

25 November 2021

P1738 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 Facilities, 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 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) 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.

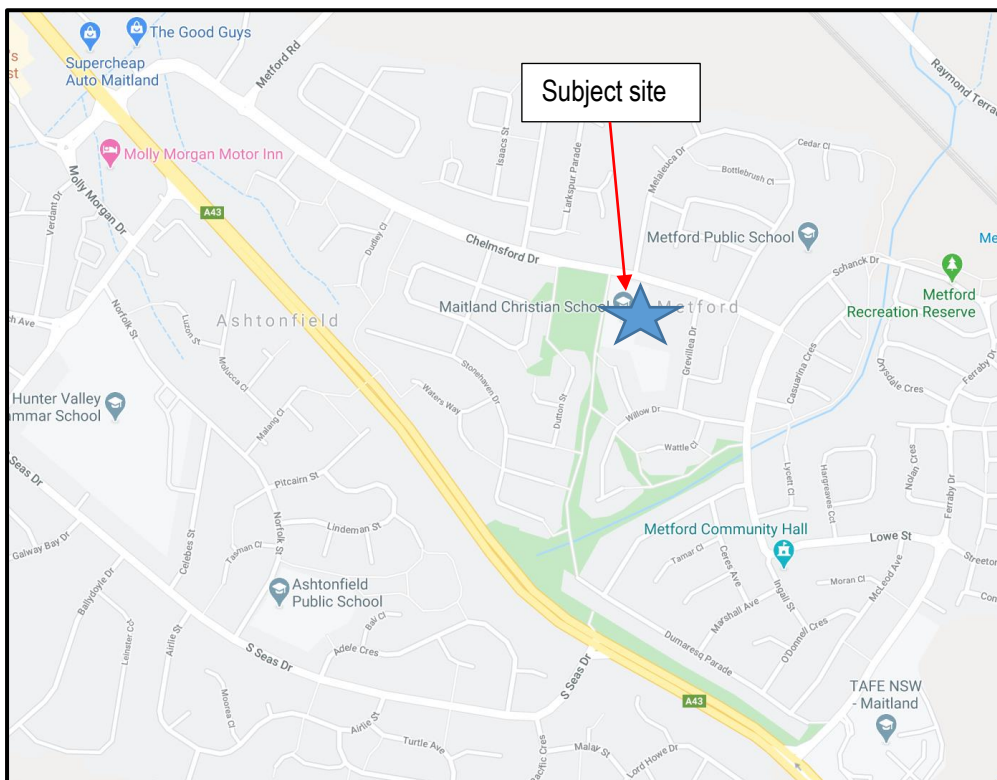


Figure 1 – Subject site in the context of the local road network

The subject site consists of an existing college with road frontage to Chelmsford Drive only. The proposed works for this project are located to the rear of the adjacent church between the existing college site and the Stage 1 project associated with Arise College. This land is currently vacant.

Although the proposed expansion of the college facilities sees no increase in student numbers, this assessment of the traffic impacts associated with this project have been impacted upon by the Covid-19 pandemic, which has impacted upon travel patterns and students demands for the existing college. Observations of the traffic movements and demands were completed during 2020 when although normal traffic patterns for the school were not occurring the College was at least operational. Advice from the study team at this time indicates that the number of students accessing the college by bus had reduced from normal patterns and students were instead relying on private motor vehicles to access the school. This increased the traffic demands associated with the drop-off and pick-up times accordingly.

Discussions held with Council during 2020 relating to the College are provided below:

- It was accepted that current traffic demands associated with the school do not represent normal patterns and as such any traffic data collected as part of this assessment should be carefully considered with regard to impacts of the Covid-19 pandemic
- There are some traffic issues along Chelmsford Drive adjacent to the college, but these may not all be due to the school demands. The roundabout controlled intersection of Chelmsford Drive and Metford Road would appear to create delays (due to the imbalance of traffic demands / movements) which can create queues back from this roundabout to the school at peak times (approximately 1,000 metres).

It is noted that the Chelmsford Drive and Metford Road roundabout has subsequently been upgraded.

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 give-way 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, with delays for the through traffic in both directions created by traffic turning in and out of 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.

The roundabout at the intersection of Chelmsford Drive and Metford Road was also observed in 2020 and the imbalance in traffic demands creates delays for traffic on Chelmsford Drive south of Metford Road. The traffic

movements at this roundabout are predominantly a left turn from Chelmsford Drive into Metford Road and the reverse movement, with very low traffic demands for traffic to continue south through the roundabout. This means that gaps in the traffic movements from Metford Road are very limited with this movement operating nearly continual. This means that there are very few gaps in the traffic for vehicles to exit from Chelmsford Drive south at this location. During the afternoon peak in particular this creates significant delays and associated queues for northbound traffic on Chelmsford Drive.

As traffic demands had not normalised at the time of preparing this report (early October 2021) no further observations of this upgraded roundabout have been undertaken.

Other Developments

The major development occurring in this location is the construction of the new Maitland Hospital on Metford Road to the north of the roundabout controlled intersection of Metford Road and Chelmsford Drive. Due to open in early 2022, this will significantly increase the traffic movements at this roundabout controlled intersection with similar traffic patterns to those observed during our site work. As part of the construction work for this hospital the roundabout at the intersection of Metford Road and Chelmsford Drive has been upgraded. The traffic modelling assessment completed for the hospital project shows that with this upgrade the roundabout will operate very well with a level of service of A or B and minor delays for traffic on Chelmsford Drive south approach.

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 for drop-off and pick-up purposes associated with the college.

Parking was observed on both sides of Chelmsford Drive in the vicinity of the college, with no parking noted on the side roads. There is also an on-site car park with 33 parking spaces. These were full during the survey work associated with the project with staff parking in these spaces only.

Proposed Development

The proposed development is for the construction of specialist learning areas for the College, providing a Gym, a Drama area and a Library with associated amenities and some general learning spaces. This provides more specific learning areas to accommodate the needs of the existing school cohort however sees no increase in staff nor student numbers.

The project involves the construction of a new building to the rear of the existing school and church grounds near what is currently being built as the Arise College for students with special needs.

Access and parking

There are no changes proposed to the access or parking associated with the existing College.

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

Traffic Impact

As there are no changes proposed to the staff enrolments or student numbers the new building will not generate additional traffic demands once open. It will provide improved facilities for the existing student body enabling the opportunity for dedicated facilities along with storage and amenities eg the library and gym.

Peak Hour Impact on Intersections

The development will see no increase in vehicle movements at the roundabout controlled intersection of Chelmsford Drive and Metford Road. As discussed above, this roundabout historically operated poorly with queues forming back to the school frontage. With the upgrades associated with the new Maitland Hospital this intersection has been assessed to operate well in the future (levels of service of A / B) with the existing College demands included in the assessments undertaken for this road upgrade.

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 new Library, Gym and Drama building with its associated learning spaces and amenities will provide an upgrade of existing facilities for the current staff and students at the Maitland Christian College. No increase in staff or student numbers shall be generated by the new facilities with no changes to the parking or access arrangements over those currently approved.

There is no change anticipated to traffic demands over those currently generated by the school.

Upgrades to the roundabout of Chelmsford Road and Metford Road are predicted to provide improved levels of service and so queuing associated with this roundabout should improve over those experienced prior to this road upgrade.

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

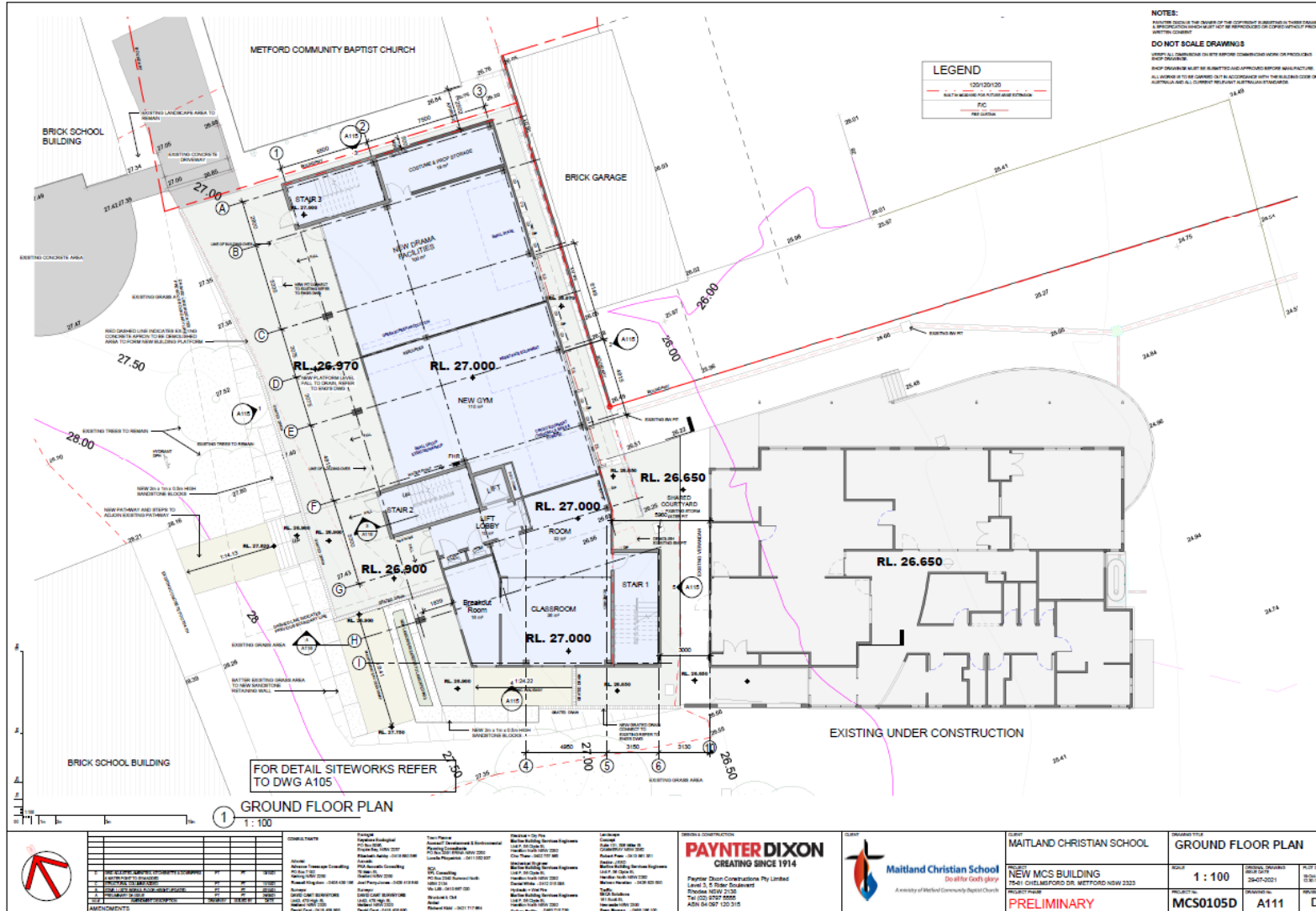
Yours sincerely

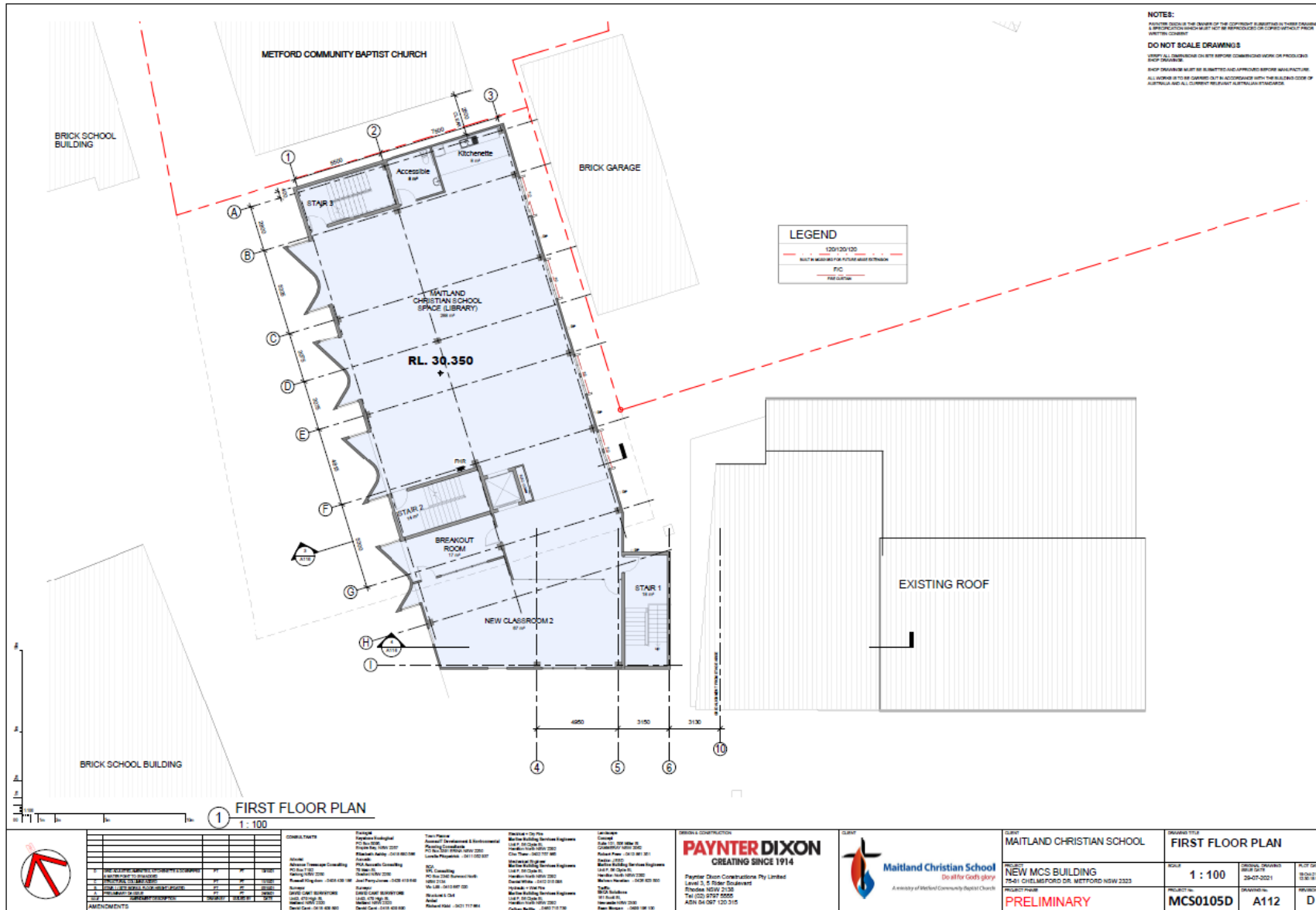


Sean Morgan

Director

Attachment A: Site Plan





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LEGEND	
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1 FIRST FLOOR PLAN
1:100

NO.	DESCRIPTION	DATE	BY	CHECKED
1	PRELIMINARY CONCEPT DESIGN	15/01/2024	JD	JD
2	CONCEPT DESIGN	22/01/2024	JD	JD
3	PRELIMINARY CONCEPT DESIGN	22/01/2024	JD	JD
4	CONCEPT DESIGN	22/01/2024	JD	JD
5	PRELIMINARY CONCEPT DESIGN	22/01/2024	JD	JD
6	CONCEPT DESIGN	22/01/2024	JD	JD

CLIENTS	DESIGNER	ENGINEER	CONTRACTOR
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PAYNTER DIXON
CREATING SINCE 1914

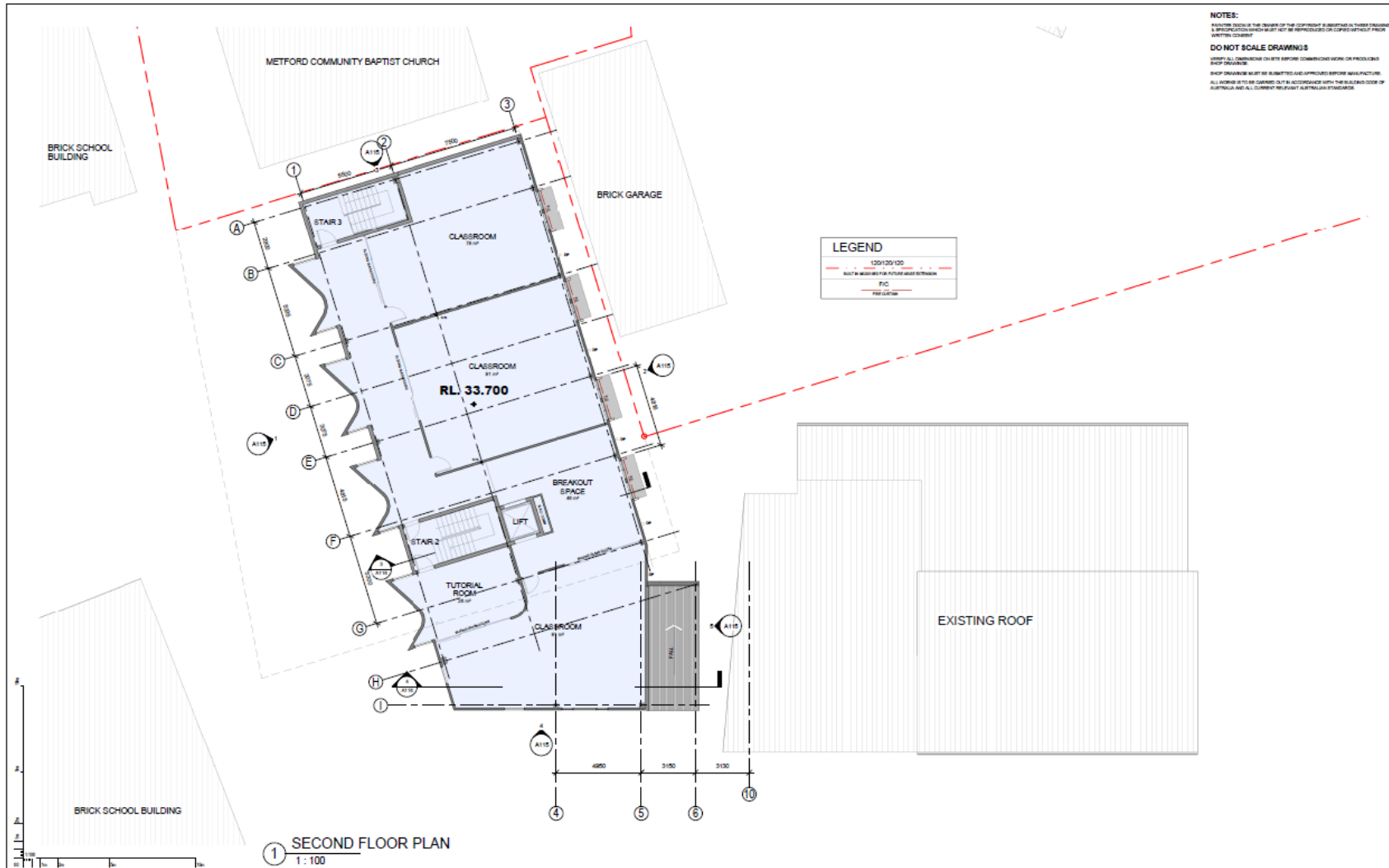
Paynter Dixon Constructions Pty Limited
Level 3, 5 Stoker Boulevard
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Tel: (02) 9727 5500
Fax: (02) 9727 5505
AS/NZS 3000:2018

Maitland Christian School
Do all for God's glory

An entity of Metford Community Baptist Church

CLIENT	PROJECT
Maitland Christian School	NEW MCS BUILDING 75-81 CHILMFORD DR, METFORD NSW 2323

DRAWING TITLE	SCALE	DATE	REVISION
FIRST FLOOR PLAN	1:100	20/01/2024	A112



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LEGEND

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NOT A WALL FOR FUTURE ROOF EXTENSION
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FIN CURVE

1 SECOND FLOOR PLAN
1 : 100

	<p>CLIENT Maitland Christian School</p>	<p>PROJECT NAME NEW MCS BUILDING 35-41 CHELMFORD DR, METFORD NSW 2333</p>	<p>SCALE 1 : 100</p>	<p>DATE 28-07-2021</p>	<p>PROJECT NO. MCS0105D</p>	<p>DRAWING NO. A113</p>	<p>REVISION D</p>
	<p>ARCHITECT PAYNTER DIXON CREATING SINCE 1914</p>	<p>CLIENT Maitland Christian School Do all for God's glory</p>	<p>PROJECT NAME PRELIMINARY</p>	<p>SCALE 1 : 100</p>	<p>DATE 28-07-2021</p>	<p>PROJECT NO. MCS0105D</p>	<p>DRAWING NO. A113</p>

