	Anticipated Number (Future Year)
Staff	85	110	6	8
Students	426	577	527	711
Total	511	687	533	719
<i>Difference from Existing</i>	-	+176	-	+186

Table 6.3 indicates that the proposal to increase the student population to 1,732 students will generate an additional 176 vehicle trips in the AM peak half hour and 186 vehicle trips in the PM peak half hour when compared with the current 1,281 student population.

- *section 3.5 states the proposal would provide a total of 335 on-site car parking spaces, however the EIS (Table 5) identifies up to 350 on-site car parking spaces. Please provide clarification on the total number of car parking spaces across the site.*

A total of 335 on-site car parking spaces and seven motorcycle spaces are to be provided.

- *given that the proposed Aquatic Centre should be assessed as alterations and additions to the existing school, the assessment of car parking rates should be based on a school development, rather than an indoor recreation centre. The car parking rates must be revised to reflect this factor.*

Section 4.2.1 details the car parking requirements for the school and indicates that a provision of up to 221 on-site parking spaces may be required. With the school intending to manage the aquatic centre and with an expected five associated FTE staff, up to three additional spaces would be required. The revised total parking requirement would therefore increase to 224 spaces.

While it is agreed that the aquatic centre is to be considered as alterations and additions to the existing school, and will be operated as such, a first principles assessment was completed to ensure a robust and practical approach to parking demand generally. Overall, the parking assessment is considered accurate in assessing the likely future peak parking demands associated with the aquatic centre.

- *section 6.5.3 identifies that under scenario 3 (concurrent operation of the Aquatic Centre and two rugby matches) on a Saturday, the intersection of Wine Country Drive and the new southern access point would experience of Level of Service (LoS) E. Further consideration should be given to improved road network design or alternative site access arrangements (i.e. from Lomas Lane) to improve the LoS at this intersection.*

Scenario 3 is considered a worst-case scenario and is only likely to occur in the winter season where rugby games are scheduled. A range of management measures can be implemented to limit the effects of peak demand associated with the rugby matches. For example, the scheduling of two concurrent rugby games should be avoided and/ or scheduled outside peak periods to mitigate the traffic effects of vehicles exiting the site at the same time. Staggered start and finish match times would also mitigate the associated traffic impacts and ensure satisfactory LoS at the southern access.

In the event that larger weekend events occur on the sports fields, temporary and managed use of the Lomas Lane site access can be utilised.

- *a comprehensive assessment of the community use facilities are their car parking generation and traffic impacts must be provided.*

Further to the above responses, the TAIA includes a detailed assessment of the anticipated parking demands and traffic impacts associated with the community facilities. No additional work is considered necessary with no meaningful change in the resultant transport impacts associated with these facilities expected as a result of any additional work.

Road upgrades

The Department requests the RtS confirm whether there would be any increase in the existing student population prior to the completion of the Stage 1a road network upgrades. Further, the RtS must confirm that the proposed maximum school population of 1732 students would not be achieved until the road network upgrades associated with Stage 2 are complete and operational.

The school is committed to delivering the necessary staged works prior to any corresponding staged increase in the student population. This includes retaining the existing student population until the completion of the agreed Stage 1A road network upgrades.

Following the completion of Stage 1A, the student population can begin to increase up to 1,417 with the subsequent stages similarly ensuring student population caps. That is, enrolments above the existing student population up to 1,417 students can commence from Stage 1B onwards following construction of the proposed southern access.

As discussed, the preferred intersection treatment at the Wine Country Drive/ Lomas Lane intersection is traffic signals, with works proposed to be completed during Stage 1B. Therefore, following completion of Stage 1B the student population can begin to increase up to 1,732 once the Stage 1b works are operational. That is student enrolments above 1,417 to reach the 1,732-student population can commence from Stage 2 onwards following the signalisation of the Wine Country Drive/ Lomas Lane intersection.

The Department also requests the RtS address the following matters:

- *a number of surrounding landowners have raised concern regarding existing vehicular (driveway) access on the western side of Wine Country Drive. The TAIA should be revised accordingly (including diagrams) to address these concerns and to ensure that all landowners have continued safe vehicular access to their property.*

The roundabout concept design has been revised by Northrop to consider the existing property accesses on the western side of Wine Country Drive. A signalised intersection concept design has also been considered.

We recognise the concerns raised by the surrounding landowners, with the ultimate aim to ensure equal or improved access arrangements as part of any intersection upgrade. Furthermore, the preferred signalised layout at Wine Country Drive/ Lomas Lane intersection provides a better outcome for surrounding landowners, with land acquisition avoided and improved access arrangements provided.

- *further information must be provided to confirm that the road widening works proposed along Lomas Lane to accommodate bus bays are contained entirely within the development site and/or road reserve and are not located on any adjoining land not in ownership of the Applicant.*

This comment is noted and agreed. Any such modifications to the layout of Lomas Lane to accommodate bus bays will be internal to the development site and/ or within the existing road reserve. Plans detailing these areas will be submitted, as necessary.

Transport for NSW (TfNSW) letter to Department of Planning, Industry and Environment, dated 1 April 2022

TfNSW has reviewed the referred information and provides the following comments to assist the consent authority in making a determination:

- *Staging of works – The submitted TIA has provided a limited assessment on how the State road network will operate satisfactorily between Stages 1A & 2. Of particular concern is the intersection of Wine Country Drive (WCD) and Lomas Lane, which performs poorly during school peak periods. Even with traffic redistributed via the new southern Wine Country Drive access intersection, it is envisioned that this existing intersection will continue to operate at unsatisfactory levels and present safety concerns for all road users. As a suitable alternative, TfNSW strongly suggests bringing forward the construction of the new roundabout at this intersection from Stage 2 to Stage 1A.*

This comment is noted and agreed. As noted above the preferred intersection configuration is to signalise the intersection of Wine Country Drive/ Lomas Lane with such works intended to be completed as part of Stage 1B.

- *Works Authorisation Deed (WAD) - As road works are required on WCD, TfNSW will require the developer to enter into a WAD with TfNSW. TfNSW would exercise its powers and functions of the road authority, to undertake road works in accordance with Sections 64, 71, 72 and 73 of the Roads Act, as applicable, for all works under the WAD (Attachment A).*

Comment: It is requested that Council advise the developer that the Conditions of Consent do not guarantee TfNSW's final consent to the specific road work, traffic control facilities and other structures or works, for which it is responsible, on the road network. TfNSW must provide a final consent for each specific change to the classified (State) road network prior to the commencement of any work.

The WAD process, including acceptance of design documentation and construction, can take time. The developer should be aware of this and allow sufficient lead time within the project development program to accommodate this process. It is therefore suggested that the developer work through this process as soon as possible with the TfNSW.

- *All road works under the WAD shall be completed prior to issuing any Occupation Certificate for Stage 1A.*
- *All works associated with the subject development shall be undertaken at full cost to the developer and at no cost to TfNSW or Council, and to Council's requirements.*

This comment is noted and agreed.

- *Redundant crossings - The closure of all existing redundant vehicle access crossings fronting WCD prior to the issuing of any Occupation for Stage 1A.*

This comment is noted and agreed.

- *Corner Splay - Dedication at no cost to Council / TfNSW of the corner splay / site frontage required to facilitate the proposed WCD / Lomas Lane roundabout.*

This comment is noted and agreed.

- *Pedestrians WCD - No pedestrian access should be permitted to WCD.*

This comment is noted and agreed.

- *Pedestrians Lomas Lane – It is unclear how traffic and pedestrians will safely be managed through the proposed northern bus zone, carparks, kiss and ride, driveways, classroom areas etc. Any arrangement must ensure that travel paths are separate and conflict points are minimised. Additional attention to the current design is required to address this safety concern.*

Bus set-down and pick-up will only occur on the southern kerb of Lomas Lane, with buses able to use the internal turnaround area towards the eastern end to turnaround. The northern bus zone is intended as a layover area only and recognises the need for additional bus storage given that the school serves as the start of several school bus routes.

The central school access will continue to be closed to vehicular traffic during school peak periods, providing pedestrian only access for students travelling by bus. Pedestrian crossings are provided internal to the car park with the school committed to maintaining a high level of on-site management to allow the kiss and ride and car park to operate well during the set-down and pick-up periods.

- *During Construction – To ensure the safety of the entire school community (students, staff, parents, children etc.), all temporary access points (construction phase) are to be removed when completed with no pedestrian access provided through these areas.*

This comment is noted and agreed.

- *School Zone Wine Country Drive - A 40 km/h School Zone speed limit is not permitted under the current School Speed Zone Guidelines and would not be supported by TfNSW.*

This comment is noted and agreed.

- *School Zone Lomas Lane - The existing school zone must be modified to suit the proposal, with signage to be extended further to the east to cover the proposed driveways.*

This comment is noted and agreed. Signage and linemarking plans for Lomas Lane will be developed as part of detailed design to include an extended school zone further to the east.

- *Service Station / Fast Food Restaurant – The existing service station / fast food restaurant on the western side of WCD will create opportunities for the school community during weekday and weekend activities to walk across WCD. This arrangement should be discouraged through both design and management, as it presents an unsafe pedestrian risk along WCD.*

This comment is noted and agreed.

- *Green Travel Plan (GTP) - TfNSW appreciates that the preparation and maintenance of a GTP and Transport Access Guide (TAG) will be conditioned as part of the consent for the school (Green Travel Plan: 9.1.2. What is a Green Travel Plan, p57). The GTP will need to be reviewed by TfNSW once it has been prepared. The GTP should identify and determine a course for the delivery of mode share targets, and strategies that encourage the use of sustainable transport options, particularly between the site and public transport (bus) stops, that reduce the dependence on and proportion of single-occupant car journeys to the site, based on credible data. The proponent is strongly encouraged to visit the TfNSW Travel Demand Management page which houses travel plan templates and toolkits - here. The GTP should*
 - *Be prepared by a suitably qualified traffic consultant in consultation with TfNSW; this includes a Traffic Impact Assessment (TIA) and GTP*
 - *Include objectives and modes share targets to reduce car use and increase public and active transport (i.e. site and land use specific, measurable and achievable and timeframes for implementation) to define the direction and purpose of the GTP;*
 - *Include specific tools and actions to help achieve the objectives and mode share targets;*

- *Include measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the GTP;*
- *Include consideration of car parking management strategies that may be required to encourage sustainable transport use / mode share targets;*
- *Include a detailed Implementation Plan comprising specific tasks needed to complete the proposed actions, the person/s responsible for completion of the task, completion date and anticipated costs; and*
- *Include details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the GTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of users of the development.*
- *The applicant can refer to our Transport for NSW website for Travel Demand Management (TDM) <https://www.mysydney.nsw.gov.au/travelchoices/tdm> with really useful resources and templates for GTPs. This also includes both hard activities and soft activities for GTP green travel plan initiatives.*

This comment is noted and agreed. As detailed in Section 9 of the TAIA, preliminary green travel considerations have been made and will be further developed in consultation with TfNSW and Council to inform the future development of a school GTP.

- *Car parking - TfNSW request that consideration be given to providing charging stations for EVs, and a parking management plan that prioritises use by staff and students on a needs basis to further reduce car use – this could include providing dedicated spaces for those who are carpooling / car sharing to encourage carpooling.*

This comment is noted and agreed. A range of management measures to further reduce car use, including opportunities for EV charging stations, priority parking and dedicated spaces for carpooling and car sharing will form part of the GTP.

It is noted that the new 1000kVA kiosk substation is located close to the Senior School car park which would be the most appropriate location for EV charging stations to be installed in the future. The proximity to the substation would allow for the development of appropriate infrastructure to provide safe and efficient transmission of electricity from the local grid on a dedicated circuit to the electric vehicle. Furthermore, the Senior School car park can also allocate spaces reserved for staff or students who car-pool/ ride share and will be identified in the GTP.

- *Cycling - It is understood that there are limited cycling options to encourage cycling at present but would recommend that this is reviewed as there are opportunities for encouraging active modes for those living within the walking / cycling catchment. TfNSW recommends that some secure, covered and accessible bicycle parking is provided around the site, and this is monitored on a regular basis to ensure that there is adequate supply which will assist to encourage cycling as a mode. Some further guidance on bicycle parking and end of trip facilities can be found in the cycleway design toolkit.*

This comment is noted and agreed. The Master Plan provides for bicycle racks at the main school entrances to accommodate any future cycle demand. The details will also be further assessed as part of the GTP, with monitoring procedures in place to ensure cycling is both encouraged and accommodated.

Once cycle connectivity to the school and surrounding area is improved, further bicycle parking and facilities will be provided. Such structures will be able to be developed as exempt development pursuant to the Transport and Infrastructure SEPP Chapter 3.

- *General design comments on the civil works layout are provided for consideration and will impact upon the scope of the subject development:*
 - *It seems that to achieve the satisfactory LOS indicated in the submitted SIDRA report, the roundabout would require 2 lanes through the roundabout into a merge after the exits in both directions to perform adequately.*

As detailed above, traffic signals are the preferred intersection layout. SIDRA Intersection modelling was completed for the signalised concept intersection layout, including 2031 traffic volumes (1.5 per cent background growth applied) with additional school traffic generated by the 1,732-student population and associated staff. On this basis, the proposed signalised intersection is expected to operate at LOS B in both the AM and PM peak half hour periods. From an operational perspective, the layout can adequately cater for future traffic volumes, with minimal delays and queuing on all approaches.

The roundabout concept intersection layout is consistent with the SIDRA Intersection layout to ensure that the modelled results can be achieved. This includes two approach and departure lanes on the northern and southern Wine Country Drive approaches. The northern approach includes a dedicated through lane and dedicated left turn lane and the southern approach a through lane and combined through and right turn lane. The SIDRA model results confirm that this layout would adequately cater for future demand when the student population increases to 1,732, with all movements operating at LOS A in both the AM and PM peak periods. Furthermore, it should be noted that outside the modelled peak periods, Lomas Lane traffic volumes will be relatively low and result in an overall improved intersection performance.

Naturally, civil plans for the intersection will be developed further, as required and in consultation with stakeholders.

- *To slow vehicles on WCD approaching the roundabout more effectively, the Deflection should be increased on the roundabout entry similar to Austroads Part 4b) Page 23.*

The concept intersection layout has been designed in accordance with the relevant sections of the Austroads Guide to Road Design.

- *The roundabout should consider on road cyclists and pedestrian refuges in the splitter islands*

Formal pedestrian and cyclist facilities are not provided along Wine Country Drive, with limited footpaths on Lomas Lane adjacent to the school frontage. On this basis, formal pedestrian refuges in the splitter islands and cycling facilities have not been included as part of the concept design. With respect to the preferred signalised layout, provision for pedestrian crossing facilities has been made within the concept design.

Ongoing stakeholder consultation will ensure appropriate design through the detailed design stage of the agreed upon intersection upgrade.

- *The proposed roundabout can be constructed from Concrete however would accept if this pavement was converted to a Heavy-Duty Flexible Pavement if required for constructability*

This comment is noted and agreed.

- *A shoulder width of 2m should be included for the WCD access intersection.*

This comment is noted with ongoing stakeholder consultation to ensure appropriate design through the detailed design stage.

- *Neighbours submission - If the roundabout is designed in accordance with Austroads then it is safe to have a property access off one of the roundabout legs.*

This comment is noted with the school committed to ongoing neighbour consultation to ensure appropriate design outcomes. The preferred signalised intersection design provides a dedicated western leg providing safe access to the

neighbouring properties. Furthermore, the concept design includes a right turn bay for southbound traffic and appropriate signal phasing to cater for traffic entering and exiting the surrounding properties.

- *DPIE Enquiry - The design for the roundabout needs to consider the existing shared entry / exit access driveway servicing 307-311 Wine Country Drive.*

This comment is noted and agreed. The updated concept intersection layout incorporates the existing access driveway. Furthermore, it is noted that the preferred signalised layout accommodates the existing access driveway.

ADVICE TO DPIE

- *DPIE should ensure that appropriate traffic measures are in place during the construction phase of the project to minimise the impacts of construction vehicles on traffic efficiency and road safety within the vicinity.*
- *DPIE should have consideration for appropriate sight line distances in accordance with Section 3 of the Austroads Guide to Road Design Part 4A (Unsignalised and Signalised Intersections) and the relevant Australian Standards (i.e. AS2890:1:2004) and should be satisfied that the location of the proposed driveway promotes safe vehicle movements.*
- *TfNSW highlights that in determining the application under Part 4 of the Environmental Planning & Assessment Act, 1979 it is the consent authority's responsibility to consider the environmental impacts of any road works which are ancillary to the development.*
- *All matters relating to internal arrangements on-site such as traffic / pedestrian management, parking, manoeuvring of service vehicles and provision for people with disabilities are matters for DPIE to consider.*
- *In the likely possibility that the proposed expansion of the school will also accommodate special / major events, an Event Management plan should be provided with the school detailing vehicle and pedestrian movements for the event and the site.*

All comments are noted and for DPIE information. A construction traffic management plan will be completed for all construction stages and will detail the impacts of construction vehicles on the road network and road safety. Naturally, any approval will also require appropriate construction traffic management measurements to be in place to ensure road safety in and around the construction site.

The intersection concept plans have been prepared in accordance with Austroads Guide to Road Design Part 4A and the relevant standards. The proposed southern access on Wine Country Drive has been located to ensure sight lines are met for the posted speed limit.

All internal layouts and access arrangements have been considered as part of the application including manoeuvring of the largest service vehicle and appropriate provisions considered for people with disabilities.

If any special/ major events are held on the school campus they could be subject to an Event Management Plan to be detailed at the time, if required.

Stakeholder

Surrounding landowners raised concerns around property access impacts, intersection layout and configuration, speed limits, traffic congestion generally and broader impacts on Wine Country Drive.

In responding to submissions these concerns have been considered appropriately and where required incorporated into updated plans and reporting.

The concept roundabout and alternative signalised intersection layout at the Wine Country Drive/ Lomas Lane intersection each consider the existing property accesses on the western side of Wine Country Drive. The school recognise the concerns of the surrounding landowners and aim to either retain or improve their access arrangements. Both the roundabout and signalised intersection will provide an appropriate and safe access point for the properties in the immediate vicinity affected by the intersection works.

The concept intersections have been designed in accordance with relevant guidelines, including Austroads Guide to Road Design and Australian Standards. Any such need for deceleration lanes and dedicated turning lanes has been appropriately considered and incorporated as required.

These designs address congestion during the school drop-off and pick-up periods. Both options significantly improve the operation of the intersection and can adequately cater for existing and future traffic.

Consultation with TfNSW is ongoing in relation to any formal speed zone changes and at this stage TfNSW has not been supportive of such changes. This includes extending the existing school zone to cover Wine Country Drive and extending the posted 70km/h speed zone to north of Lomas Lane.

The TALA included a detailed assessment of the Wine Country Drive/ Lomas Lane intersection given it is critical to the daily function of the school. Broader traffic impacts on the surrounding road network further north and south were not required to be assessed as part of the proposal.

I trust this provides the information you require. Naturally, should you have any questions or require any further information, please do not hesitate to contact me on (02) 8448 1800.

Yours sincerely

Stantec Australia Pty Ltd



Rhys Hazell

Senior Principal Transportation Planner