

TECHNICAL NOTE

Reference: P1047t02v01

13 February 2020

Hansen Yuncken
Bldg 1, L3, 75-85 O'Riordan Street
Alexandria NSW 2015

Response to Submissions

New Catherine Field Public School, O'Keefe Drive, Oran Park (SSD 9477)

Dear Paul,

I refer to recent correspondence in regard to the issues raised in the submission received in relation to the proposed New Public School, O'Keefe Drive, Oran Park SSD-9477 (the Proposal), and specifically the following submissions prepared by government agencies following exhibition of the Proposal:

- M. Rawson, Camden Council (Council), *Notice of Exhibition - New Catherine Field Primary School (SSD 9477)*, 11 December 2019 (Council Submission)
- Mark Ozingar, Transport for NSW (TfNSW), SSD - 9494 – Proposed New Primary School, Lot 1 Dp1253855, Estella Road, Estella, 4 December 2019 (TfNSW RTS)

The sections below provide a summary of the relevant issues raised in each of the responses to the submission and the Ason Group response to each issue. In preparing these responses, Ason Group has referenced the following documents:

- Ason Group, *Transport Impact Assessment, New Catherine Field Public School, O'Keefe Drive, Oran Park (AGTIA)*; and
- Ason Group, *Construction Traffic Management Plan, New Catherine Field Public School, O'Keefe Drive, Oran Park (AGCTMP)*

Issues have also been labelled with the appropriate Ethos Urban reference number (EU) for ease of cross referencing.

Camden Council

1.6 Construction Access (EU 4x)

Direct access off O’Keefe Drive is not supported due the potential impact created by turning truck movements in and out of the site close to residential houses. A temporary access point should be located at the southern end of O’Keefe Drive. This will also protect the existing kerb and gutter. In addition to owner’s consent for the subject site, owner’s consent must also be provided for the relevant lot if any works or access is proposed on or from adjoining lots (rather than the road reserve).

Ason Group Response (EU 4x)

This comment appears to be offering conflicting advice—access off O’Keefe Drive is not supported, locate temporary access at southern end of O’Keefe Drive.

Notwithstanding, light vehicle traffic generation would be generally associated with construction staff movements to and from the Site. Staff would be comprised of project managers, various trades and general construction employees. Over the full period, the peak workforce represents the worst-case scenario for vehicle movements during the morning or evening road network peak hour. The workforce arrival and departure periods (6:30-7:00am and 6:00-6:30pm) represent the peak construction traffic periods.

It is expected that the heavy vehicles would generally arrive outside of peak periods, therefore not contribute to the estimated peak hour volumes and have minimal impact on local residents.

Whilst the construction traffic volumes are yet to be determined (these volumes will be finalised post SSD approval), it is expected that these volumes will not exceed to the proposed operational volumes. As mentioned in Section 2.4 of AGCTMP, any vehicles required to access the Site that do not comply with the mass, dimension or operating requirements as specified by the National Heavy Vehicle Regulator (NHVR) will need to apply for a class 1 Oversize Overmass (OSOM) or Special Purpose Vehicle (SPV) permit and comply with restrictions limiting access to the Site to reduce the impact on traffic management and safety.

O’Keefe Drive is 12.5 metres wide at the northern and southern ends adjacent to the site and the southern end has been identified as an emergency access. Accordingly, the access location shown in Figure 1 are deemed appropriate and acceptable.

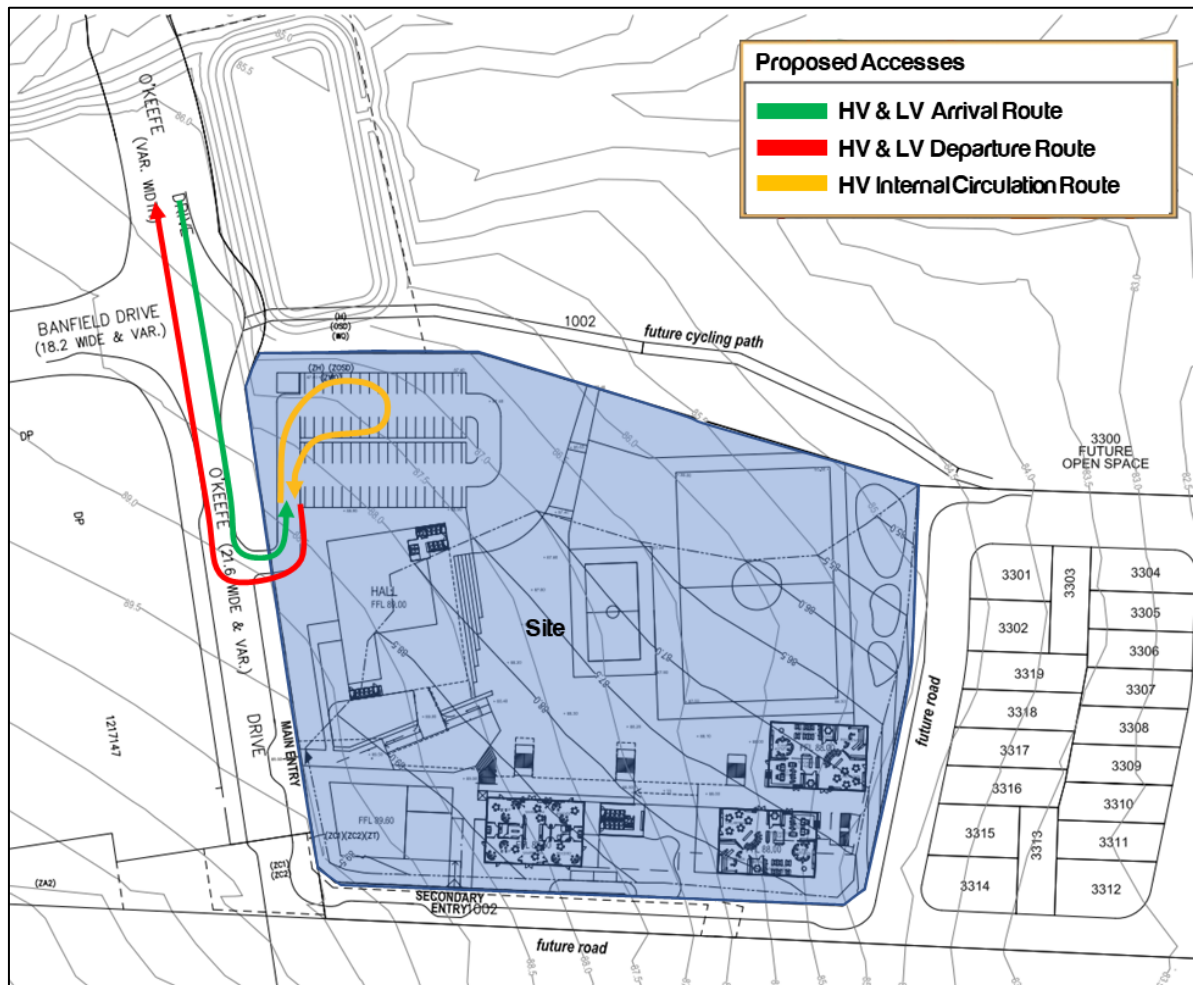


Figure 1: Construction Vehicle Routes

1.8 Waste Pad (EU 4z)

The design of the waste pad should be further detailed. Although labelled as a 'pad' the structure is shown to cast shadows. The waste pad is in a visually prominent location and it would be preferable for the waste area to be relocated to the south eastern corner of the car park. The entrance gate for the staff car park can be moved to a more central location in the car park closer to space 60 (this gate could be potentially directly off a shared space catering to the required accessible spaces, discussed further in the 'Traffic' section of this letter).

Ason Group Response (EU 4x)

The design and location of the waste pad is an issue for consideration and response by other consultants as access on O'Keefe Drive would not be effected. The entrance gate location is discussed in the Traffic section of this Technical Note.

Traffic 1 (EU 4kk)

Signage and line marking plans would need to be submitted and Local Traffic Committee concurrence sought.

Ason Group Response (EU 4kk)

This is a standard requirement and it is acknowledged that this would form a condition of consent.

Traffic 2 (EU 4kk)

The traffic report states that the disabled parking will be accommodated within the staff car park, which provides 68 spaces. Accessible spaces will impact on the number of spaces provided as shared spaces would need to be provided (as per AS289). This does not seem to have been considered in the car park layout. The number of accessible spaces provided shall be based on assessment of similar sites. It should also be specified if a special needs stream would be provided at this school.

Ason Group Response (EU 4kk)

All access, parking and servicing areas have been designed with reference to the appropriate Australian Standards, and specifically AS 2890.1 (with regard to access driveways and parking modules) and AS 2890.2 (with regard to service vehicles). It is expected that a Condition of Consent in any future approval will require that the final design provide full compliance with the Australian Standards, which would provide for any minor design revisions that may arise through to construction commencing.

The school does not have a Special Education requirement for the car park.

Traffic 4 (EU 4kk)

Pedestrian crossings shall be provided. Locations shall be specified. Crossing points should be provided on O'Keefe Drive and crossing points on the southern boundary road.

Ason Group Response (EU 4kk)

TfNSW has a reduced warrant for sites used predominantly by children and by aged or impaired pedestrians. If the crossing is used predominantly by school children, is not a suitable site for a children's crossing and in two counts of one hour duration immediately before and after school hours:

(a) the pedestrian flow per hour (P) crossing the road is greater than or equal to 30

AND

(b) the vehicular flow per hour (V) through the site is greater than or equal to 200

a pedestrian (zebra) crossing may be installed. If at least 50% of pedestrians using the crossing are aged or impaired and for each three one hour periods in a typical day

(a) $P \geq 30$

AND

(b) $V \geq 200$

AND

(c) $PV \geq 60,000$

a pedestrian (zebra) crossing may be installed.

The above criteria are not known for the school when it will be operational and, whilst the vehicle volumes can be forecast with relative accuracy and may exceed the requirement, the pedestrian volumes and desire lines may not. This is particularly relevant given that the number of possible directions and access desire lines—depending on specific enrolment locations within the catchment—is likely to significantly spread the concentration of pedestrians and therefore reduce the effectiveness and efficiency of a crossing.

Notwithstanding, indicative locations shown in have been shown on the drawings to demonstrate an appropriate and likely location should the warrants be met once the school is operational. The ultimate crossing location should be based on an assessment of enrolment spatial data with consideration of desire lines.

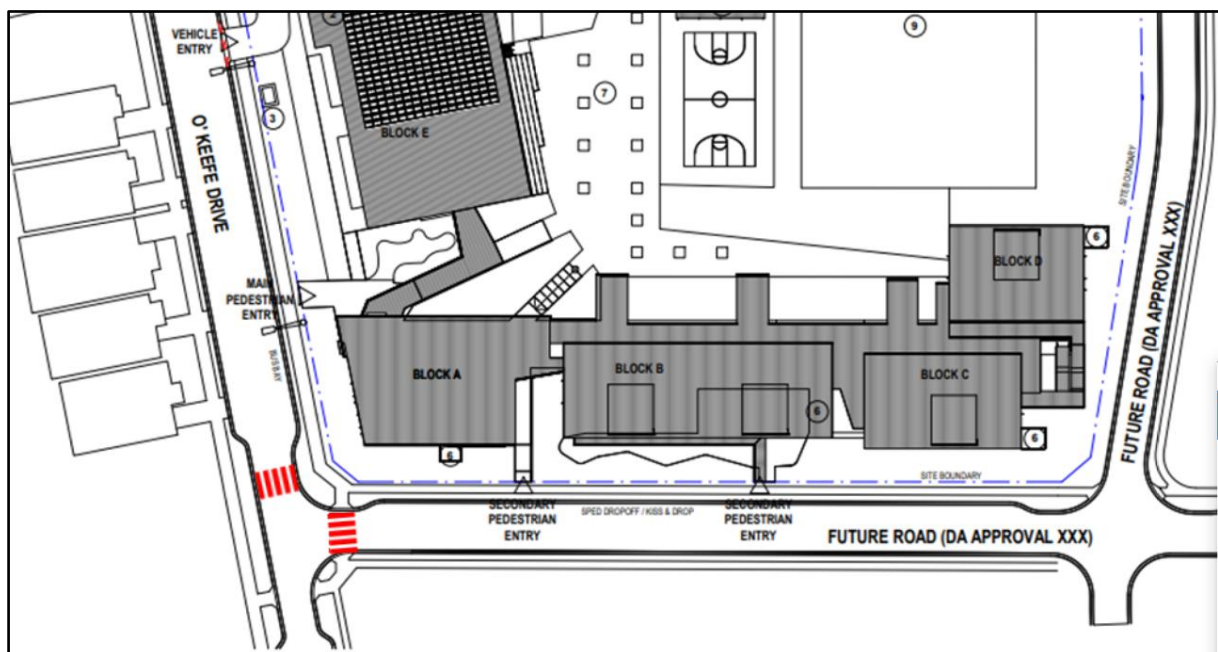


Figure 2: Indicative Pedestrian Crossing Locations

Traffic 5 (EU 4kk)

The number of bus bays required has not been specified. The extent of the bus bay shall be based on anticipated demand and based on similar developments within the LGA. For example Gledswood Hills Public School (scheduled to open in Jan 2020) proposed three bus bays. Most other schools in the LGA have similar configurations.

Ason Group Response (EU 4kk)

While there is an expectation that the local and district bus services will provide the coverage and capacity required to accommodate student travel to and from the School, dedicated school bus services could be introduced should demand exceed public bus capacity. However, in general students would be encouraged to travel on scheduled public transport routes.

O'Keefe Drive has been designated as a bus route corridor and as such has been / will be designed in accordance with the appropriate bus standards, including the provision of minimum 3.5m travel lanes and indented bus bays in the vicinity of the Site. Bus stops are expected to be provided approximately every 400m along all bus routes, noting that bus stops are proposed directly adjacent to the School in O'Keefe Drive.

The indented bus bay on O'Keefe Drive can accommodate three buses.

Traffic 6 (EU 4kk)

Camden DCP rates were used to calculate parking rates - requiring 66 car parking spaces. The provision of 68 may be compromised upon provision of Disabled bays to accommodate the disabled pick-up and drop-off areas (as discussed in Point 2). The minimum required number of spaces shall be satisfied.

Ason Group Response (EU 4kk)

Kerbside drop off and pick up will be accommodated at the appropriate location in the designated Drop Off Pick Up Zone (DOPUZ) to the south of the site on the Future Road, satisfying the requirement. Accordingly, the spaces will not be required in the car park which is a significant relative distance from designated buildings. Appropriate signage and provision of a minimum of two car spaces shall be provided in the DOPUZ.

Traffic 7 (EU 4kk)

The distribution of peak hour traffic flow has not been discussed or justified.

Ason Group Response (EU 4kk)

As discussed previously in AGTIA, the School is centrally located within the Catherine Field (Part) Precinct (CFPP), and the majority of students are expected to live within the CFPP. Consequently, student trips are expected to be distributed to the CFPP road network in accordance with residential densities (across the CFPP). This is entirely consistent with the analysis provided in the CFPP Social, Section 5.3.4 of which states:

"The population of the Precinct will warrant the provision of one government primary school, based upon the Department of Education and Communities (DEC) guideline of one primary school per 2,000-2,500 dwellings. The report has not identified how the high school needs of the precinct will be addressed.

The DEC has confirmed that one primary school will be required in the precinct. This Precinct will provide a full catchment for a primary school (although it may take children from adjoining areas, as a holding school, until other new schools in the district are built). In the longer term, it is not intended that this school also meet demand from Oran Park or Gregory Hills, which will have their own primary schools."

Student vehicle trips are expected to be evenly divided in the School peak periods between inbound and outbound trips.

As discussed previously in AGTIA, staff are expected to travel to/from the broader sub-region, with only a minority of trips generated within the CFPP. During the AM school peak period, all staff trips are expected to be arrival trips, while during the PM school peak period all staff trips are expected to be departure trips, though it is noted that the majority of departure trips would be later than the PM school peak period, i.e. coinciding more with the PM commuter peak period.

With reference to sections **Error! Reference source not found.** and **Error! Reference source not found.** of AGTIA, the trip generation of the School during the school peak periods has been assigned to the key intersections of O'Keefe Drive & Banfield Drive, and O'Keefe Drive and Road 610. The results of this assignment are provided in

Figure 3, while the total 2036 traffic flows at the intersections—using the base flows provided in the *Catherine Field (Part) Precinct Post-Exhibition Transport and Access Review (Addendum)* Aecom 2013 (CFPP TAR)—are shown in **Figure 4**.

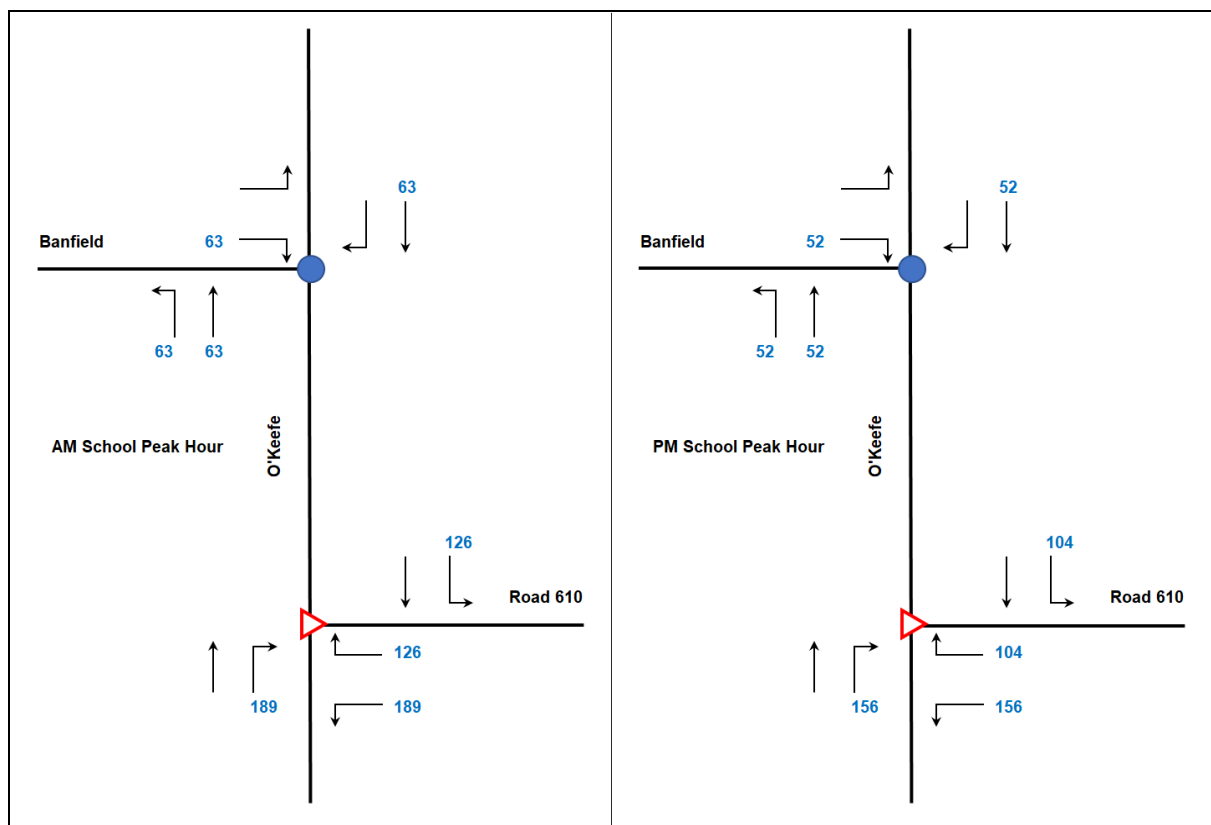


Figure 3: School Peak Period Traffic Generation

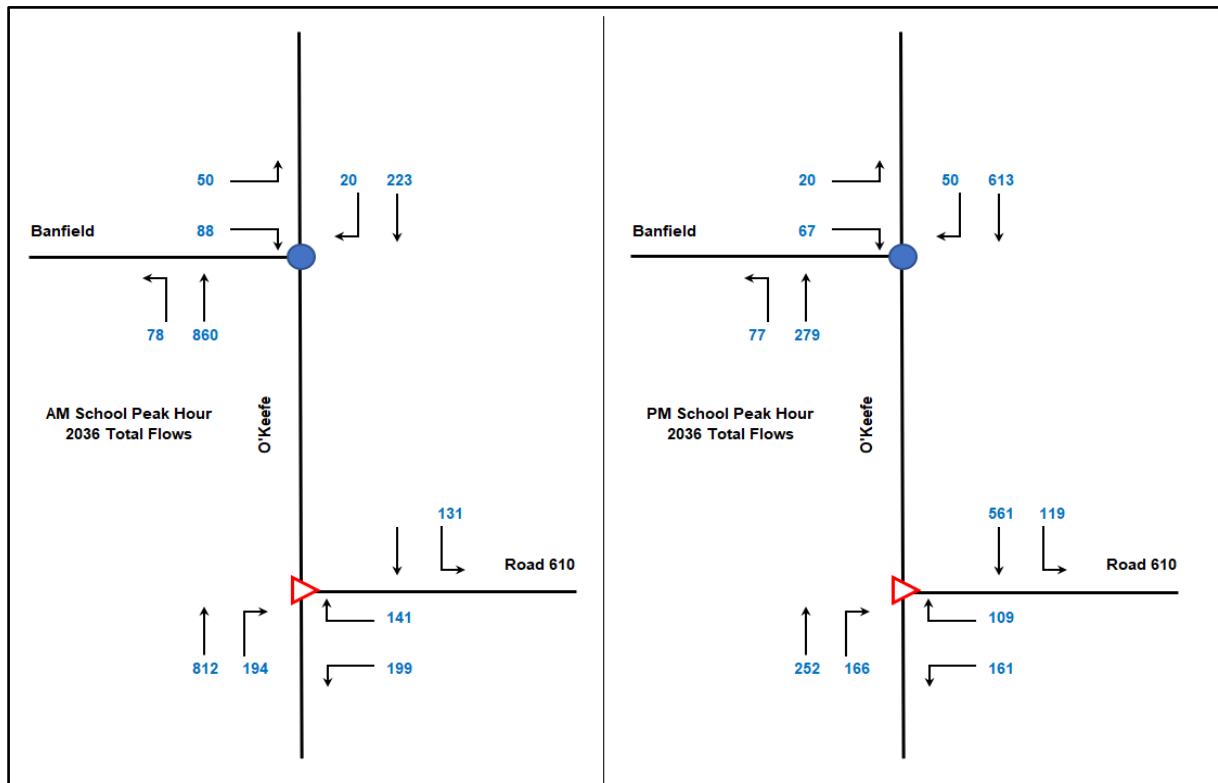


Figure 4: 2036 Total Traffic Flows

Transport for New South Wales

EU 7

Thank you for your correspondence via Major Projects Planning portal (ref: PAE-1101) on 8 November 2019, requesting Transport for NSW (TfNSW) to review and comment on the subject State Significant Development (SSD) Application. Legislation came into effect on the 1 December 2019 that brings Roads & Maritime Services and Transport for NSW together into one organisation. It is noted that a submission had been provided by the former Roads & Maritime Services and this letter represents the additional response of the new organisation.

The Transport Impact Assessment in support of the subject SSD has been reviewed and the comments are outlined as follows:

- *Proposed drop off and pick up (DOPU) facilities on O’Keefe Drive should give consideration to the role and function of O’Keefe Drive as identified in the DCP of Catherine Fields (Part) Precinct.*
- *Advice to be considered informing the final Green Travel Plan that is recommended to be in place prior to the issue of an Occupation Certificate.*

These comments have been expanded upon and are provided in TAB A. Suggested draft conditions are provided in TAB B.

Thank you again for the opportunity of providing advice for the above development application. If you require any further information, please don’t hesitate to contact Billy Yung, Senior Transport Planner, via email at billy.yung@transport.nsw.gov.au. I hope this has been of assistance.).

Ason Group Response (EU 7)

Noted and discussed below.

EU 7a

The TIA report suggests that the proposed DOPU zone will be managed and time restricted to maximum 2 minutes. The report also acknowledges that a longer average standing time is required in the PM school peak as parents/carers would normally arrive prior to the end of school to wait for the students. It is evident that the analysis of DOPU movements is based on a 2-minute usage time over a 45 minute period without considering the demand of parents/carers waiting prior to end of school. It is also commonly observed at primary schools that some short-term parking demand would be generated by parents/carers of younger students who would stay till start of school in the AM school peak.

Recommendation

Further analysis should be provided in assessing the drop-off/pick-up demand, including short-term parking demand, around the school site and identify practical measures to alleviate the impact if necessary.

Ason Group Response (EU 7a)

The provision of DOPU spaces in Road 610 could provide the capacity required to accommodate peak demand, with an estimated peak queue of 33 vehicles, or a length of approximately 200m. This queue could be accommodated in Road 610 Street adjacent to the School, feeding DOPU spaces in the southern end of O'Keefe Drive adjacent to the School.#

The PM pick-up period is spread more than the AM due to staggered finish times, generates less traffic due to after hours school care and co-curricular activities, and does not align with the network peak. Therefore, queuing in the PM will be less than the AM.

Dwell times in the DOPUZ are subject to the Australian Road Rules no standing parking rule. Under the no parking rule, motorists cannot stop for longer than two minutes and cannot move more than three metres from their vehicle. These times have been used in calculating the requirements for the DOPUZ and the timing will be managed in the school's Traffic and Pedestrian Management Plan and enforced the same as all existing kerbside parking restrictions.

EU 7b

Construction Traffic Impact Comment

A high-level Construction Traffic Management Plan (CTMP) has been provided. Details in relation to swept path of the largest vehicles entering and exiting the site (in a forward direction) should be included.

Recommendation

Swept path analysis detailing the above comment should be included in the Response to Submissions.

Ason Group Response (EU 7b)

A swept path analysis is provided in Attachment A.

EU 7c

Bicycle Parking Comment

There is no indication of how many bicycle parking spaces will be provided for the proposed development.

Recommendation

The provision of bicycle parking rates should be considered in line with those outlined in the Cycling Aspects to Austroads Guidelines Appendix I. In addition, the proposed future use of the school hall and construction of a supporting car park to cater for over 450 visitors should include the provision of additional bicycle parking to further encourage residents/visitors to walk and cycle to the facility.

Ason Group Response (EU 7c)

Table H1 in Cycling Aspects of Austroads Guides (CAAG) gives an indication of the levels of bicycle parking needed to be provided for various land uses. These bicycle parking provision rates may be used to provide guidance if local standards or data are not available. It should be noted that the application of these types of provision rates needs to be undertaken with caution as local circumstances may often render them inappropriate. The bicycle parking provision required for primary schools from CAAG is 1 per 5 students over year 4. Accordingly, a suitable provision is considered between approximately 70 bicycle racks for students and staff, along with end of journey facilities including showers and lockers.

Provision of 45 additional bicycle racks to accommodate 10% of the proposed 450 visitors to the hall is considered acceptable.

EU 7d

Green Travel Plan Comment

A framework Green Travel Plan (GTP) has been prepared in associated with the transport assessment. The following items should be further considered:

- include a Transport Access Guide to staff, students and parent/carers about the range of travel modes, access arrangements and supporting facilities that service the site;*
- identify which party is responsible for the delivery of each action in the GTP and advise when each action will be delivered;*
- analyse the likely travel origins and modes of travel based on the school catchment and aggregate residential post code analysis of enrolled students, once known;*
- liaise with TfNSW about any proposed transport service improvements in the area and/or the need for any additional services that may be required, based on the projected demand identified above.*

Recommendation

Prior to the issue of an Occupation Certificate, the applicant prepare a comprehensive Travel Plan (or amend and expand the existing framework GTP) in consultation with TfNSW to address the above..

Ason Group Response (EU 7d)

It is expected that the provision of a TAG would be included as a Condition of Consent and developed once the required data is available.

EU 7e

School Zone signs and associated markings

The applicant must obtain written authorisation from Transport for NSW (TfNSW) to install School Zone signs and associated pavement markings, and/or remove/relocate any existing Speed Limit signs. To obtain authorisation, the applicant must submit the following for review and approval by TfNSW, at least eight (8) weeks prior to student occupation of the site:

- a. A copy of development Conditions of Consent*
- b. The proposed school commencement/opening date*
- c. Two (2) sets of detailed design plans showing the following:*
 - i. School property boundaries*
 - ii. All adjacent road carriageways to the school property*
 - iii. All proposed school access points to the public road network and any conditions imposed/proposed on their use*
 - iv. All existing and proposed pedestrian crossing facilities on the adjacent road network*
 - v. All existing and proposed traffic control devices and pavement markings on the adjacent road network (including School Zone signs and pavement markings).*
 - vi. All existing and proposed street furniture and street trees.*

School Zone signs and pavement marking patches must be removed and installed in accordance with TfNSW approval/authorisation, guidelines and specifications. All School Zone signs and pavement markings must be installed prior to student occupation of the site. The applicant must maintain records of all dates in relation to installing, altering, removing traffic control devices related to speed.

Following installation of all School Zone signs and pavement markings the applicant must arrange an inspection with TfNSW for formal handover of the assets to TfNSW. The installation date information must also be provided to Transport for NSW at the same time.

Note: Until the assets are formally handed-over and accepted by TfNSW, TfNSW takes no responsibility for the School Zones/assets.

Reason for condition

A significant number of vehicles and pedestrians will access the site at the start and end of the school day. School Zones must be installed along all roads with a direct access point (either pedestrian or vehicular) from the school. School Zones must not to be provided along roads adjacent to the school without a direct access point. Road Safety precautions and parking zones should be incorporated into the neighbouring local road network and 40km/hr School Zones are to be installed in accordance with the conditions above. The consent

authority should ensure that parking, drop-off and pick-up zones and bus zones are incorporated in accordance with TfNSW standards. TfNSW is responsible for speed management along all public roads within the state of New South Wales. That is, TfNSW is the only authorised organisation that can approve speed zoning changes and authorise installation of speed zoning traffic control devices on the road network within New South Wales.

Ason Group Response (EU 7e)

Noted and acknowledge that this post-determination process would be included as a Condition of Consent.

EU 7f

Car Parking

The layout of the proposed car parking areas associated with the subject development (including, driveways, grades, turn paths, sight distance requirements in relation to landscaping and/or fencing, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS 2890.1- 2004, AS2890.6-2009 and AS 2890.2 – 2002 for heavy vehicle usage.

Ason Group Response (EU 7f)

All access, parking and servicing areas have been designed with reference to the appropriate Australian Standards, and specifically AS 2890.1 and AS 2890.6 (with regard to access driveways and parking modules) and AS 2890.2 (with regard to service vehicles). It is expected that a Condition of Consent in any future approval will require that the final design provide full compliance with the Australian Standards, which would provide for any minor design revisions that may arise through to construction commencing.

The swept path analysis in Attachment B has been conducted using the largest proposed design vehicle.

Existing and future off-site infrastructure such as on-street parking lanes and bus capable streets has/will necessarily be constructed in accordance with the requirements of the Camden GCP DCP.

EU 7g

Construction Traffic Management Plan

A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to the relevant consent authority for approval prior to the issue of a Construction Certificate.

Swept path of the longest vehicle (including garbage trucks, building maintenance vehicles and removalists) entering and exiting the subject site, as well as manoeuvrability through the site, shall be in accordance with AUSTROADS. In this regard, a plan shall be submitted to Council for approval, which shows that the proposed development complies with this requirement..

Ason Group Response (EU 7g)

A detailed Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control will be submitted to the relevant consent authority for approval prior to the issue of a Construction Certificate. It is acknowledged that this would be included as a Condition of Consent.

Finally, we trust the above information provides clarification and a greater appreciation of the issues identified in the RRTS. As always, please do not hesitate to contact the undersigned should you require any further information.

Yours sincerely,

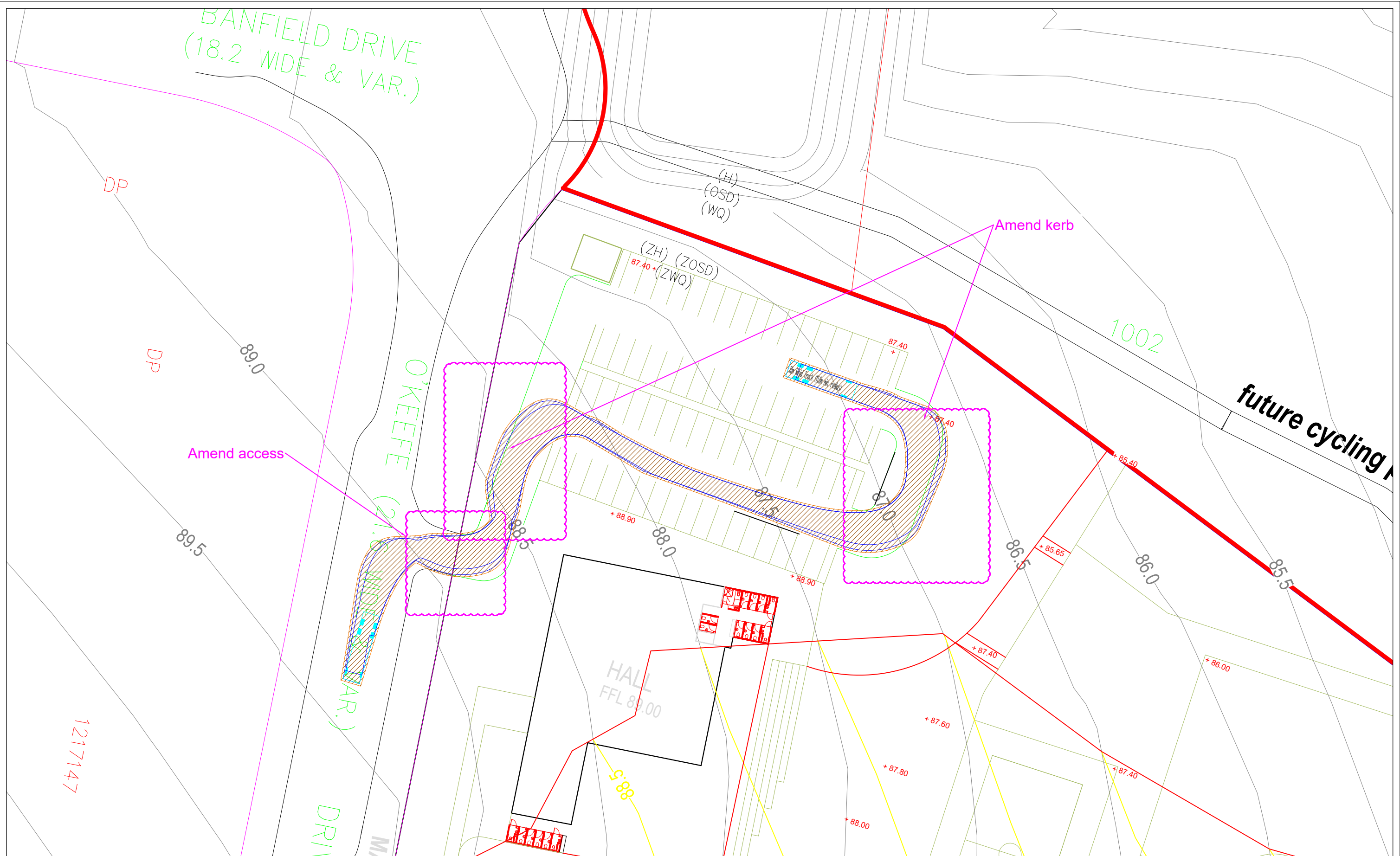
A handwritten signature in black ink, appearing to read 'Dan Budai'.

Dan Budai
Senior Traffic Engineer – Ason Group

Email: dan.budai@asongroup.com.au

Attachment A

Swept Path Analysis



Notes: This drawing is provided for information purposes only and should not be used for construction.	Document Info: Drawn by: Rebecca BMadden File name: 1047 Servicing Access.dwg	Project: 1047 Catherine Field Primary School	Date: 27/06/2019	asongroup Suite 5.02, Level 5, 1 Castlereagh Street Sydney NSW 2000 info@asongroup.com.au
	Client: Hansen Yucken	Drawing Title: Swept Path Analysis 10m Waste Truck Exit	Scale @ A3: 1:500	
			Drawing Number: AG 02	