

19 July 2023

P2662 EJE Metford Medical centre assessment

Metford Medical Centre Pty Ltd  
PO Box 1631  
NOOSA HEADS NSW 4567  
C/o EJE Architects

**Attn: Luke Jogever**

Dear Luke,

### **Proposed Medical Centre, 395 Metford Road, Metford NSW**

We have now completed our site work and review of the documentation provided for the proposed medical centre development at 395 Metford Road, Metford 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 Maitland Council DCP dated December 2011 (updated 31 May 2023), with reference to the Guide to Traffic Generating Developments (GtTGD) and Australian Standard AS2890.1: Off-street Car Parking Facilities.

### **Background**

The subject site is located at 395 Metford Road, Metford as shown below in Figure 1. The site has frontages to both Metford Road and Turton Street with entry to be provided off Metford Road and exit movements onto Turton Street dictated by the shape of the site.

Metford Road is a local road under the care and control of Council as the road authority with Clause 2.119 of the Transport and Infrastructure SEPP 2021 (Development with frontage to classified road ) not being applicable.

Similarly, the size and nature of the proposed development does not trigger the requirement for referral to Transport for New South Wales under Schedule 3 of Transport and Infrastructure SEPP 2021 given that the project is greater than 90m from any state roads.

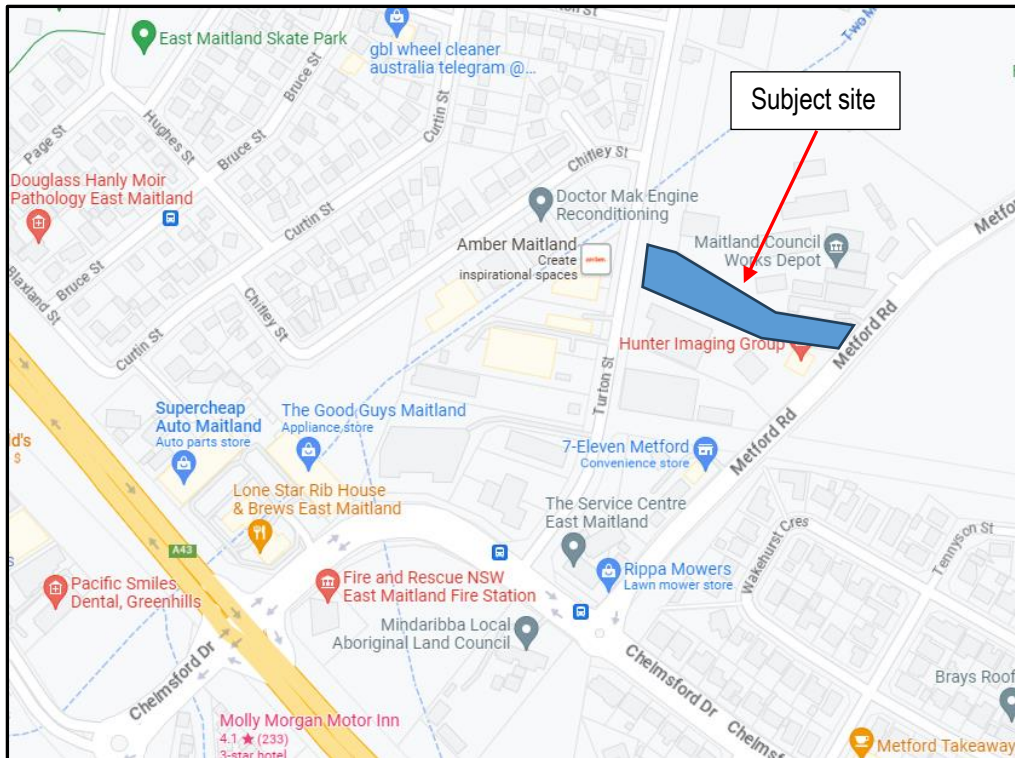


Figure 1 – Subject site in the context of the local road network

The lot is currently unoccupied having previously been used as a concrete batching plant.

### Road Hierarchy

**The New England Highway** is the major road passing through the locality. It forms part of the state road network and provides the primary link between the greater Maitland area and the M1 Motorway / Greater Newcastle area. It generally provides a minimum of 2 lanes of travel in each direction separated by a central median to restrict right turn movements. It provides additional lanes at intersections to maintain capacity with the key intersections being signal controlled. It connects with Chelmsford Drive via a 4-way signal-controlled intersection.

**Chelmsford Drive** provides a mixture of 1 and 2 lanes of travel in both directions separated by a central median. It provides additional lanes on the approach to the New England Highway for increased capacity and restricts access to individual lots to improve road capacity.

Chelmsford Drive then connects with **Metford Road** via a 3-way roundabout. Metford Road in this location provides a single lane of travel in both directions and has a central turn lane to accommodate the traffic wishing to turn into the various sites along its length including the subject site. It has been upgraded as part of the development of the Maitland Hospital to the north east of the subject site. There is a footpath provided along the site frontage and a shared path on the opposite side of Metford Road from the subject site. Street lighting is provided along its length and it operates under the posted speed limit of 60 km/h.

### Current Road Network Operation

Seca Solution has undertaken a morning peak period traffic survey on Metford Road to determine the current 2-way traffic flows in this location on Monday 26<sup>th</sup> June 2023 between 8.00 and 9.00 AM, reflective of commuting demands. Based on the traffic surveys completed, during the peak period the 2-way traffic flow was in the order of 1,500 vehicles per hour with a bias in traffic south-westbound towards the New England Highway. This reflects the desire of commuters to access the New England Highway and the key attractions along this route.

Traffic flows on Turton Road are much lower and based on observations are less than 200 vehicles per hour.

The on-site observations show that the road network in this location works well, with minor delays at the roundabout of Metford Road and Chelmsford Drive. This roundabout was upgraded with a second circulating lane as part of the development of the Maitland Hospital.

A review of crash data shows there have been no accidents in the immediate vicinity of the subject site on Metford Road over the 5 year reporting period (2017-2021). There was a single vehicle accident to the north of the site involving a single vehicle running off the road and hitting an object (2019) resulting in a serious injury. The road in this location is well laid out with good visibility and the central turn lane assist with road safety.

Public Transport

Bus services operate along Metford Road with routes 188 and 189 passing the subject site and providing a reasonably regular bus service through the day as shown below.

There is no sign posted bus stop within the immediately vicinity of the subject site.

There are no train services within the immediate vicinity with the closest station at East Maitland approximately 1.5 kms or so away from the subject site.

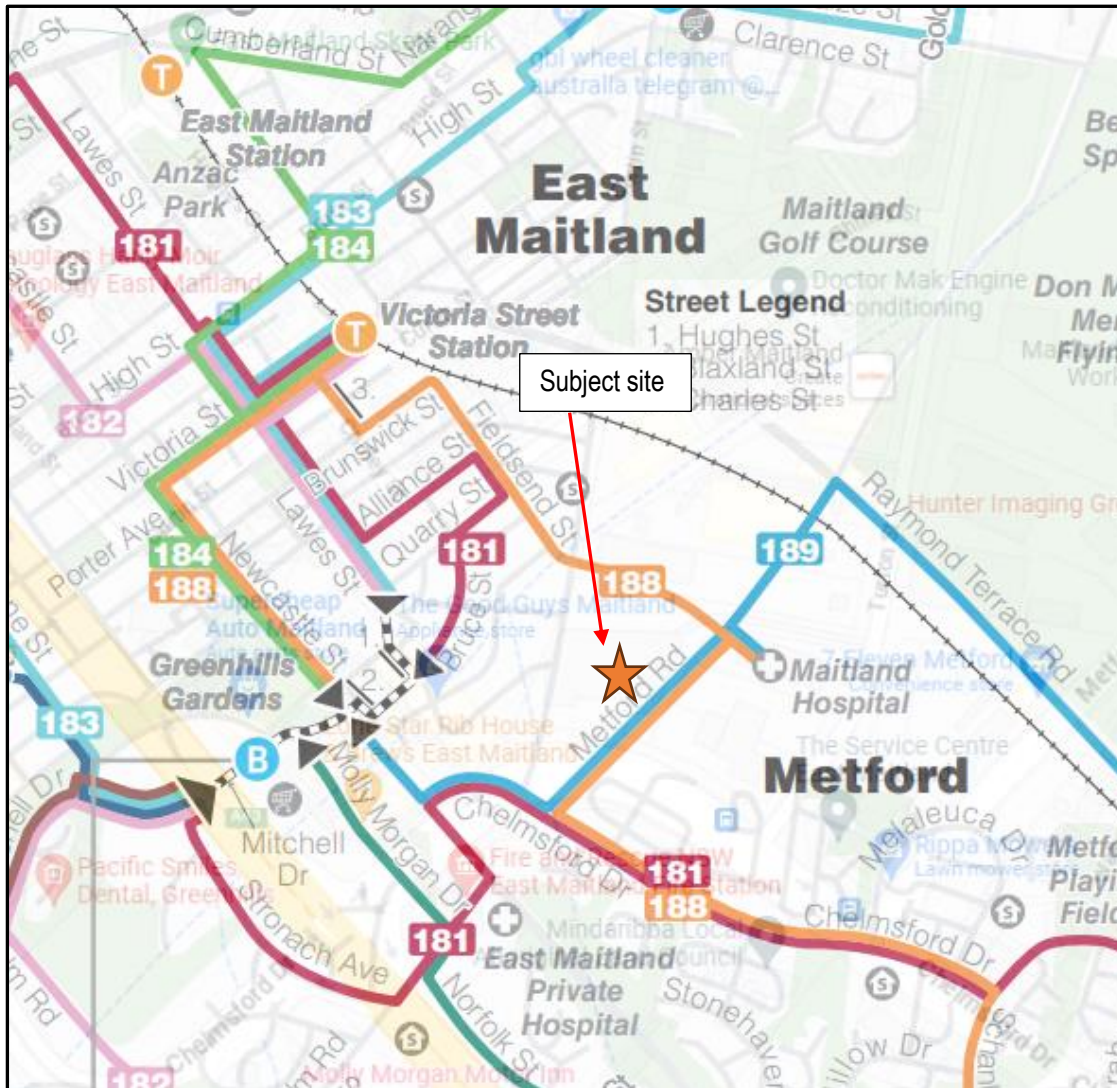


Figure 2 – bus routes adjacent to subject site.



### Parking

There is no on-street parking available along the frontage to Metford Road.

On-street parking is permitted along Turton Street to the rear of the site to both sides. Observations on site on Monday 26<sup>th</sup> June 2023 at 9.30 AM show that the demands for on-street parking in this location are very low.

There is no public off-street parking provided within the immediate area.

### Proposed Development

The proposed development is for a medical centre with 11 separate medical suites with on site parking provision. The project allows for vehicle entry movements off Metford Road and vehicle exit movements onto Turton Street to the rear of the site. The plans allow for 71 parking spaces to be provided at 90 degrees to the one-way drive though including six designated disabled parking bays and a drop off zone in the centre of the site.

A concept plan for the proposed development is included in **Attachment B**.

### Access

The driveway on Metford Road will provide for entry movements only and is located in a similar location to the existing 2-way driveway that serves the site in this location. This driveway is located on a straight section of the road with both left and right turn movements permitted into the site. There is a sheltered right turn lane on Metford Road that services the subject site.

All vehicles exiting the site shall do so via the new driveway on Turton Road. Vehicles can turn left or right out of this proposed driveway with no restrictions for vehicle movements at this location.

On Metford Road, the posted speed limit is 60 km/h and under Austroads Guidelines the sight distance required is 114 metres minimum. Whilst this distance is required for a driver exiting the site, it provides a worst-case scenario and with this distance available road safety would not be compromised. The sight distance has been measured on site and exceeds 120 metres for a driver entering the site off Metford Road, which is further enhanced by the sheltered right turn lane in this location.



Photo 1 – View south along Metford Road for driver turning right into the subject site.

For drivers exiting the site onto Turton Road, the speed limit of 60 km/h applies and the sight distance of 114 metres could be applied at the site exit if considered as an intersection. As a driveway however, under AS2890 then the requirement would be 83 metres desirable. The review on site shows that the sight distance of 114 metres is available, although this could potentially be impacted by parked vehicles as per the normal urban environment. The distance of 83 metres for consideration as a driveway can also be met.



*Photo 2 – View to left for driver exiting the site on to Turton Road*



*Photo 3 – View to right for driver exiting the site onto Turton Road*

The medical centre driveway shall meet the required width of 6 metres for driveways under AS2890.1, for a car park with 25 -100 spaces accessed off a local or non-arterial road. The carpark design is constrained to one-way movements only due to the width of the site overall. The opportunity for turning around within the site if a single access was provided is not viable.



Pedestrian access to the medical centre is provided from both Turton Road and Metford Road, with an existing footpath providing for pedestrian access along Metford Road.

### Parking

A total of 71 parking spaces are to be provided within the site, 6 of which are designated disabled parking spaces designed in accordance with AS2890 part 6.

The Maitland City Council DCP requires parking to be provided at a rate of 1 space per 2 practitioners for medical centres.

The plans for the project do not show the number of practitioners but rather provides for 11 separate suites. With a parking provision of 71 spaces across the site, this could accommodate up to 35 practitioners. Based on the floor plans provided and an allowance on average of 3 practitioners per suite, this could give 33 in total and a parking requirement of 66 parking spaces. There are 4 suites that are less than 100m<sup>2</sup> and would not accommodate 3 practitioners and could be suitable for a dentist type use with 2 practitioners. With the worst-case scenario of 3 practitioners per suite it can be seen that the parking provision across the site is therefore adequate to meet the future parking needs for the overall project.

All general parking spaces within the carpark shall be designed in accordance with AS2890 for a Class 3 parking facility with spaces 2.6m wide by 5.4m long and an aisle width of 5.8m.

Staff parking shall be designed in accordance with AS2890.1 for Class 1 with spaces a minimum of 2.4m wide and 5.4m long and an aisle width of 5.8m

Accessible parking shall be designed in accordance with AS2890.6 with spaces 2.4m wide and 5.4m long with a shared space adjacent being the same size and an aisle width of 5.8m.

### Site Servicing

The need for site servicing will be minimal. Waste collection will be by standard waste collection truck with a waste store area provided adjacent to the one-way driveway. The waste truck can enter the site, stop adjacent to the waste storage area and collect the waste. The time for this waste collection can be managed to avoid busy periods for the medical centre. Deliveries shall typically be by van size vehicles which can use the parking on site as required.

### Traffic Analysis

#### Traffic Generation

#### Medical Centre

The GtTGDs provides a potential wide range of generation rates for medical centres, with a variance of between 4.4 and 19.4 trips per 100 m<sup>2</sup> and an average of 10.4. Similarly in the afternoon the variance is between 3.1 and 19.4 trips per 100 m<sup>2</sup> and an average of 8.8 trips. If these average rates are applied then the proposal could generate the following traffic flows:

- Morning commuter peak hour trips – 10.4 trips per 100m<sup>2</sup> GFA
- Evening commuter peak hour trips - 8.8 trips per 100m<sup>2</sup> GFA
- No daily rates specified.

Based on the medical centre having a GFA of 2757 m<sup>2</sup>

- 286 vehicle trips in the morning peak hour and
- 242 vehicle trips during the afternoon peak hour.

It is considered that the above flows are excessive for the project site and that the number of vehicles would be much lower. Allowing for 33 practitioners across the site, with 2 patients per hour, this could give 66 inbound and

66 outbound patient trips per hour. Allowing for other traffic movements including staff or some overlap in patients, these values could be doubled giving 132 inbound and 132 outbound trips per hour. This would equate to a value towards the lower end of the above surveyed rates from TfNSW guidelines and more representative of current traffic patterns for these types of developments. It is noted that the generation rates from the RTA Guide date from 1991 for medical facilities in Sydney, with these rates potentially not representative of current traffic demands for these types of developments with opportunities for shared trips and complimentary services provided within the centre.

Daily rates are considered to be in the order of 5 times the peak rates giving some 660 inbound and 660 outbound traffic movements per day.

### Traffic Distribution

All traffic shall enter the site off Metford Road and exit onto Turton Road.

Based on the traffic surveys and the location of the site relative to the local residential area and the nearby Maitland Hospital, it is considered that the traffic demands could be relatively evenly distributed giving equal splits between inbound right turn / left turn movements and a similar pattern for outbound traffic movements on Turton Road.

Table 1 - Distribution of additional traffic in AM, PM and daily traffic

Direction	AM peak	PM peak	Daily
Right turn in from Metford Road	66	66	330
Left turn in from Metford Road	66	66	330
Right turn out to Turton Road	66	66	330
Left turn out to Turton Road	66	66	330

### Impact of additional Traffic Flows

The development could result in an increase in peak hour flows along Metford Road in the order of 66 per direction and a similar increase on Turton Road of 66 vehicles per hour in the peaks. Turton Road is currently well within its capacity as an urban road with 2-way traffic flows of less than 200 vehicles per hour. With these increasing by 66 either side of the site access, it can be seen that the hourly flow on this road could remain below 300 vehicles per hour and well within the capacity of the road and well within the directional volume of 900 vehicles per lane.

For Metford Road, it can be seen that the development could increase the 2-way traffic flow to both sides of the site access by 66 vehicles per hour during the peak periods. From the traffic survey, the current morning peak traffic demands are in the order of 1,500 vehicles per hour, with the dominant south-west bound movement (towards the New England Highway) being 858 vehicles per hour. For an urban road, Table 4.4 of the RTA Guide provides the following advice:

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

Table 2 – Urban road capacity values from RTA Guide to traffic generating developments (Table 4.4 of the guide)

From the above, with current peak flows of 858 vehicles per hour in the AM peak (and a similar value expected in the PM peak) this indicates that the road is currently operating at a level of service of D. With the additional traffic demands associated with the project site the total directional flow could increase to around 920 vehicles per hour, which is just over the indicated value of 900 vehicles per hour per lane.

Whilst the total hourly flows could be over the desirable capacity of 900 vehicles per lane, the guide shows that the ultimate capacity of the road is around 1,400 vehicles per hour with the current road network observed to be operating to a satisfactory level. It can be seen that the development of the Maitland Hospital has significantly increased traffic flows in this location and the road has been upgraded to accommodate this demand. When assessing the traffic demands associated with the subject site, no allowance has been given to the previous (approved) use on the site as a light industrial user and there has been no allowance for shared / complimentary trips. These trips could account for 10% of the trips in the peaks with traffic accessing the site being diverted trips only.

Overall, it is considered that the additional traffic movements associated with the project shall have an acceptable impact upon the local road network during the morning and afternoon peak periods and outside of these peaks when the traffic flow on the local road network is lower these impacts will also be acceptable.

### Peak Hour Impact on Intersections

Observations on site completed by Seca Solution as part of this project work show that the roundabout controlled intersection of Metford Road and Chelmsford Drive currently operates to a reasonable standard with low delays / queues for traffic on the approach from Metford Road and the New England Highway. The additional traffic associated with the project is considered to have a minor and acceptable impact upon the overall operation of this roundabout with only minor increases in potential delays / queues.

### Queuing at Site Access

The driveway onto Metford Road has been designed to meet the requirements of AS2890.

Metford Road at the site access provides a single lane in each direction and a sheltered right turn lane for traffic entering the subject site. This right turn lane is approximately 40 metres long and allowing 6 metres per car provides storage for 6 cars. Observations on site showed that there was no right turn demand into the adjacent site (which also uses this right turn lane) and it is considered that this right turn lane has adequate capacity to cater for the right turn demand into the subject site.

For the left turn into the site, the existing sealed shoulder in this location allows for safe and appropriate turn movements into the subject site with minimal delays for the through traffic on Metford Road.

All exit movements from the site shall be to Turton Road and given the very low traffic flows in this location there will be minimal queues / delays for traffic exiting the site.



**Conclusion**

Overall, the proposed medical centre will have a minor and acceptable impact upon traffic and parking in the local area.

Parking has been assessed applying the Council DCP. The provision of 71 parking spaces on site could allow for upto 35 practitioners. Whilst no details are available for the future number of practitioners on site, given the size of the suites, allowing for 3 practitioners per suite on a worst-case scenario the on-site parking shall be adequate and within the DCP requirements.

The proposed access and circulation through the car park can be provided in a manner consistent with the requirements of AS2890 taking into consideration the Council DCP. A one-way access arrangement is proposed due to the shape of the site which allows for dispersed traffic movements.

Traffic demands for the medical centre may not coincide with the local road peak in the morning however has been reviewed for this time as a worst-case scenario and it is assumed the afternoon flows would be similar. The additional trips associated with this development will have a relatively minor impact upon the overall operation of the surrounding roads and intersections with minimal increases in delays and queues.

Overall, it is concluded that the project 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: Concept Plan

