

Ref: 300300107

11 December 2019

Kelsey Godwin-Smith  
Project Coordinator  
Billard Leece Partnership  
SYDNEY, NSW

**Attention:** [kelsey@blp.com.au](mailto:kelsey@blp.com.au)

Dear Kelsey,

**NSW Department of Planning and Environment  
New Primary School at Warnervale – Traffic Engineering Statement**

Stantec has reviewed the comments register dated 28 November 2019 (*CPS comments – 191128 – Response to Submission Tracker – Warnervale*) and has provided responses in the following response table:

| Comments      |   | Stantec Response   |
|---------------|---|--|
| Central Coast |   |  |
| 1             | It is recommended that the staff parking on the eastern boundary be changed to 90 degrees and eliminate the turning head (this will require a slight relocation of the buildings to the west). This will double the number of spaces in this carpark and possibly eliminate the need for staff parking in the western carpark. This will separate the staff and public carparks and increase the number of public spaces. | <p>It is noted that increasing the number of public spaces in the car park will potentially:</p> <ul style="list-style-type: none"> <li>Encourage parents to drive to school, essentially making the Green Travel Plan redundant;</li> <li>Result in more vehicle movements generated, affecting the efficiency of Warnervale Road and the surrounding road network.</li> </ul> <p>The five parallel parking spaces along the eastern boundary have been allocated to visitors, as required within the Central Coast Council's Development Control Plan (DCP).</p> <p>The current arrangement on the eastern boundary is able to accommodate the movements of the waste truck and passenger vehicles efficiently.</p> <p>Council's recommendation of having additional parking spaces in the eastern boundary has been considered in the earlier stages of this project.</p> |
| 2             | It is recommended that the western carpark be redesigned so the set-down and pick-up is directly  | This recommended option has been considered in the earlier stages of this project.   |

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|---|---|---|
|   | adjacent to the school as this will be a safety issue as students will be crossing the staff carpark. Eliminate the staff spaces and re-locate the median closer to the school to facilitate 90 degree angle parking both sides in the western carpark. Delete the turning head and increase the number of spaces.  | <p>The current proposed arrangement has been refined to achieve the following:</p> <ul style="list-style-type: none"> <li>Staff parking to be separated from pick-up and drop-off. It is expected that the eastern boundary of the western carpark to be restricted for staff parking only, hence there will be minimal movement (21 movements <b>before</b> and <b>after</b> the school peak period respectively)</li> <li>Allowing sufficient "room" for the internal roundabout. The internal roundabout is required to minimise the number of conflict points within the western carpark.</li> </ul> <p>Nonetheless, it is proposed that appropriate signage be installed and the activity of pick-up and drop off to be managed.</p> |
| 3 | The bus bay on the southern side of Warnervale Road must be long enough to accommodate 3 buses with appropriate entry and exit tapers.  | <p>A swept path assessment has been undertaken.</p> <p>Adjustments have to be made to the footpaths to accommodate entry and exit movements for the buses. See swept paths attached in Appendix A.</p> <p>This will be undertaken at the detailed design stage.</p>   |
| 4 | Buses parked on the northern side of Warnervale Road will obstruct sight lines from the driveways in the PM period.   | <p>As shown in Figure 3 of Appendix A, vehicles will be able exit the driveways on the north side of Warnervale Road, with no obstructions to the sight lines.</p> <p>It is expected that approaching vehicles from Warnervale Road will slowdown in a school zone environment.</p>   |
| 5 | The Transport and Accessibility report (6.3.1) estimates that the number of students that will be driven to school during the morning and afternoon peak hour periods will generate 262 vehicle movements, and that the 30 minute peak demand period will be 50% resulting in 131 movements. This may apply to the morning peak as arrivals are staggered, however, the afternoon peak will likely generate 262 vehicles in the 30 minute peak as parents will arrive just prior to the afternoon bell. | <p>Given that there is no enrolment data for the proposed site, data obtained from surrounding schools (Warnervale Public School) was used as a base reference for this study. A site investigation was undertaken on 28/11/2018. The site investigation includes identifying pick up and drop off patterns of the existing Warnervale Public School located near the site.</p> <p>The following summarises travel mode survey undertaken previously and the pick-up and drop off patterns during the afternoon peak:</p>   |

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|---|--|---|
|   |  | <ul style="list-style-type: none"> <li>Approximately 74% of students (346 students) are driven to school.</li> <li>During the period between 2:45pm to 3:15pm, it was observed that parking was at its peak, with approximately 94 parked vehicles in the vicinity of the site.</li> <li>Based on an occupancy of 1.3 students per vehicle, the total number of student being driven during the 30 minutes peak period is approximately 123 students (36% of the students being driven)</li> </ul> <p>Therefore the <b>50%</b> used within the Transport and Accessibility report is considered appropriate.</p>  |
| 6 | <p>It is anticipated that the 30 minute peak movements in the afternoon (262 vehicles) will create significant congestion on Warnervale Road as the set down and pick up area will not cope with the anticipated traffic volumes and vehicles will queue onto Warnervale Road as there is no queuing space inside the carpark.</p> | <p>As referenced within Section 6.3.1 of the Transport and Accessibility report, 8 pick-up and drop off spaces and 16 short-term parking spaces are proposed. It is noted that these spaces have a two minutes parking restriction<sup>1</sup>, and <b>this activity of pick-up and drop off should be managed</b> (i.e. use of supervisors/staff) to allow maximum efficiency for pick up and drop off.</p> <p>As mentioned above, the vehicle trips were based on assumptions formulated from surrounding school data. Based on our experience on similar projects, how parents choose to send their children to school would largely depend on the following factors:</p> <ul style="list-style-type: none"> <li>Proximity to School;</li> <li>Availability of proper footpaths;</li> <li>Pedestrian crossing facilities; and</li> <li>Frequency and reliability of school bus services.</li> </ul> <p>The abovementioned factors would affect the percentage of parents driving their children to school</p> <p>The New Primary School at Warnervale was proposed to cater for the population growth in Warnervale and, therefore it is recommended that priority of enrolment should be allocated based on student's proximity to school, to minimise vehicle usage and potentially encourage mode shifts.</p> |

<sup>1</sup> Source : [https://roadsafety.transport.nsw.gov.au/stayingsafe/schools/dropoff\\_pickup.html](https://roadsafety.transport.nsw.gov.au/stayingsafe/schools/dropoff_pickup.html)

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|    |  |  |
|    | <b>Transport for NSW Comment</b>   |  |
| 7  | As part of the ongoing operation of the school, a Green Travel Plan (GTP), which includes target mode shares for both staff and students to reduce the reliance on private vehicles, shall be implemented accordingly and updated annually.  | A Green Travel Plan has been prepared. It will be implemented accordingly and updated annually.  |
| 8  | <p>The Applicant shall prepare a Traffic and Parking Management Plan, which details the measures to safely manage the daily transport task to/from the school. Traffic management measures that need to be addressed include:</p> <ul style="list-style-type: none"> <li>- kerbside vehicle pick-up/drop-off management and orderly vehicle queuing;</li> <li>- maintaining bus accessibility and student waiting areas;</li> <li>- safe parent and student behaviour during pick-up/drop-off; and</li> <li>- safe pedestrian movements to the school entrances, minimising vehicle-pedestrian conflicts.</li> </ul> <p>The plan shall also detail the responsibilities of various personnel executing the plan and include measures to monitor, review the performance and make improvements to the plan. This plan should be implemented as part of the ongoing operation of the redeveloped school.</p> | <p>The <b>(Operational)</b> Traffic and Parking Management plan is proposed to be undertaken at a later stage of this project.</p> <p>It is proposed that consultations be carried out with relevant stakeholders (i.e. TfNSW, Bus Companies, Etc.) to achieve a coordinated and effective plan.</p>   |
|    | <b>Government Architect Comment</b>  |  |
| 9  | Redesigning road access to give greater priority to pedestrians at main entry.   | <p>The proposed design is considered sufficient in providing priority to pedestrians at the main entry.</p> <p>Redesigning the road access might be excessive and possibly lead to a similar outcome; however, the following can be carried out to provide greater priority to pedestrian and raise awareness to drivers:</p> <ul style="list-style-type: none"> <li>• Review speed environment of Warnervale Road, as well as the school frontages;</li> <li>• Provision of appropriate signage, speed humps and raised crossings, if necessary.</li> </ul> |
| 10 | Reducing car spaces and rethinking where they will be provided.  | As referenced within Section 6.1 of the Transport and Accessibility Report, the number of staff and visitors parking spaces provided (26 + 2 accessible space) meets the statutory parking requirement (26) of the Central Coast Council Development Control Plan (DCP).   |

Yours sincerely

A handwritten signature in black ink, appearing to read 'Desmond Ang', with a long horizontal flourish extending to the right.

Ang, Desmond  
Traffic Engineer

A handwritten signature in blue ink, appearing to read 'Kirk Martinez', with a stylized, cursive script.

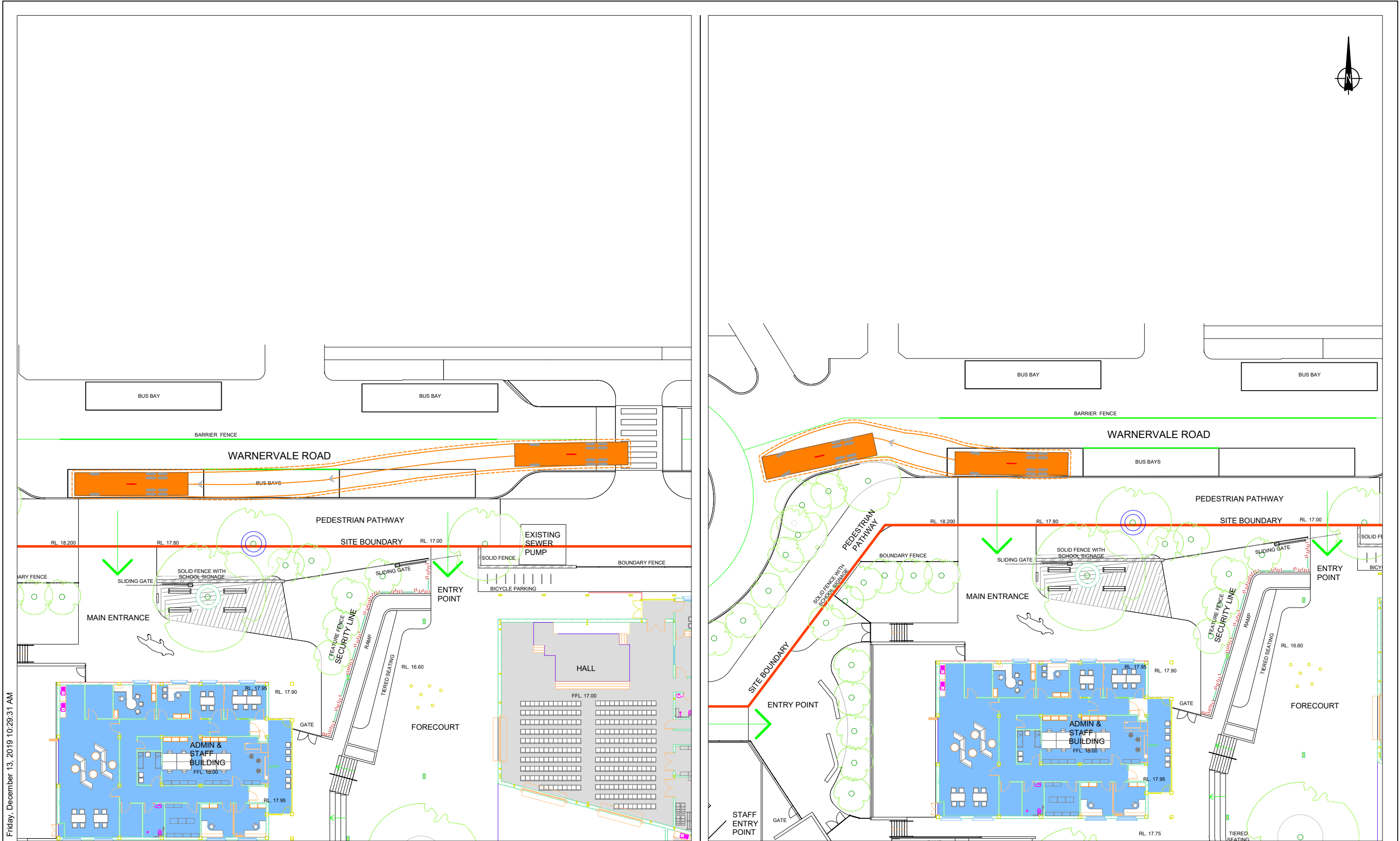
Kirk Martinez  
Senior Traffic Engineer

**Stantec Australia Pty Ltd**

Encl:

Appendix A – Swept Paths

## Appendix A – Swept Path



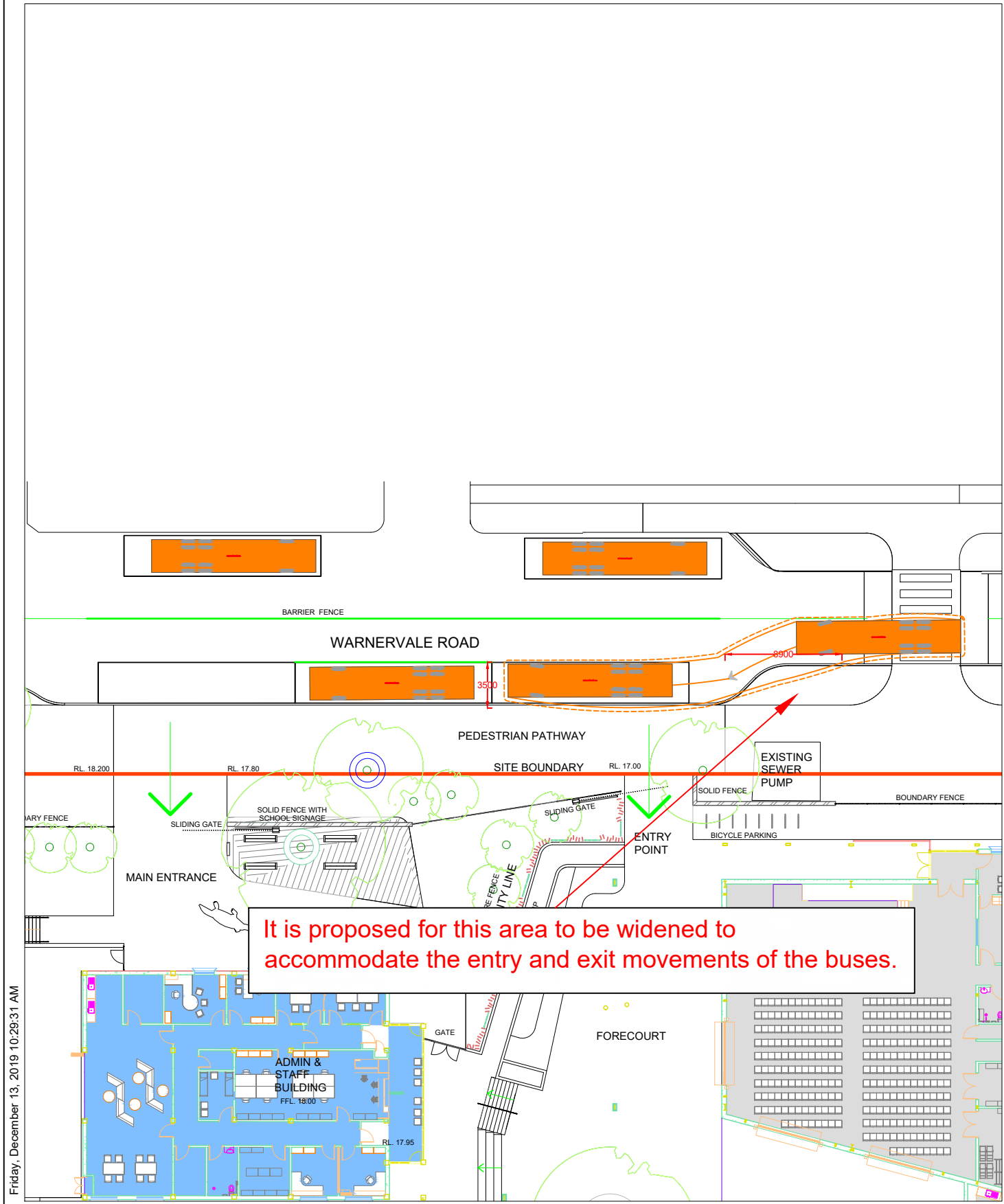
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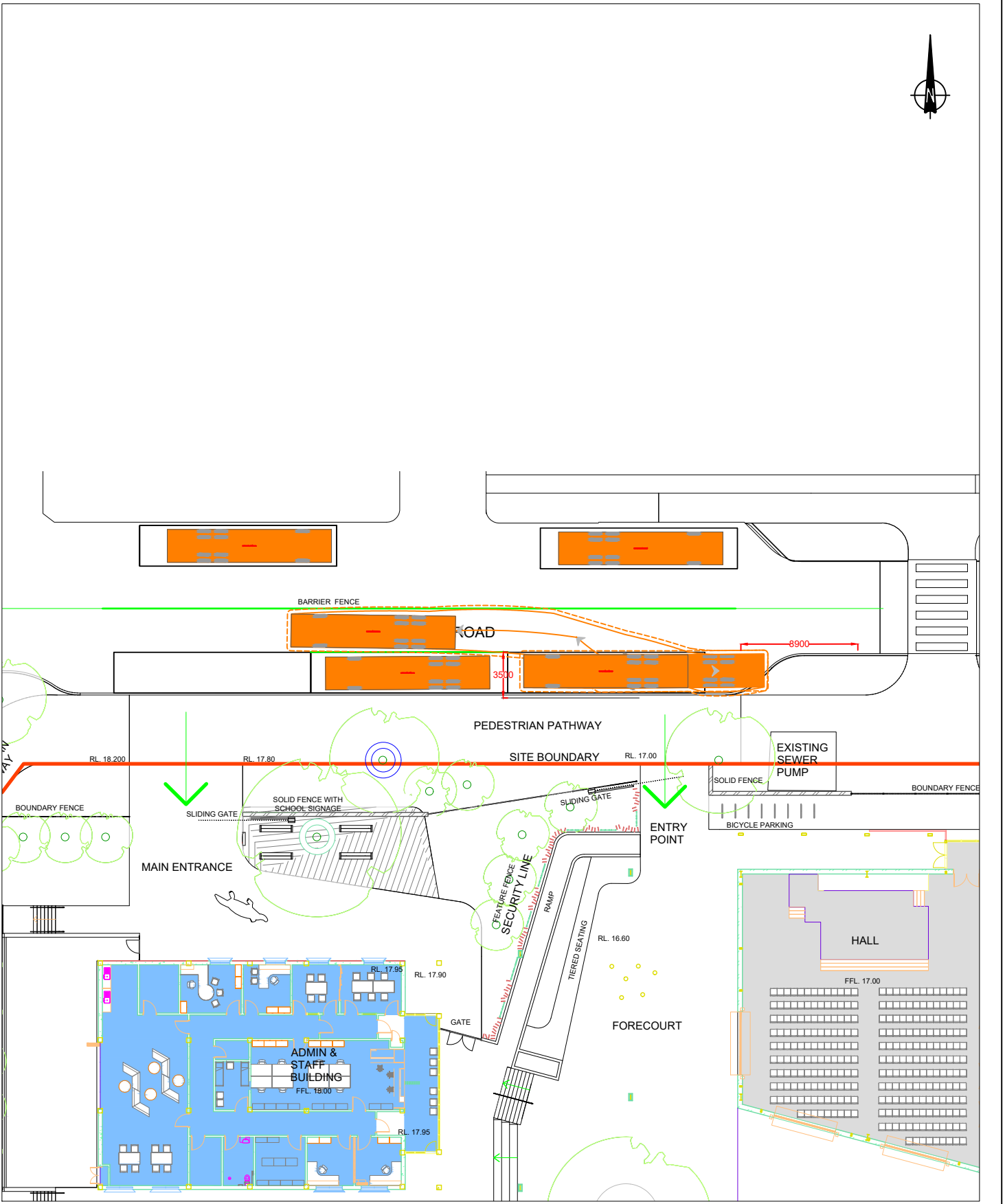
75 Warervale Road, Warnervale  
Swept Path Assessment  
12.5m Long School Bus Entry / Exit

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It is proposed for this area to be widened to accommodate the entry and exit movements of the buses.



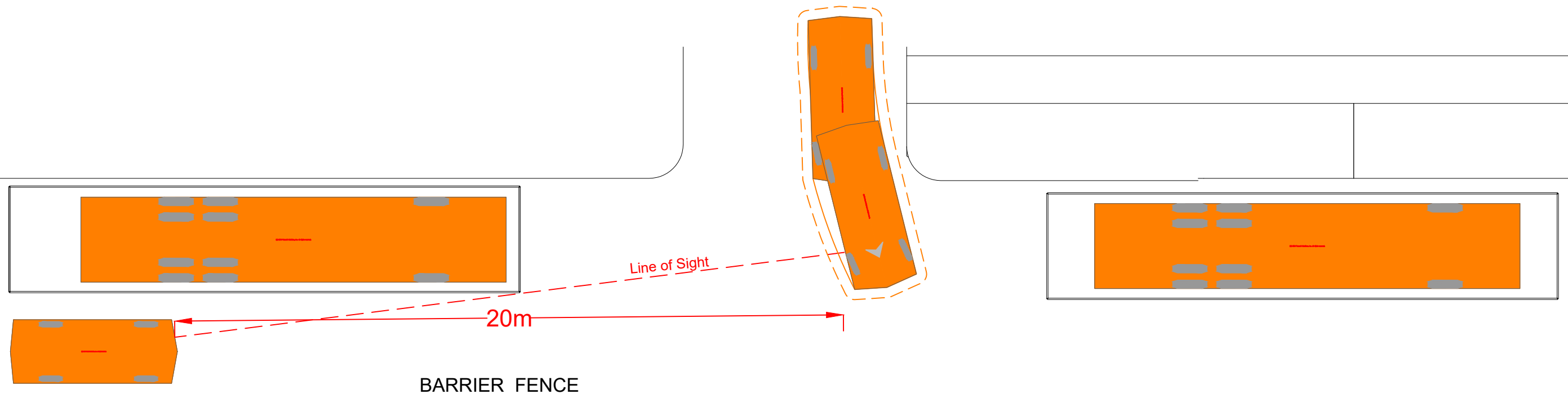
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75 Warervale Road, Warnervale  
Swept Path Assessment  
12.5m Long School Bus Entry / Exit

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75 Warnervale Road, Warnervale  
Sight Distance Assessment

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