

5 October 2023

P1738D PD Maitland Christian College Block B + student increase TIA

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

**Attn: Clive Furnass**

Dear Clive,

### **Proposed Expansion, Maitland Christian College, 75-81 Chelmsford Drive, Metford, NSW.**

We have now completed our site work and review of the documentation provided for the proposed expansion of the school facilities within the existing Maitland Christian College site off Chelmsford Drive and provide the following assessment of parking demands, traffic generation 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) published by Transport for NSW, 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.

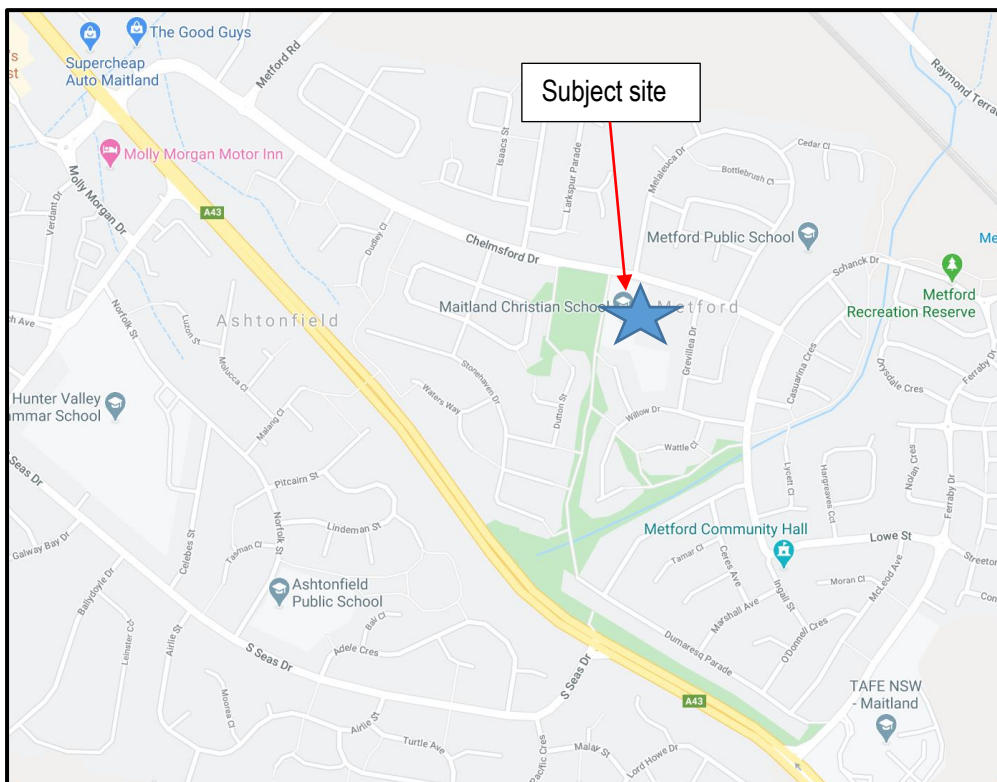


Figure 1 – Subject site in the context of the local road network

The subject site consists of an existing college with road frontage to Chelmsford Drive only. The proposed works for this project see the expansion of the site through a multi level extension.

The proposed expansion of the college facilities sees six additional learning spaces with a potential increase of 168 students and 6 staff. Observations of the traffic movements and parking demands were undertaken in August 2023. At the time of the site work, in addition to normal school operations there was construction work being undertaken on site with associated parking demands. The afternoon survey period also coincided with parent teacher interviews which saw ongoing vehicle movements and parking demands past the normal school finish time.

### 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 link 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 giveaway 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 surveys and parking 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. 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.

Two way flows adjacent to the school in the AM peak (8am-9am) were 811 vph (373 vph eastbound 438 vph westbound) and in the afternoon peak (2.30-3.30pm) were 726vph (359 vph eastbound and 367 vph westbound).

The roundabout of Chelmsford Drive and Metford Road to the north of the school has been upgraded in conjunction with the construction of the new Maitland hospital at Metford and observations undertaken in conjunction with site work confirmed that this roundabout operates well with improved performance and reduced queues over those previously noted.

A review of Crash Statistics provided by TfNSW shows there have been three accidents along Chelmsford Drive in the vicinity of the College. Two occurred in darkness, one at Stradbroke Avenue was a tow-away incident, whilst another near the school and church was an off road to right into an object resulting in a serious injury. The third, also resulting in a serious injury, was associated with a vehicle emerging from a driveway. There is no pattern to these incidents with Chelmsford Drive generally providing a straight alignment with intersections well laid out. Vehicles appeared however to travel at or above the 40km/h school zone speed, particularly travelling east in the

morning and a number of vehicles were noted to undertake U-turns across double lines, particularly in the afternoon.

### Other Developments

Following the development of the Maitland Hospital it is anticipated that further infill, medical based development may occur in the vicinity. The area surrounding the school however appears to be well developed with little opportunity for new development.

### Car Parking

On-street carparking is available along the local roads surrounding the site and on the various side roads. Adjacent to the school are public sports pitches which has a car park with direct frontage to Chelmsford Drive. This car park area is used by parents for drop-off and pick-up purposes.

Parking counts were undertaken in the vicinity of the school to determine the extent of parking associated with the school, particularly during the peak drop off and pick up periods.

The counts confirmed previous observations which is that the majority of parents choose to park on both sides of Chelmsford Drive in the vicinity of the school, with minimal parking noted on the side roads. The car park adjacent to the sports fields provides a popular area for drop off and pick up whilst the on-site car park within the school is generally fully utilised.

During the site work there were also a number of vehicles parked on Chelmsford Drive associated with the current construction being undertaken as part of Arise College upgrades. A review of construction records indicates 16 people on site, the majority of which appeared to be in their own vehicles rather than travelling in groups.

### Proposed Development

The proposed development is for the construction of additional learning areas for the school, providing six new learning spaces. These new spaces can allow for an increase in student numbers, accommodating up to six additional classes (168 students) along with six extra staff.

The project involves the expansion of a building to allow a multi level learning area.

### Access and parking

There are no changes proposed to the access however six additional staff car parking spaces shall be incorporated into the school grounds. This will be achieved by creating angle parking along the existing driveway where currently parallel parking is provided along with a general realignment of parking.

Buses will continue to load within this area with the parking managed on site per the current arrangement.

There shall be no change to the servicing requirements for the school in conjunction with these new enrolment spaces and staff numbers.

### Traffic Impact

The student numbers are proposed to increase by 168 places and there shall be an associated increase in traffic values. Current school numbers (Term 3 2023) are in the order of 715 students (comprising 665 for MCS + 50 for Arise Christian College).

A review of bus usage in August 2023 indicates that daily bus demands are in the order of 31% of student numbers whilst allowing for pedestrian and cycling demands of 3%, may see on average up to 66% of students travel to the school by private vehicle.

Allowing a car occupancy rate of 2 per vehicle for the balance of the cohort (appropriate given the K-12 nature of the school), the school expansion may see 56 additional vehicles associated with the morning and afternoon pick up.

The additional trips associated with the six staff will typically occur prior to or after the school peak period and so does not add to traffic accumulation at the critical peak school times.

The impact of 56 additional vehicles, equally split to the east and west, could see traffic flows adjacent to the school increase in the AM peak to 866 vph (400 vph eastbound 466 vph westbound) and in the afternoon peak to 781 vph (386 vph eastbound and 395 vph westbound).

### Peak Period Impact on Intersections

The key impact occurs at the entry to the carpark adjacent to the playing fields which is used by the school community as a pick up and drop off area. In the morning both the school grounds and this carpark are used for drop off with the school providing a Kiss and Drop zone as shown in Attachment B. In the afternoon the front of the school is dedicated to bus pick ups with parents parking on street or using the sports field carpark.

Operating with one way circulation vehicles enter the carpark site at the eastern end and exit at the western end. Although there are no signs to the contrary the driveway tends to operate as a left out only, in part because of the painted island associated with the pedestrian refuge to the west of the driveway and also due to the high demand for passing traffic.

Movements to and from the carpark see 117 vehicles enter and 133 leave during the period 8.05-9.05AM and 101 enter and 117 vehicles leave between 2.20-3.20PM. Exit movements are slightly higher reflecting vehicles already entered/parked prior to the peak.

On average, this carpark demand surveyed represents 20% of the cohort. On the basis that this proportion was maintained in conjunction with the expansion, this could see an additional 36 vehicles enter and leave this area. Such demands would be spread throughout the morning drop off or afternoon pick up period.

Observations show that for the majority of the time the carpark access and egress operate well with vehicles able to enter and exit the carpark efficiently. At periods of absolute peak traffic flow, which includes the movement of various buses westbound along this corridor, there can be delays for eastbound traffic on Chelmsford Drive whilst vehicles are propped to turn right.

Modifications to line marking could be considered to improve traffic flows in this area.

Exit movements from the carpark would be enhanced through the installation of No Right Turn signage between the school peak periods. This would avoid delays within the carpark whilst some drivers wait to turn right. These demands however are low as most drivers do turn left to exit. Motorists with a destination east are more likely to park on street either along Chelmsford Drive or on adjacent streets given that there are minimal delays for left turns out of these streets.

Peak Period Impacts on Surrounding Streets

The balance of the drop off and pick up demands occur by parents/carers parking on street and walking to the school grounds.

Parking counts were undertaken during both the morning and afternoon period to determine typical demands associated with the school.

In the morning these demands are low with drop offs spread across a long period and a high turnover of parking as well as the two areas being used for the drop off of children. The parking on Chelmsford Drive did include construction vehicles in the morning and afternoon. These demands are short term being associated with construction work within the school site.

In the afternoon parking demands were recorded as primarily stretching along Chelmsford Drive. Peak parking was observed to occur between 2.45 and 3pm with parked vehicles starting to move by 3pm and flags in the carpark withdrawn by 3.15pm reflecting the end of the busier pick up period. Figure 2 below shows the extent of parking at the 2.45pm peak.

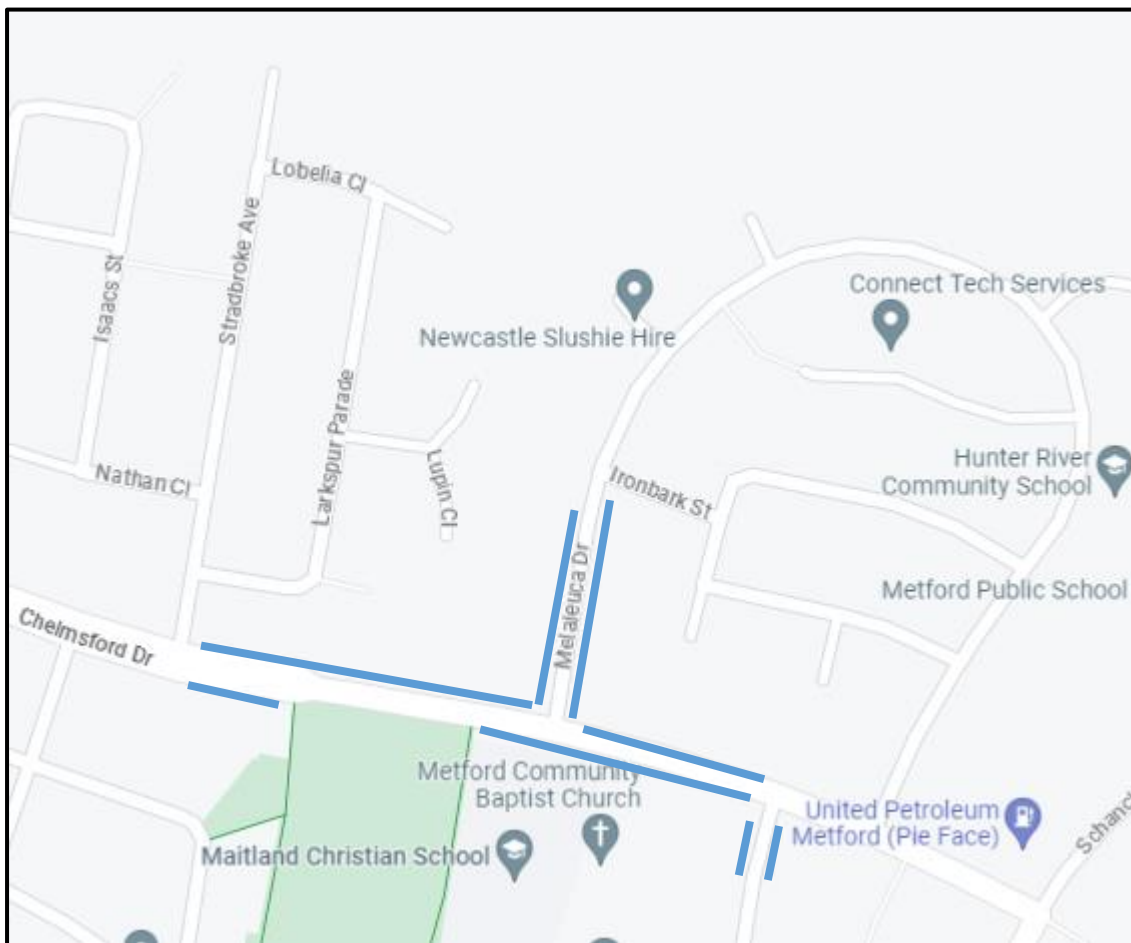


Figure 2 Extent of peak afternoon parking associated with the school

Noted during the parking surveys were:

- Parking on Chelmsford Drive in vicinity of school included construction vehicles (utes etc). Extent of parking increased between 2pm and 2.45pm with maximum as shown in Figure 2 above by 2.45pm
- Parking on Melaleuca Drive between Chelmsford Drive and Ironbark Street increased by six vehicles from 10 to 16 vehicles between 1.50pm and 2.45pm reducing back to 10 vehicles by 3.30pm.
- No changes to local parking demands on Melaleuca Drive north of Ironbark Street

- No changes to on street parking noted on Stradbroke Avenue
- One parent noted parked in Larkspur Parade who walked through the adjacent reserve to access the school
- Seven vehicles parked on Grevillea Drive (east of school) at 2.45pm reduced to 4 vehicles at 3.30pm
- In school parking had 25 vehicles in the morning and 10 in the church carpark. Afternoon had 27 cars and a bus/people mover in school carpark and 12 vehicles parked in the church.

Overall, while parking is keenly sought close to the school, there is a ready supply of vacant space on local streets within 220 metres walk of the school.

Allowing for the proposed expansion with 36 vehicles potentially using the carpark throughout the afternoon pick up, the balance of 20 vehicles may seek parking on street. The parking surveys show that there is spare capacity for not only these 20 vehicles to park for the short period associated with the afternoon pick up on the streets surrounding the school, but if necessary spare capacity for all of the additional vehicles associated with the proposed expansion.

For the additional six staff, six extra parking spaces are to be provided within the school grounds. This allows for staff parking despite opportunities for active travel and the chance that some staff to car share or cycle to work.

### Construction Traffic

Traffic associated with the construction of this new building would be consistent with that required for the Arise College construction currently being undertaken. It is anticipated that the Arise building shall be completed with no significant cross over of construction and therefore minimal cumulative demands.

### Conclusion

Overall, the proposed expansion of the school to include six new learning spaces with additional capacity for up to 168 students and six staff can be accommodated within the local road network.

Six additional staff parking spaces are being provided on site. The survey of local streets also confirmed there is adequate capacity for the short period in the afternoon for parents to park and walk to the school. Similarly, the use of the carpark adjacent to the playing fields can continue to provide for the efficient drop off and pick up of children.

Introduction of No Right Turn signage during the peak school periods at the sports ground carpark exit can improve the movement of vehicles exiting the carpark whilst additional line marking could be considered to improve traffic flows in this location.

Based on this assessment it is concluded that the expansion of the College should be approved on traffic and parking grounds.

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

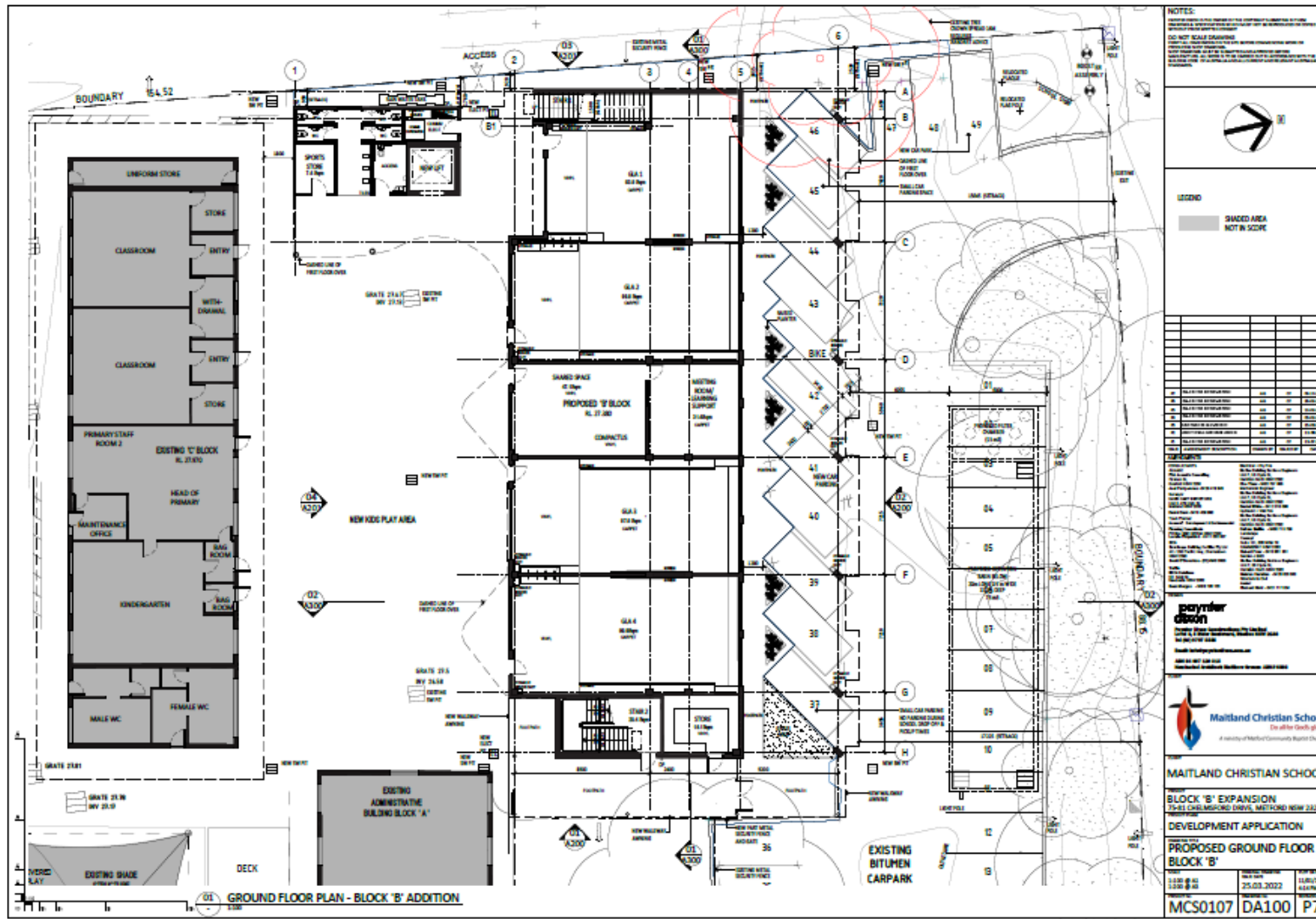
Yours sincerely



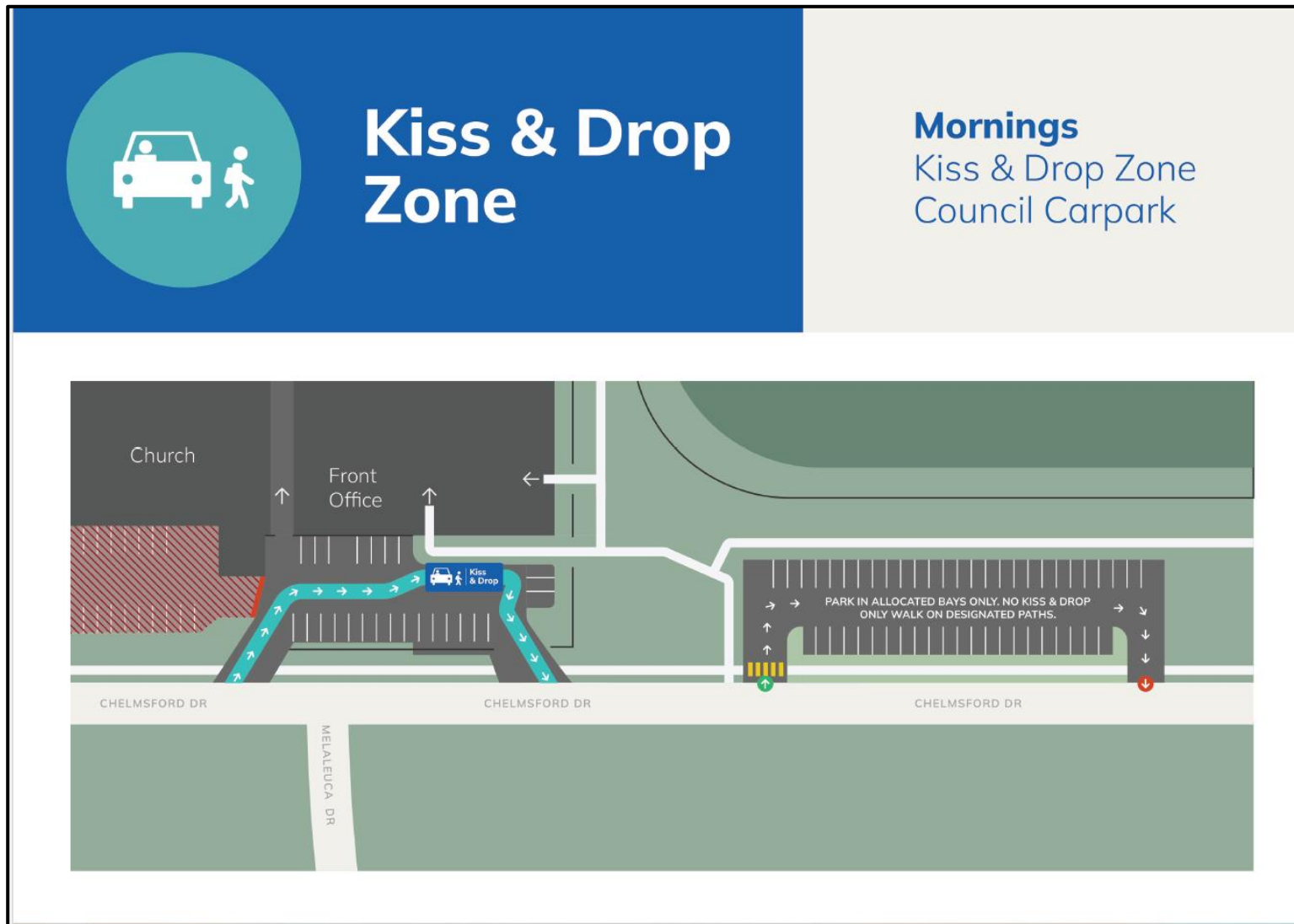
**Sean Morgan**

**Director**

Attachment A: Site Plan



Attachment B – Kiss and Drop Arrangements







# Kiss & Drop Zone

Afternoons  
Council Carpark

