

Project: Proposed Gym and Swim Centre

Lot 3046, 160 Butler Boulevard, Butler

Client:

Author:

Date:

Shawmac Document #: 21/07/2022

2206012-TIS-A

CONSULTING CIVIL AND TRAFFIC ENGINEERS 1 ST. FLOOR, 908 ALBANY HIGHWAY, EAST VICTORIA PARK WA 6101. PHONE|+61 8 9355 1300 EMAIL| admin@ shawmac.com.au





Document Status: Client Review

Version	Prepared By	Reviewed By	Approved By	Date
Α	L. De Leon	P. Nguyen	P. Nguyen	21/07/2022

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File Reference: \\10.0.0.24\\text{NewData\Jobs} Active 2022\\T&T - Traffic & Parking\\Ennis Advisory_Lot 3046 Butler Blvd_Butler_TIS_2206012\\3. Documents\\3.2 Reports\\Ennis Advisory_Lot 3046 Butler Blvd_Butler_TIS_A.docx



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1. Introduction

1.1. Proponent

Shawmac Pty Ltd has been commissioned by Ennis Advisory to prepare a Transport Impact Statement (TIS) for a proposed gym and swim centre in Butler.

This TIS has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines Volume 4 – Individual Developments*. The assessment considers the following key matters:

- Details of the proposed development.
- · Vehicle access and parking.
- Provision for service vehicles.
- · Hours of operation.
- Daily traffic volumes and vehicle types.
- Traffic management on frontage streets.
- Public transport access.
- Pedestrian access.
- Cycle access and end of trip facilities.
- Site specific and safety issues.

1.2. Site Location

The site address is 160 (Lot 3046) Butler Boulevard in Butler. The local authority is the City of Wanneroo.

The general site location is shown in Figure 1. An aerial view of the existing site is shown in Figure 2.





Figure 1: Site Location



Figure 2: Aerial View (Feburary 2022)



2. Proposed Development

2.1. Land Use

The proposed development is a gym and swim centre.

The proposed site layout is shown in Figure 3 and the development plans are attached as Appendix A.



Figure 3: Site Layout

The gym is proposed to operate 24 hours per day, 7 days per week.

The swim centre is proposed to operate from 6am to 9pm, 7 days per week.

The proposed site is located within Precinct B of the Butler District Centre Activity Centre Structure Plan Area which is described as "a mix of office, commercial, consultancy, retail and residential type uses that are centred on Butler Boulevard. Precinct B is based on Main Street principles, while also recognising Butler Boulevard's primary transport function connecting Marmion Avenue and the rail station.



3. Traffic Management on Frontage Streets

3.1. Road Network

3.1.1. Existing Road Layout and Hierarchy

The layout and hierarchy of the existing local road network according to the Main Roads WA *Road Information Mapping System* is shown in **Figure 4**.



Figure 4: Existing Road Network Hierarchy

As shown, Butler Boulevard is classified as a Distributor A and Bruton Lane and Raunds Lane are classified as an Access Road.

The speed limits are shown in Figure 5.





Figure 5: Existing Speed Limits

As shown, a 50km/h speed limit applies on all roads in the vicinity of the site. Bruton Lane and Raunds Lane are constructed as laneways and so the operating speeds are expected to be lower than 50km/h.



4. Vehicle Access and Parking

4.1. Access

The proposed access arrangement is via a new crossover on Bruton lane and is shown in Figure 6.



Figure 6: Proposed Access Arrangement

No vehicle access is proposed to Butler Boulevard which is consistent with the provisions of the Butler District Centre Activity Centre Structure Plan.



4.1.1. Sight Distance

Sight distance requirements from exit crossovers is defined in Figure 3.2 of Australian Standard AS2890.1-2004 *Parking facilities Part 1: Off street car parking* (AS2890.1) as shown in **Figure 7**.

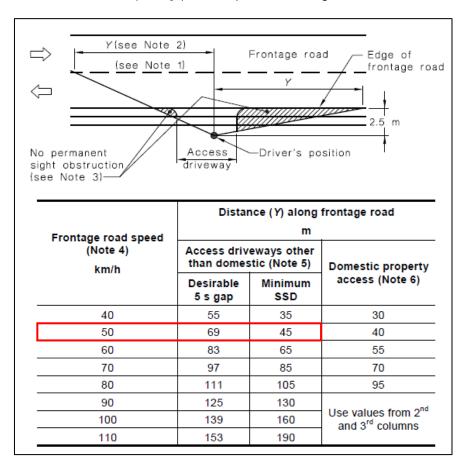


Figure 7: Sight Distance Requirements

Based on a maximum 50km/h speed limit along Bruton Lane, the minimum required sight distance from the Bruton Lane crossover is 45m.

The sight distance check is shown in Figure 8.





Figure 8: Sight Distance Check - Bruton Lane

As shown, the minimum required sight distance is achieved towards the south.

Vehicles approaching from the north are likely to be travelling below the speed limit as they will have slowed down to turn from Butler Boulevard. Based on the approximate 10m turning radius and standard 3% superelevation, the curve negotiating speed would be about 20km/h (based on the Main Roads Supplement to Austroads Guide to Road Design Part 4B). The realistic required stopping sight distance based on a 20km/h approach speed is 20m. There is approximately 35m sight distance towards the north which exceeds the calculated requirement.

The site plan indicates that a retaining wall is proposed around the site boundary. However, the height will not exceed the standard driver eye heigh of 1.15m and so visibility will not be impacted unacceptably.

Vertically, the geometry of Bruton Lane is relatively flat with no major crests that impede sight distance.



4.2. Parking Layout and Provision

4.2.1. Parking Provision

The car parking requirements for developments within the City of Wanneroo are outlined in the City's District Planning Scheme. Under the City of Wanneroo District Planning Scheme Table 2 (Clause 4.14) Car Parking Standards, the applicable land use for the proposed development is considered to be *Recreation Centre* which requires a minimum of 1 space per 4 people accommodated.

The client has advised that the maximum number of occupants at any one time is 50 persons for the swim centre and 70 persons for the gymnasium. The parking requirement is calculated in **Table 1**.

Table 1: City of Wanneroo – Local Planning Scheme

Land Use	Requirement	Quantum	Bays Required	
Gymnasium	1 anges per 4 people accommodated	70	18	
Swim Centre	1 space per 4 people accommodated	50	13	
	Total	120	31	

As shown, the proposed development is required to provide a minimum of 31 parking spaces. The proposed development provides 63 parking spaces which exceeds the minimum requirements outlined in the City's District Planning Scheme.

It is also noted that:

- There is street parking along both sides of Butler Boulevard in the vicinity of the site.
- The site is located adjacent to Butler Station which provides access to numerous rail and bus services.
- The site is located within an Activity Centre where some patrons may visit multiple locations and parking can often be shared between neighbouring sites.

4.2.2. Parking Design

The parking layout will need to comply with the requirements of Australian Standard AS2890.1. The user class will depend on the purpose of the bay as detailed in **Figure 9**.





TABLE 1.1
CLASSIFICATION OF OFF-STREET CAR PARKING FACILITIES

User class Required door opening 1 Front door, first stop		Required aisle width	Examples of uses (Note 1) Employee and commuter parking (generally, all-day parking)			
		Minimum for single manoeuvre entry and exit				
1A	Front door, first stop	Three-point turn entry and exit into 90° parking spaces only, otherwise as for User Class 1	Residential, domestic and employee parking			
2	Full opening, all doors	Minimum for single manoeuvre entry and exit	Long-term city and town centre parking, sports facilities, entertainment centres, hotels, motels, airport visitors (generally medium-term parking)			
3	Full opening, all doors	Minimum for single manoeuvre entry and exit	Short-term city and town centre parking, parking stations, hospital and medical centres			
3A	Full opening, all doors	Additional allowance above minimum single manoeuvre width to facilitate entry and exit	Short term, high turnover parking at shopping centres			
4	Size requirements are specified in AS/NZS 2890.6 (Note 2)		Parking for people with disabilities			

Figure 9: Classification of Parking Facilities

Most parking is expected to be medium term use and so the most appropriate class is User Class 2. The minimum required dimensions of the parking areas are outlined in **Table 2**.

Table 2: Minimum Parking Dimensions

Bay Type	Dimension	AS2890.1 Requirement	Provided
90 Degree Bays	Bay Width	2.5m	2.5m
(User Class 2)	Bay Length	5.4m	5.5m
	Aisle Width	5.8m	6.0m

Based on the current site plan, all parking bays are 2.5m wide and 5.4m long which satisfy the minimum AS2890.1 requirements. The parking aisles are 6m in width which also comply with AS2890.1.



4.3. Provision for Service Vehicles

Waste will be collected from Bruton Lane. A bin pad is proposed adjacent to the proposed crossover. Therefore waste vehicles will not need to be accommodated on the site.

It is assumed that any deliveries will be made using light vehicles or small commercial vehicles.

A swept path assessment has been undertaken to check the manoeuvrability of service vehicles within the site. The assessment has been undertaken in Autodesk Vehicle Tracking using the Australian Standard 6.4m Small Rigid Vehicle (SRV). As shown in **Figure 10**, the site layout allows adequate manoeuvrability for these vehicles.

It is recommended that any service vehicle movements are scheduled outside of peak periods of traffic where possible to minimise the impact on other vehicles and to allow the service vehicles to use the full width of the circulating roads.



Figure 10: Swept Path Assessment - 6.4m SRV



5. Traffic Volumes

The volumes of traffic generated by the gym and swim centre have been estimated using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation. The closest land use for the site is determined to be Health/Fitness Club.

The traffic generation is detailed in **Table 3**.

Table 3: Proposed Development Vehicle Trip Generation

Land Han	Huita	Overtity	Genera	tion Rate	Number of Trips		
Land Use	Units	Quantity	AM Peak	PM Peak	AM Peak	PM Peak	
Health/Fitness Club - Gym	100m ² GFA	12.17	1.41	3.71	17	45	
Health/Fitness Club – Swim Centre	100m ² GFA	7.36	1.41	3.71	10	27	
				Total	27	72	

According to the TIA guidelines, an increase of between 10 to 100 peak hour vehicles is considered to have a low to moderate impact and is generally accepted as being acceptable without requiring detailed capacity analysis. The estimated 27 to 72 peak hour trips is in the middle of this range and so the development traffic is considered to have a low to moderate impact.



6. Pedestrian and Cyclist Access

6.1. Paths

The site currently has excellent access for pedestrians and cyclists with paths or wide verges along both sides of most roads in the vicinity. There are also on-road cycle lanes along both sides of Butler Boulevard and a dual-use path along the south side.

The existing path network is assessed as being adequate.

6.2. Bicycle Parking

There are no specific bicycle parking requirements outlined in the City's Planning Scheme or the Butler Activity Centre Structure Plan.

The demand for bicycle parking for a gymnasium and swim centre is likely to be relatively low. However, it is recommended to consider including several bicycle racks to encourage any staff and customers that may consider cycling.



7. Public Transport Access

The site has good access to public transport. Existing services include:

- Transperth Bus Route 480 which operates between Clarkson Station and Butler Station via Marmion Avenue.
- Transperth Bus Route 482 which operates between Clarkson Station and Quinns Rocks via Mindarie.
- Transperth Bus Route 483 which operates between Clarkson Station and Alkimos via Merriwa and Butler Station.
- Transperth Bus Route 490 which operates between Butler Station and Two Rocks via Marmion Avenue.
- Transperth Bus Route 491 which operates between Butler Station and Yanchep via Marmion Avenue

The closest stops are located on Butler Boulevard east of Camborne Parkway approximately 200 metres west of the site.

The site is also located approximately 200 metres walking distance of Butler Station which provides access to the Joondalup Train Line as well as other bus services.

The existing public transport services are considered to be adequate.



8. Site Specific Issues and Safety Issues

8.1. Crash History

The crash history of the adjacent road network was obtained from the MRWA Reporting Centre. The search included the length of Butler Boulevard between Camborne Parkway and Exmouth Drive.

A summary of the recorded incidents over the five-year period ending December 2021 is shown in **Figure 11**.



Figure 11: Crash History January 2017 to December 2021

The volume and types of crashes appear to be typical of the road environment along Butler Boulevard and there does not appear to be any major safety issue on the road network to be addressed. The proposed site access is located along Bruton Lane and no crash have been recorded along this road between January 2017 to December 2021.

A review of the detailed crash history indicates that none of the recorded crashes were casualty crashes.

The proposed development itself will only generate a low to moderate volume of additional traffic and there is no indication that the development would increase the risk of crashes unacceptably.



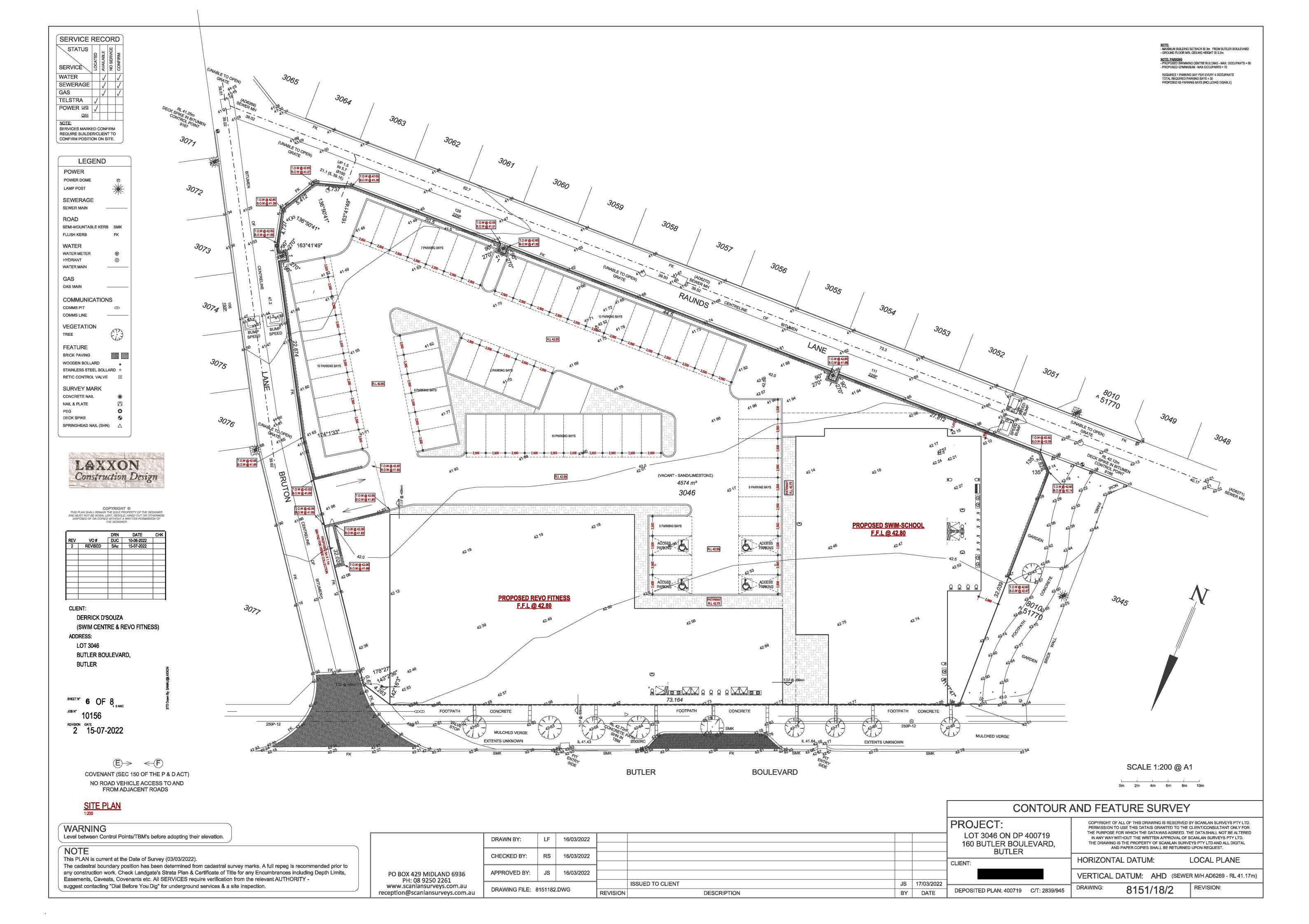
9. Conclusion

A Transport Impact Statement for the proposed fast food development concluded the following:

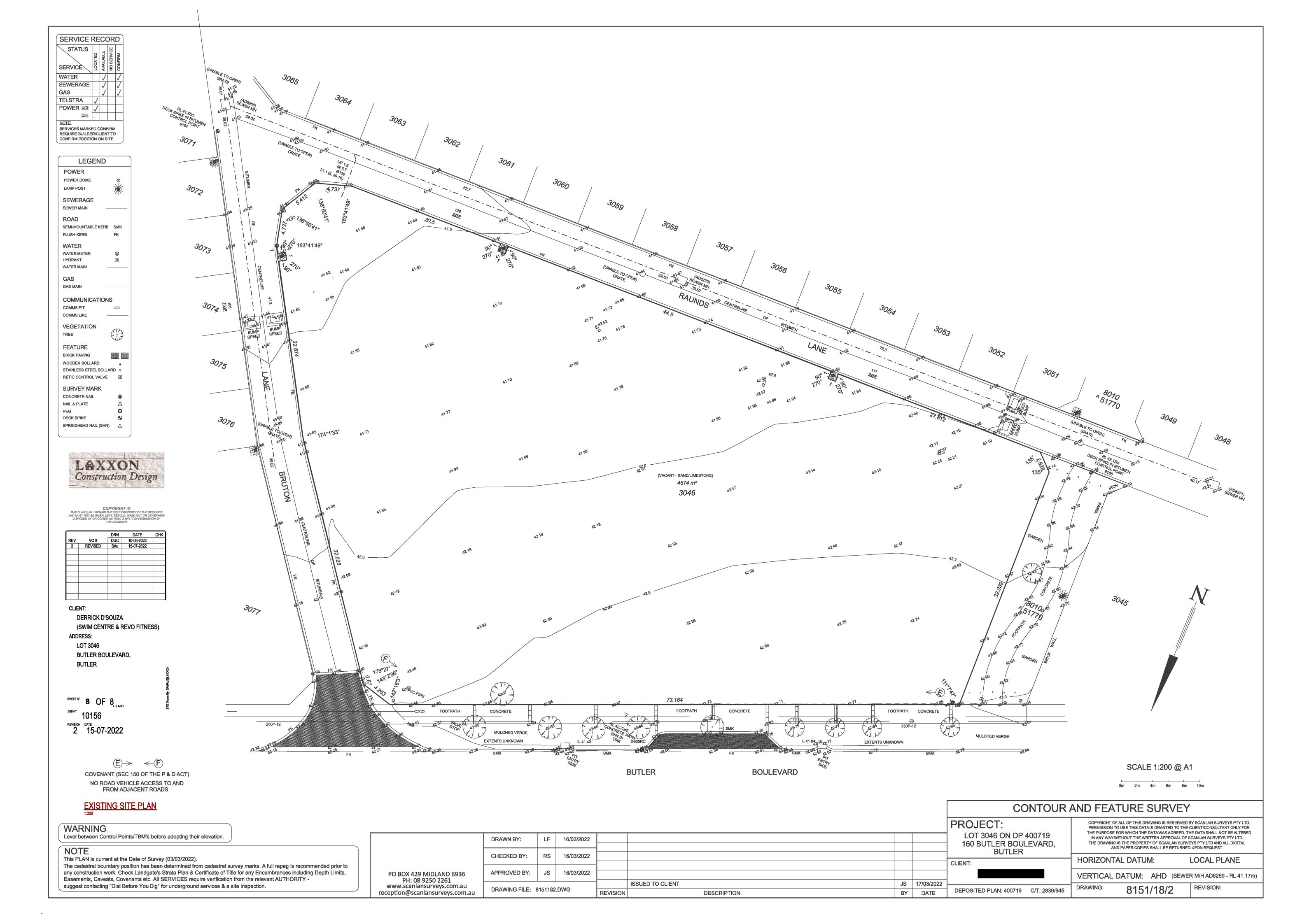
- The proposed development is estimated to generate between 27 and 72 vehicles trips during the peak hours.
- The existing road network will have sufficient capacity to accommodate the traffic generated by the development and no modifications are required.
- The minimum required sight distance is available from the proposed driveway crossover along Bruton Lane.
- The proposed 63 parking spaces satisfies the parking requirements of the City's District Planning Scheme.
- The parking layout complies with AS2890.1.
- A swept path assessment that the site layout allows adequate manoeuvrability for the likely service vehicles.
- The existing external path network is considered to be adequate.
- There are no specific bicycle parking requirements outlined in the City's Planning Scheme or the Butler
 Activity Centre Structure Plan. The demand for bicycle parking to this development is likely to be
 relatively low. However, it is recommended to consider including several bicycle racks to encourage any
 staff and customers that may consider cycling.
- The existing public transport services are considered to be adequate.
- The crash history of the adjacent road network does not indicate any major safety issue on the road network. The proposed development itself will only generate a low to moderate volume of additional traffic and there is no indication that the development would increase the risk of crashes unacceptably.

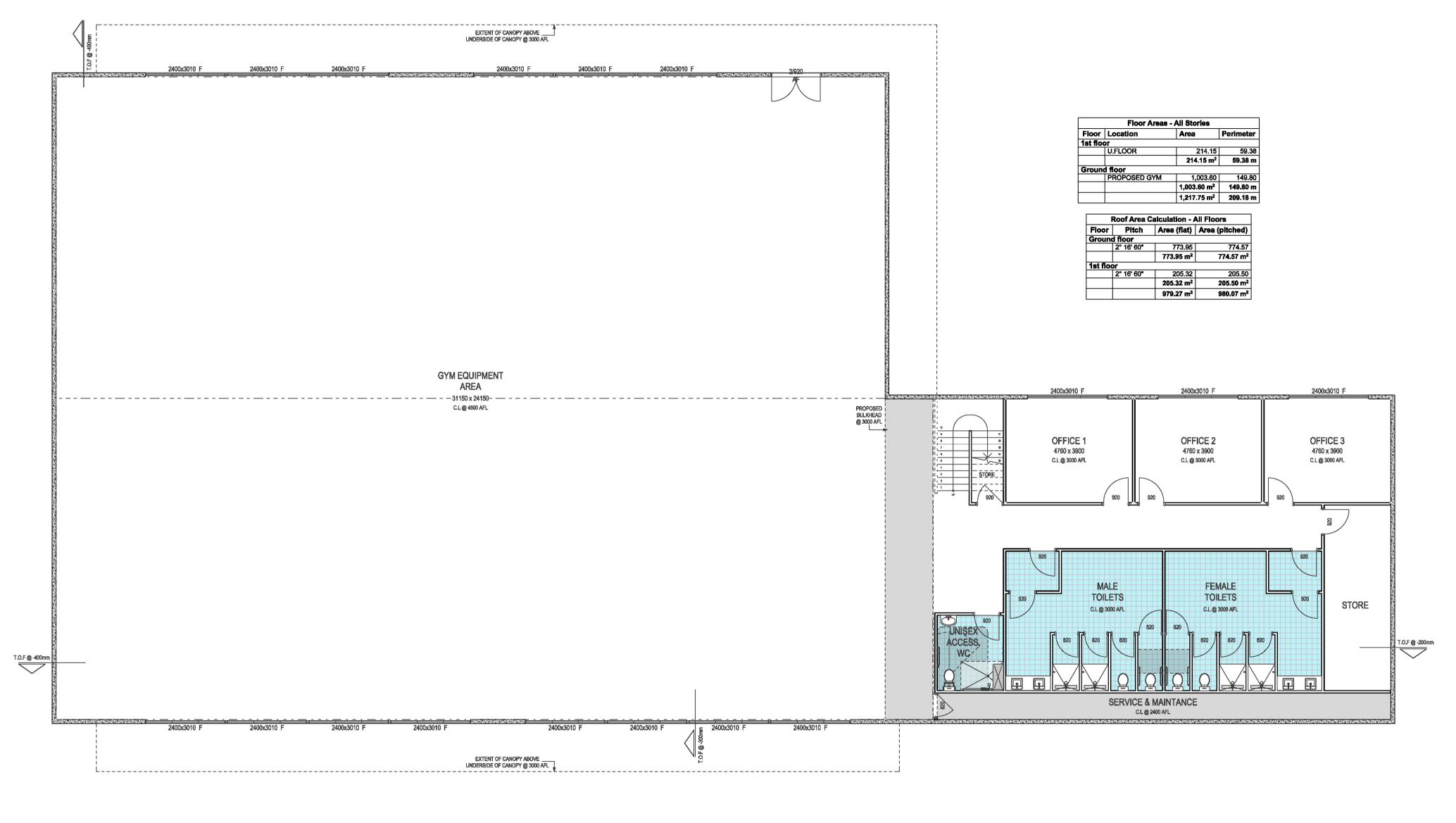


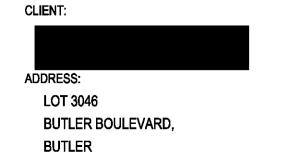
Appendix A – Development Plans

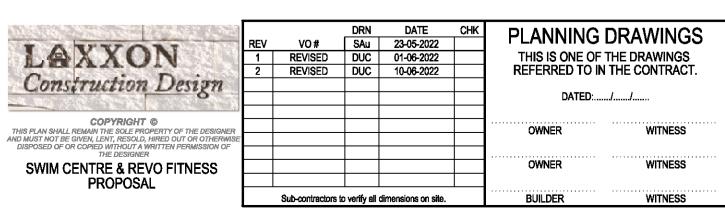










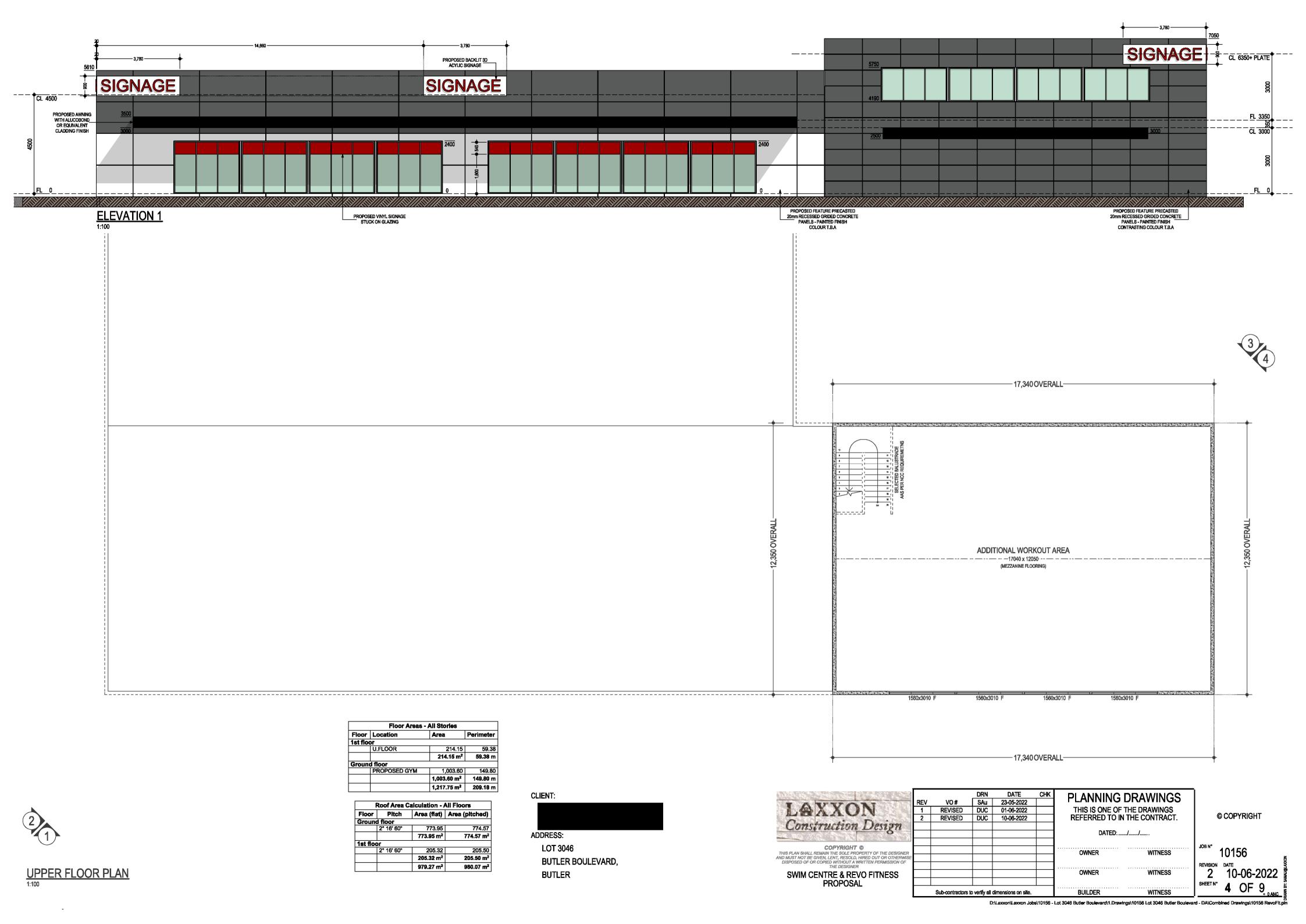


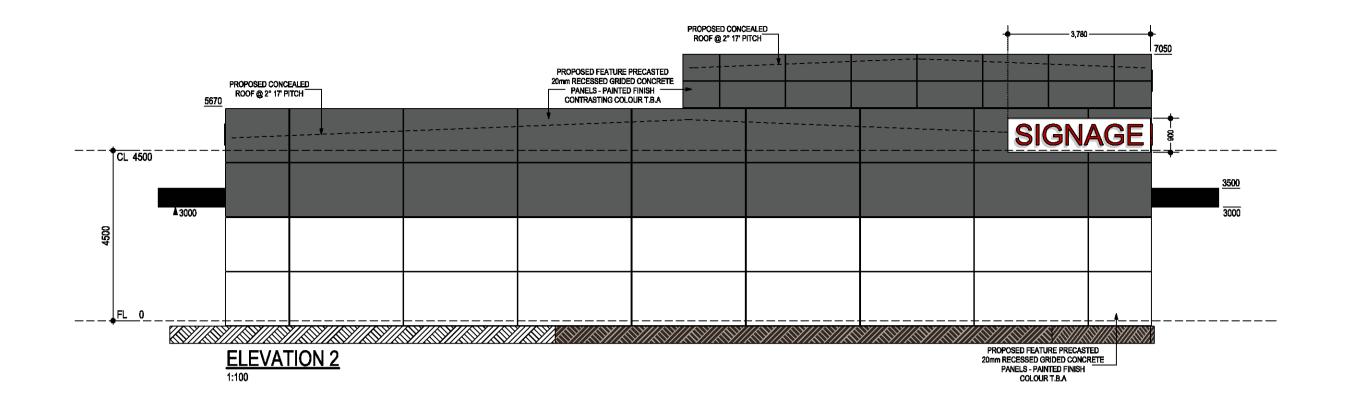
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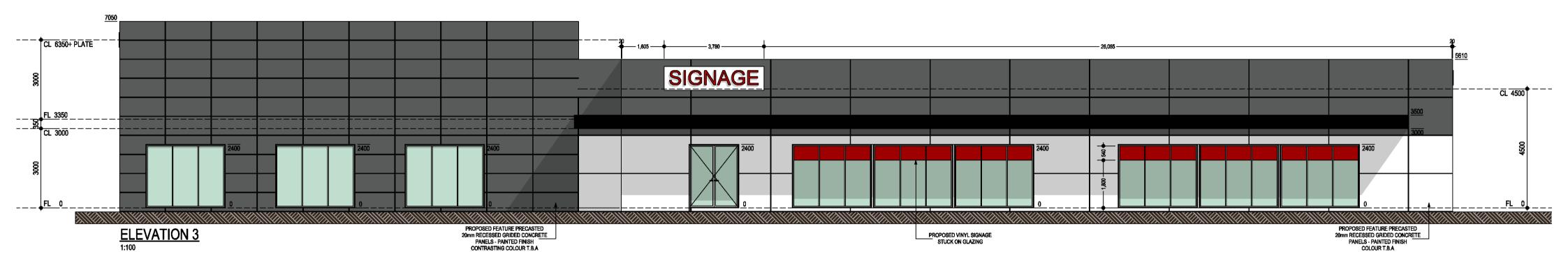
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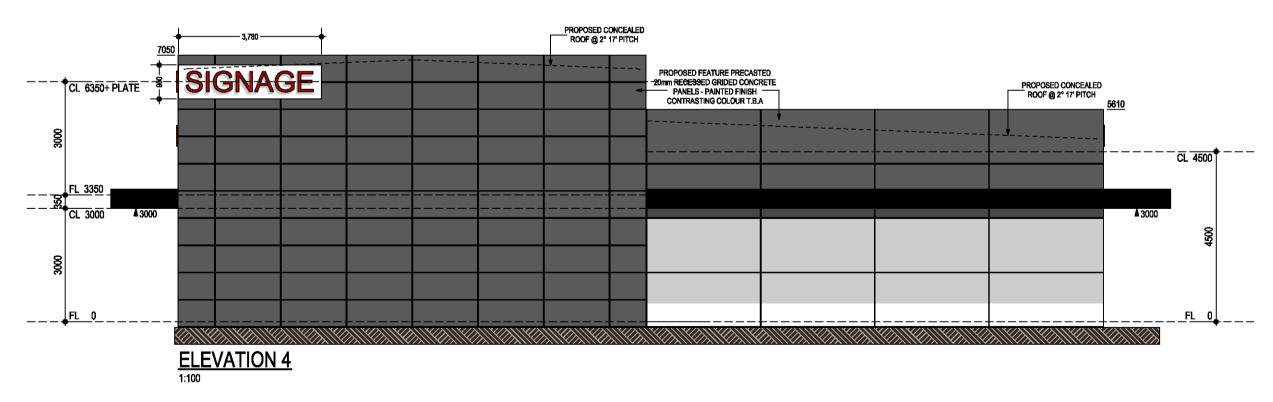
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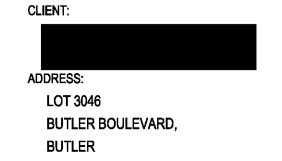
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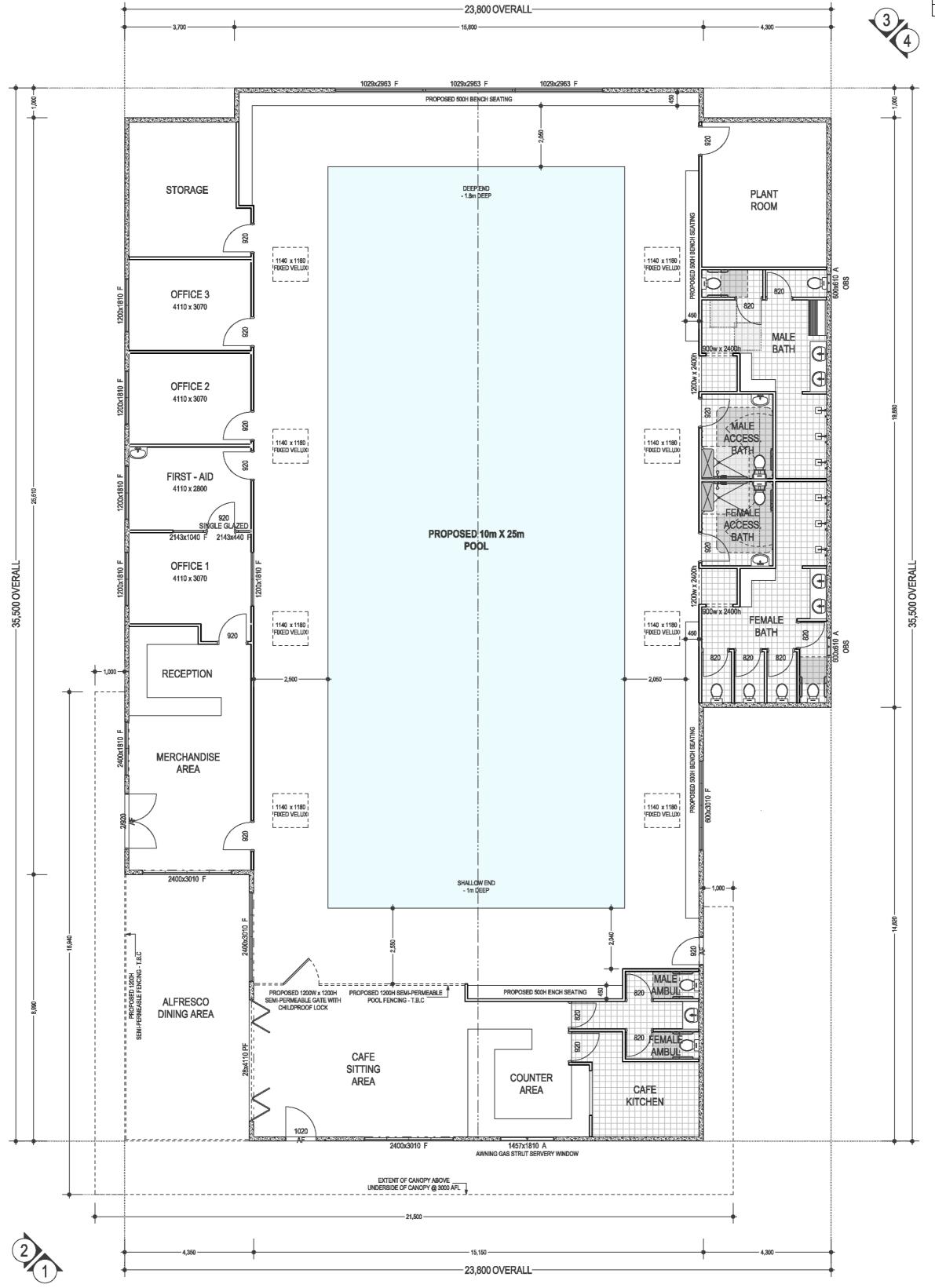


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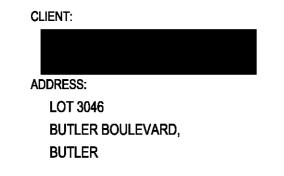
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