SECAsolution
ACN: 164611652
Ground Floor, 161 Scott Street
Newcastle NSW 2300
Ph: (02) 4032 7979
admin@secasolution.com.au

8 December 2022

P1738B PD Arise Christian College traffic assessment

Paynter Dixon
Level 2, 2 Richardson Place
Riverside Corporate Park
North Ryde NSW 2113

Attn: Clive Furnass

Dear Clive,

Proposed Additional Learning Space, Arise Christian College, 75-81 Chelmsford Drive, Metford, NSW.

We have completed our site work and review of the documentation provided for the proposed expansion of the special learning centre located within the existing Arise Christian College site off Chelmsford Drive and provide the following assessment of parking demands, traffic impacts and access arrangements for the development. This assessment has been completed with regard to the relevant requirements outlined in the Guide to Traffic Generating Developments (GtTGD) and Australian Standard AS2890.1: Off-street Car Parking Facilities.

Background

The subject site is located at off Chelmsford Drive in Metford as shown below in Figure 1.

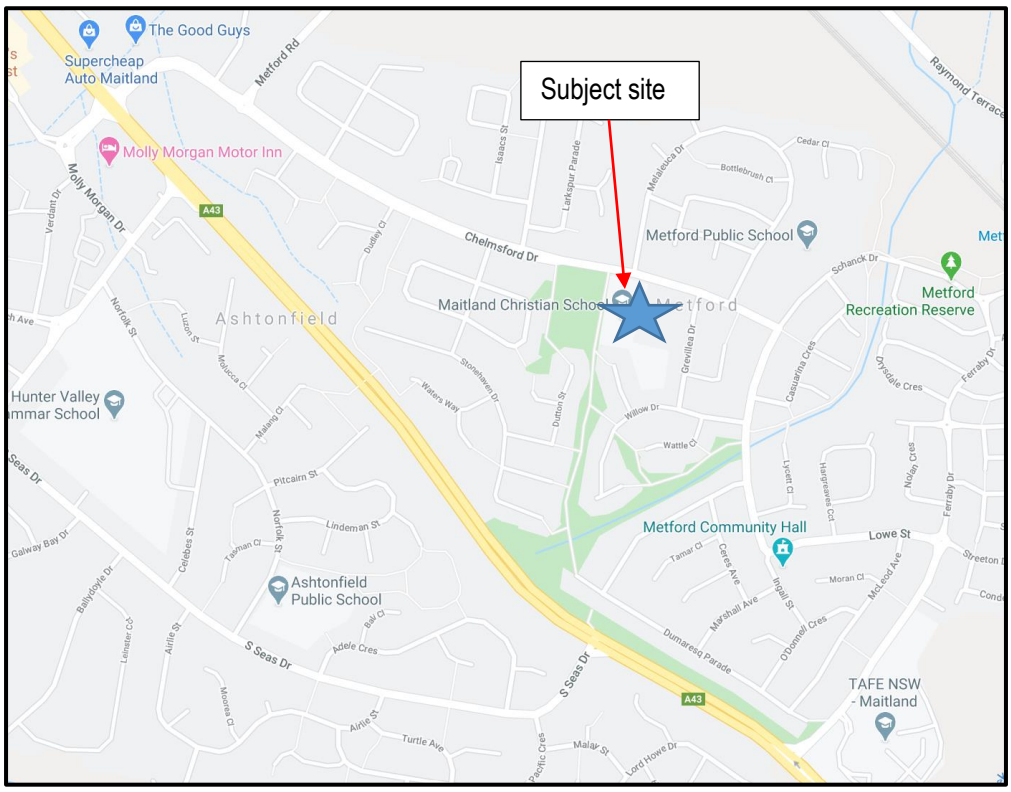


Figure 1 – Subject site in the context of the local road network

The subject site consists of an existing college with road frontage to Chelmsford Drive only. The proposed works for this project see an extension and an additional level added to provide additional learning space which shall allow for two additional classes (28 students and 2 staff).

Based on previous work undertaken for the College and consultation with Council in 2020 some traffic issues are noted along Chelmsford Drive adjacent to the college, but these are not all be due to the school demands. The roundabout controlled intersection of Chelmsford Drive and Metford Road appeared at that time to create delays (due to the imbalance of traffic demands / movements) however this roundabout has subsequently been upgraded and observations undertaken in conjunction with site work in October 2022 confirmed that this roundabout appears to operate well with improved performance and reduced queues over those previously noted.

Road Hierarchy

The **New England Highway** to the west of the site is the major road passing through the locality forming part of the regional road network and providing an important line between Newcastle to the south-east and Maitland and beyond to the north-west. It carries the bulk of the through traffic movements in this location and the major intersections are controlled by traffic signals. Reflective of its status in the overall road network, it carries significant traffic flows, especially during the traditional morning and afternoon peak periods.

Chelmsford Drive is located along the site's boundary and provides the only road connection to the existing college on the site. It provides a high standard of residential collector road, with a single lane of travel in both directions and a parking / cycle lane to both sides of the road. It operates under the posted speed limit of 50 km/h with a footpath to both sides and street lighting along much of its length. It connects with Metford Road at its northern end via a 3-way roundabout controlled intersection and Schanck Drive at its southern end via a T intersection. Traffic on Chelmsford Drive to Schanck Drive south-east bound have priority with Schanck Drive northbound being giveway controlled as is Schanck Drive southbound.

There are a number of residential roads connecting with Chelmsford Drive via give-way controlled T-intersections with Chelmsford Drive being the priority road.

Current Road Network Operation

Seca Solution has undertaken traffic observations as part of our work on site and these show that the traffic flows on Chelmsford Drive are reasonably high, but well within the capacity of the road network. During the morning drop-off and afternoon pick-up periods the traffic flows are impacted upon by the school traffic demands, as well as those generated by Metford Public School and Hunter River Community School on Melaleuca Drive north east of the site. Some minor delays for the through traffic can be created by traffic turning into the school and the adjacent parking area by the playing fields. In the afternoon this was more apparent as the afternoon demands are more of a peak with all students finishing at the same time however parents appear to stagger their arrival times and spread these demands.

The roundabout at the intersection of Chelmsford Drive and Metford Road was also observed. This roundabout appears to operate well with improved performance and reduced queues subsequent to the upgrades.

Other Developments

The major development in this area has been the construction of the new Maitland Hospital on Metford Road to the north of the roundabout controlled intersection of Metford Road and Chelmsford Drive. Ongoing development to the north of Thornton will continue to see increases in background flows through this area.

Car Parking

Parking on site provides 33 parking spaces as well as some overflow parking in the adjacent carpark associated with the Baptist Church. Staff utilise these spaces whilst some choose to park on street along the site frontage.

Adjacent to the school to the immediate west are public sports pitches which have a car park with direct frontage to Chelmsford Drive. This car park area is used for drop-off and pick-up purposes associated with the college with some staff also observed to park here.

On-street carparking is also available along the local roads surrounding the site and on the various side roads. During the afternoon pick up in particular parking was observed on both sides of Chelmsford Drive in the vicinity of the college, with some additional parking noted on the side roads (Melaleuca Drive).

Proposed Development

The proposed development is for the expansion of the Arise special learning centre to provide for two additional classes catering for 28 students. There will also be 2 full time equivalent teachers associated with this.

The project involves the expansion to the buildings and to incorporate an upper level.

Access and parking

Arise students typically require assistance / guidance when accessing the school building with these students being dropped off / picked up within the existing car park to the front of the main college building. These students are generally accompanied between the drop off / pick up point and the building along the existing internal driveway.

The majority utilise assisted transport services with small groups travelling together to school via mini bus type vehicle e.g. Toyota Hi-Ace with up to 12 seats whilst some may use the existing buses that service the school. Some transport services will carry 2-3 students whilst some will be dropped direct to the school by parents/carers.

To support the proposed expansion upgrades to the front carpark will allow for five additional parking spaces which exceeds the requirements for this project and represents an improvement in parking for the College.

Traffic Impact

When assessing the traffic impacts for the project, it is important to note that the requirements for the students for drop off and pick up are not as per normal school students, due to the specialist needs of the various students enrolled at this school. These needs are varied and specific to each student. As discussed above, around 50% or more of the students will arrive and depart the school via a dedicated school bus that will utilise a drop-off / pick-up zone within the main car park to the front of the school, with students then travelling between this zone and the new school building via the existing internal driveway.

Given the special needs of these students, no students will walk or cycle to the school.

Allowing for 28 additional students:

- 50% of student (14 in total) arriving in dedicated school buses. This may utilise existing services however as a worst case may see 2 additional vehicles.
- 50% of students (14) arriving by private motor vehicle, with sharing of vehicles allow for a typically occupancy rate of 2-3 students per car. This would give 5 *additional* cars in the morning drop off and 5 in the afternoon pick up period.

Traffic surveys were undertaken on Thursday 13th October at the intersection of Chelmsford Drive and Melaleuca Drive. Flows between 2.30-3.30pm are shown below.

Figure 2 PM traffic surveys 2.30-3.30pm

Chelmsford Drive is a high standard urban collector road which during the afternoon peak has two way flows of 587 vehicles per hour.

When reviewed against the current traffic flows along Chelmsford Drive and the existing traffic demands associated with the school, it can be seen that the additional 7 vehicles in the morning drop-off period and a similar number on the afternoon pick-up period shall have a minimal impact upon the overall operation of the local road network. Staff movements typically occur before and after the school peak and so do not impact these peak periods.

Peak Hour Impact on Intersections

The development will result in a small increase in vehicle movements at the roundabout controlled intersection of Chelmsford Drive and Metford Road or at the T-intersection of Chelmsford Drive and Schanck Drive. The impact at either of these intersections is minimal and at the T-intersection Chelmsford Drive, traffic on Chelmsford Drive has priority with give way controls on Schanck Drive.

Conclusion

Overall, the proposed expansion to the special learning centre allowing for 28 additional students and 2 extra staff shall have a minor and acceptable impact upon traffic and parking in the local area with no impediment to approval.

The students associated with this project will be dropped off / picked up by dedicated school buses or in private vehicles with typically 2-3 students per car. This may increase traffic demands by 7 additional cars/vans for drop off and similar for the afternoon pick-up and as such will have a minor impact upon the local road network. The two additional staff movements typically do not coincide with the school peak arriving before and leaving after the students.

The students will be dropped off / picked up within the existing school grounds and escorted by staff between this location and the building, along the existing internal driveway.

The project will require two additional staff members and five additional parking spaces will be provided within the college grounds to accommodate this.

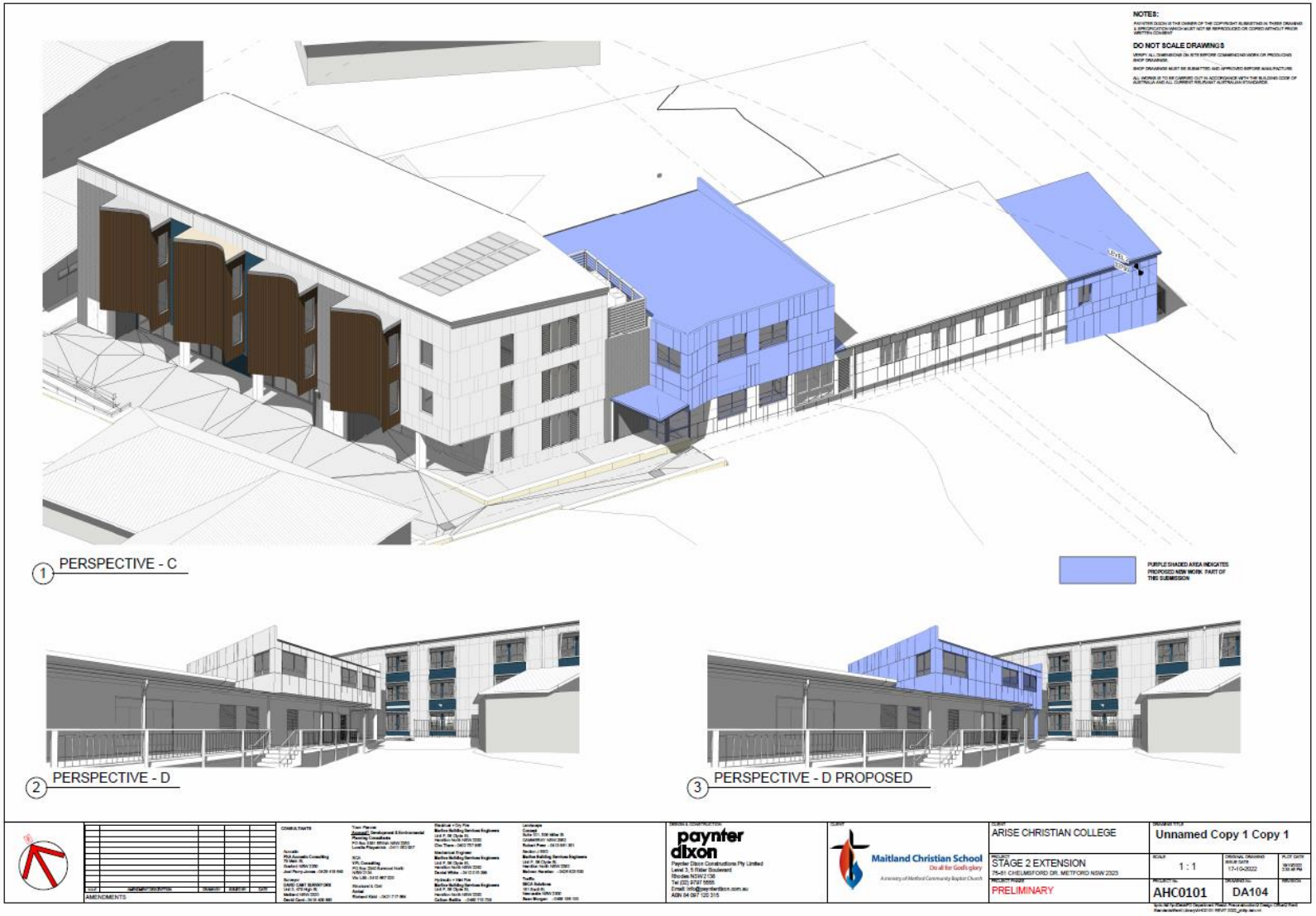
Please feel free to contact our office on 4032 7979 should you require any additional information.

Yours sincerely

Sean Morgan

Director

Attachment B: Stage 2 Plans




NOTES:
DO NOT SCALE DRAWING
CHELSMFORD DRIVE
UPRIGHT KERB
CONCRETE FOOTPATH
BITUMEN CARPARK
144
DP1284176
143
DP1284176
A 88.125
EXISTING BUILDING
2 PARKING DETAIL
1 : 200
ADDITIONAL CARPARK
ARISE CHRISTIAN COLLEGE
STAGE 2 EXTENSION
75-81 CHELMSFORD DR. METFORD NSW 2323
PRELIMINARY
AHC0101
DA002
3
paynter dixon
Maitland Christian School