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Our Ref: 791_VIV22

Economic Development Queensland
Department of Local Government, Racing and Multicultural Affairs
PO Box 15009 City East
Brisbane QLD 4002

11 May 2018

Site Location: 31 Thompson Street, Bowen Hills
Activity: Proposed Childcare Centre
Subject: Traffic Statement to Accompany Development Application

Dear Sir / Madam,

Introduction and Background

Q Traffic was commissioned to undertake a Traffic Impact Assessment of a proposed childcare centre catering for up to 72 children within the existing commercial development located at 31 Thompson Street, Bowen Hills.

Whilst located within the Brisbane City Local Government Area, the site is also located within the Bowen Hills Priority Development Area (PDA) (Precinct 8: Thompson Street Precinct), and therefore has assessed considering the relevant controls, including the requirements of the Bowen Hills Urban Development Area Development Scheme.

This report provides relevant background information regarding the proposal, and documents the results and findings of our investigations addressing the following key traffic design elements and issues:

- Vehicular access and parking;
- Servicing and refuse collection arrangements; and
- The traffic impacts anticipated as a result of the development.

The above issues are discussed further in the following sections.

Subject Site and Road Environment

The subject site is located at 31 Thompson Street, Bowen Hills, on the eastern side of the street between Allison Street and Murray Street, as shown in **Figure 1** over page.

The site currently accommodates a two-storey commercial (business park type) development as shown in **Figure 2** over page. This development has at-grade car parking which is accessed via an all-movements driveway onto Thompson Street approximately midway along the site frontage. The building which is the subject of this application is located adjacent to the southern site boundary, towards the front of the complex.

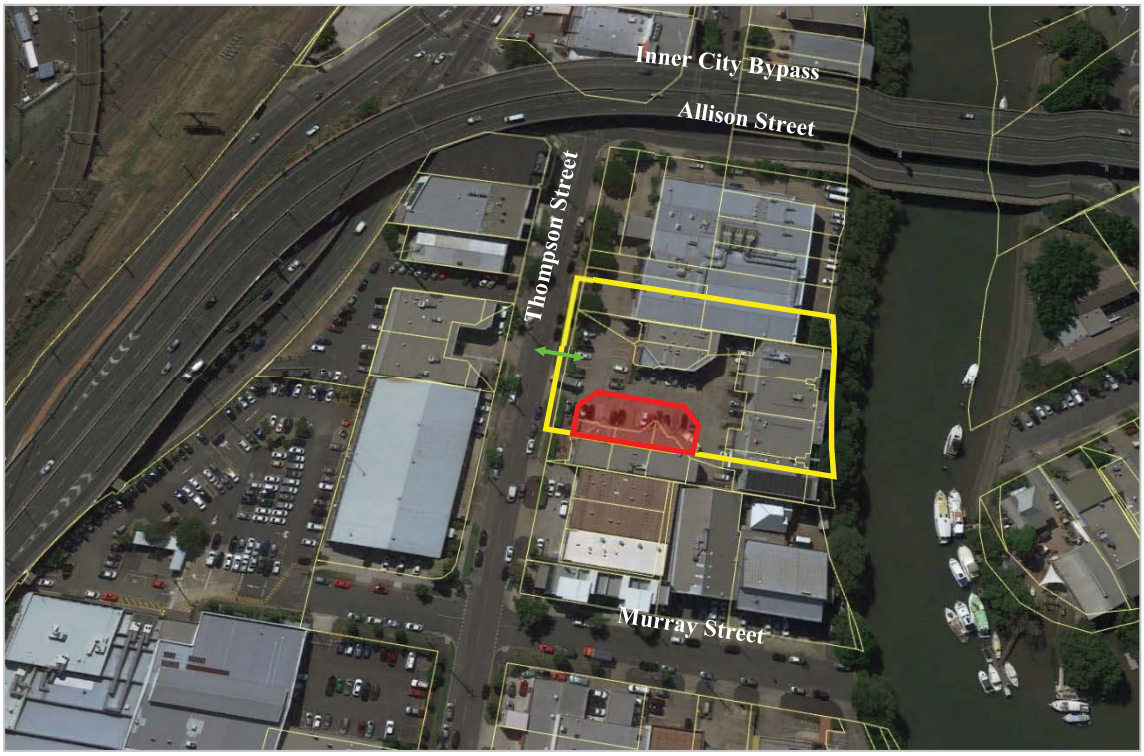


Figure 1: Subject Site and Subject Building **Source: Google Earth**

Figure 2: Existing Development **Source: Google Street View**

"As of right" uses on the site include:

- educational establishment
- home based business
- multiple residential
- office
- other residential
- service industry
- showroom, storage and display facilities.

The subject site has frontage to (and is accessed via) Thompson Street, which is designated as a district road in Council's Road Hierarchy in the Brisbane City Plan 2014. It runs generally in a north-south direction, connecting from Allison Street at its northern end to Edmondstone Road at its southern end.

As shown in **Figure 3** below, Thompson Street has a two-lane, two-way undivided cross-section in the vicinity of the site, and a pavement width of approximately 11m. Kerbside parking is generally permitted in proximity to the development site (restricted to 12 hour metered parking from 7am – 7pm, Monday to Friday) clear of intersections and property access driveways, in accordance with Queensland Road Rules.

Figure 3: Thompson Street (looking to south) **Source: Google Street View**

Proposal

The application seeks approval to use the existing building located adjacent to the southern site boundary (which has an estimated NLA in the order of 800m²) for the purpose of a childcare centre which will cater for up to 72 children.

Plans of the proposal are included as **Attachment 1**, and an extract from the site plan is provided for reference as **Figure 4** below.

The traffic elements of the proposal have been assessed considering the requirements of the Bowen Hills Urban Development Area Development Scheme, and Council's Transport, Access, Parking and Servicing (TAPS) Planning Scheme Policy, as discussed in the following sections.

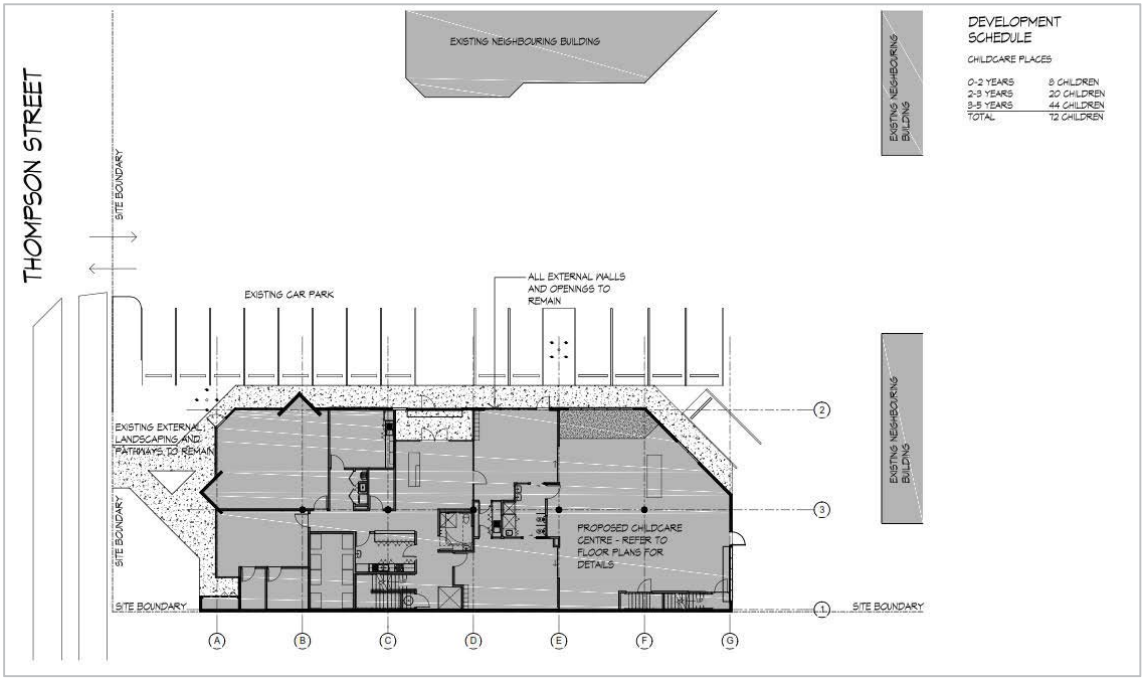


Figure 3: Thompson Street (looking to south)

Car Parking and Vehicular Access

The Bowen Hills Urban Development Area Development Scheme stipulates the following requirements with regard to car parking provisions within Precinct 8 (Thompson Street Precinct):

Car parking ratios	For residential	An average of 1 space per dwelling *(including visitor parking)*
	For business, service industry, showroom and warehouse	A maximum of 1 space per 75m² of GFA
	For shop & food premises	A maximum of 1 space per 50m² of GFA
	For all other uses	As per the planning scheme for the local government for the area

Extract from Bowen Hills Urban Development Area Development Scheme

Whilst maximum parking rates are stipulated in the Bowen Hills Urban Development Area Development Scheme for the majority of commercial and retail uses, no specific parking rate is stipulated for a childcare centre. Accordingly, reference has been made to Council's Planning Scheme Policy.

Given the site is within the City Frame Area as defined in Council's Transport, Access, Parking and Servicing Code, a **maximum** rate of 1 space per 5 children applies. This equates to a maximum parking provision of 15 spaces.

It is important to note that there is no minimum parking requirement and on the proviso that the applicant provides no more than 15 spaces, the proposal complies with A012 of the TAPS Code.

As shown in plans included as **Attachment 1**, there are **13 parking spaces** conveniently located along the frontage of the building. Staff will be encouraged to use alternative modes of transport (i.e. walking, cycling and the use of public transport) which is in keeping with Council's policy for development within in the City Frame Area. The proposal therefore meets Council's parking requirement.

The overall level of on-site parking is considered to be appropriate given the scale and nature of the proposed development and complies with A012 of the TAPS Code.

Vehicle Servicing

Given the nature of the proposed development, the demand for service vehicles would be very limited. With the exception of the occasional delivery / tradesperson vehicle, the only servicing requirement would be regular refuse collection.

Council's TAPS Planning Scheme Policy (Table 1) suggests that the appropriate design vehicle for a childcare centre is a van. It is anticipated that any such vehicle would typically access the development outside of the peak drop-off and pick-up periods for the centre when the parking spaces fronting the centre are largely unoccupied, and therefore any vacant parking space could be used.

In regard to refuse collection, kerbside collection of wheelie bins is proposed, consistent with the provisions of Council's TAPS Planning Scheme Policy for a childcare centre.

Overall, the proposed servicing / refuse collection arrangements are considered to be appropriate given the nature and scale of the development.

Traffic Impact

With long-stay child care centres parents/carers have flexibility to drop-off and pick-up children at a time of their choosing. By way of example, some parents/carers may drop-off and pick-up children as part of their commute to work whilst other parents/carers may combine drop-off and pick-up with a school run. Stay at home parents may avoid the peak times all together. This results in the peak hour trip generation for childcare centres being spread over a 2hr period in the morning and afternoon. This is shown in the extract from the RTA Guide to Traffic Generating Developments document below:

Table 3.6
Traffic generation rates

Centre Type	Peak Vehicle Trips / Child		
	7.00-9.00am	2.30-4.00pm	4.00-6.00pm
Pre-school	1.4	0.8	-
Long-day care	0.8	0.3	0.7
Before/after care	0.5	0.2	0.7

Figure 4.1: RTA Guide to Traffic Generating Developments

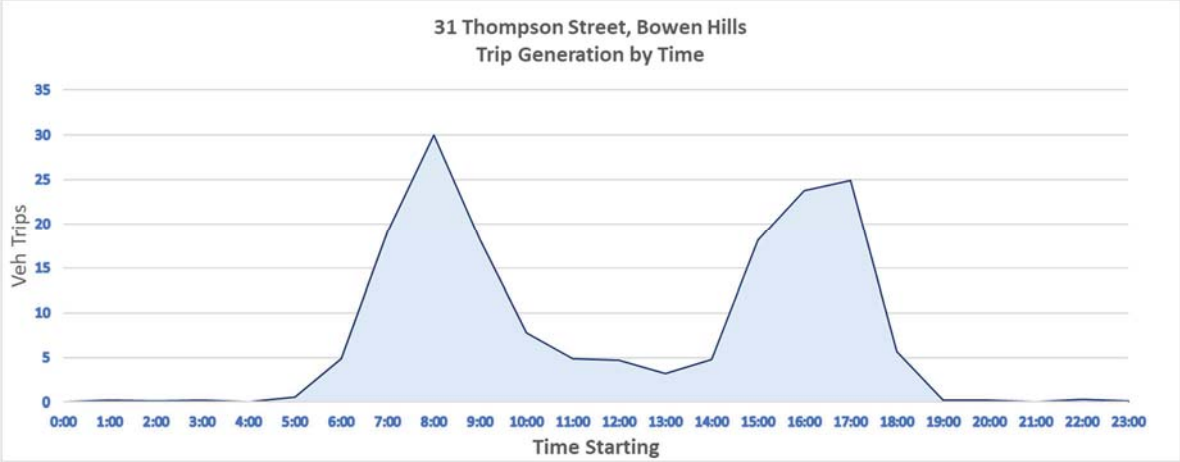
Reference is also made to trip generation data released by the Department of Transport and Main Roads (TMR) which was collected at four (4) child care centres in 2009, a summary of which is included as **Attachment 2**. This data also shows the peak periods extending over a 2-hour period in the morning and afternoon. The State Government recommends the following trip generation rates for the peak **1hr** periods:

- AM Peak Hour (8:00am – 9:00am): 0.42 trips per child
- PM Peak Hour (5:00pm – 6:00pm): 0.35 trips per child

Applying these trip generation rates to the proposed development (72 children), suggests the following peak 1-hour trip generation volumes:

- AM Peak Hour: **30 vehicle trips** (15 arrivals and 15 departures)
- PM Peak Hour: **25 vehicle trips** (12 arrivals and 13 departures)

The graph below shows the anticipated traffic generation by time of day for the subject site.



This level of traffic generation (i.e. approximately one vehicle trip every two minutes during the peak periods) is relatively low.

By way of comparisons the site could be occupied as of right by anyone of the following uses:

- educational establishment
- home based business
- multiple residential
- office
- other residential
- service industry
- showroom, storage and display facilities.

The table below compares the trip generation rates for a childcare centre against the more likely alternatives (e.g. office or showroom):

Table 4a – Trip Generation Comparison

		AM Weekday		PM Weekday		Saturday	
Use	**Area**	**Rate**	**Trips/hr**	**Rate**	**Trips/hr**	**Rate**	**Trips/hr**
Office	**800m2**	1.6 / 100	13	1.2	10	-	-
Showroom	**800m2**	-	-	2.7	22	3.9	31
Childcare	**72 children**	0.42 / child	30	0.35 / child	25	-	-

The trip generation associated with the proposed childcare centre is only marginally higher than a showroom use during the afternoon peak (e.g. 25 vs 22 trips). In the AM peak hour, a childcare centre would be the higher traffic generator. However, in absolute terms a showroom use is likely to have a higher peak hour trip generation that a childcare (31 trips) and this occurs on a weekend when the childcare centre would be closed.

Irrespective of whether this building is occupied by an office, showroom or childcare centre, the traffic generation is low. In light of the above, no external roadworks are considered to be required to support the proposed development. Any impacts (however minor) would be mitigated by way of infrastructure charges payable as part of the development of the site.

Assessment against Bowen Hills Urban Development Area Development Scheme Requirements

The proposal has been assessed against the relevant UDA-wide development criteria in Section 3.8 of the Bowen Hills Urban Development Area Development Scheme, as outlined in **Table 1** below:

Table 1: Responses to Relevant Requirements of Bowen Hills UDA Development Scheme

Requirement	Response
Transport Corridors Development does not unreasonably constrain future provision of public transport infrastructure (including rail, light rail, road, busway and cycle infrastructure) and does not adversely impact on the function or operation of existing or future public transport corridors including rail, light rail or busway corridors.	The proposed childcare centre will be located within an existing building, and will therefore have no impact upon future provision of public transport infrastructure or the function or operation of existing or future public transport corridors.
Car Parking Development is required to provide on-site car parking in accordance with the rates set out in the precinct development criteria or sub-precinct development principles.	No specific parking rate is stipulated for a childcare centre in the Bowen Hills UDA Development Scheme, therefore reference has been made to the parking requirements in Council's TAPS Planning Scheme Policy. Given the site is within the City Frame Area as defined in Council's Transport, Access, Parking and Servicing Code, a maximum rate of 1 space per 5 children applies. This equates to a maximum parking provision of 15 spaces. It is important to note that there is no minimum parking requirement and on the proviso that the applicant provides no more than 15 spaces, the proposal complies with A012 of the TAPS Code. As shown in plans included as Attachment 1, there are 13 parking spaces conveniently located along the frontage of the building. Staff will be encouraged to use alternative modes of transport (i.e. walking, cycling and the use of public transport) which is in keeping with Council's policy for development within in the City Frame Area. The proposal therefore meets Council's parking requirement..
Circulation Development is to support increased accessibility, permeability and movement for pedestrians and cyclists and appropriate movement by vehicles, including emergency vehicles. Development is to be designed to include safe and highly visible connections to pedestrian and cycle networks through building and landscape design elements and treatments.	The proposal retains the existing pathway from Thompson Street to the building entrance, providing accessibility, permeability and movement for pedestrians and cyclists. The proposal also retains the existing vehicular access and car parking arrangements, which are acceptable and supportable from a traffic engineering perspective.

End of trip facilities End of trip facilities for pedestrians and cyclists are to be provided as part of development for non-residential purposes, including secure, undercover bicycle storage facilities, showers and lockers. Such facilities are to be provided to a standard consistent with AS2890.3. Bicycle facility targets for sites other than apartments are: - residents - to have secure space per 200m2 net lettable area (NLA) according to AS2890.3 - visitors - to have secure space per 1000m2 NLA according to AS2890.3.	As shown in the plans included as **Attachment 1**, provision will be made within the building for end of trip facilities for pedestrians and cyclists, with showers for staff, staff rooms which could accommodate lockers, and store rooms / staff rooms which could be used to accommodate staff bicycles, if necessary. Whilst unlikely to be required given the nature of the proposed development, if necessary, a visitor bicycle parking rail could be provided. It is anticipated that the bicycle parking and end of trip facility requirements would be addressed in response to a condition of the approval, at detailed design stage.

Conclusion

In my capacity as a Registered Professional Engineer of Queensland, I am satisfied that the proposal will not result in unsatisfactory impacts upon the surrounding road network, nor will the proposal result in impacts on the road network. Irrespective of whether this building is occupied by an office, showroom or childcare centre, the traffic generation is low.

On this basis, it is recommended that the application be approved from a traffic engineering perspective.

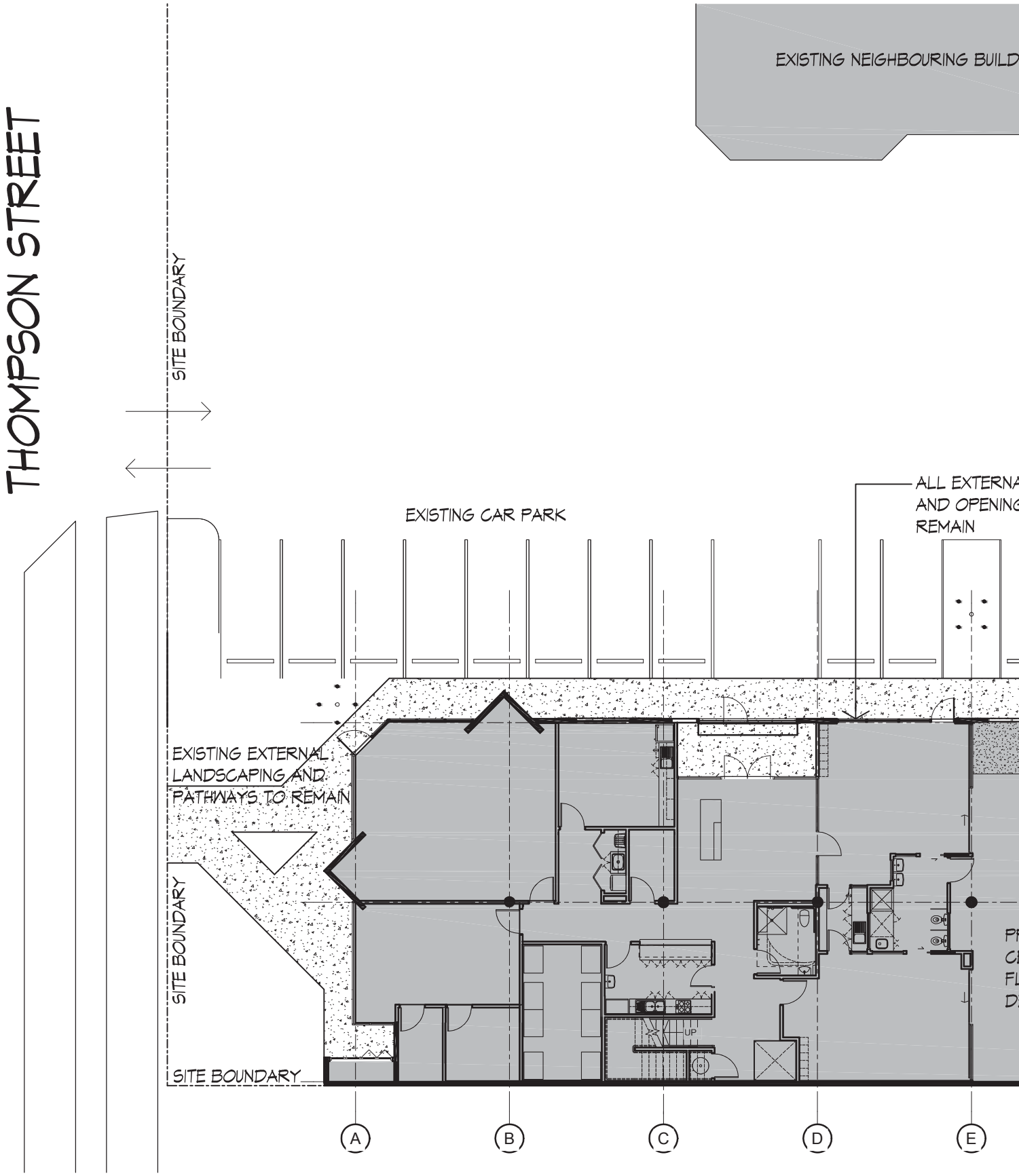
Should you have any queries regarding the above, please do not hesitate to contact the undersigned.

Regards

Richard Quinn
BECivil, MIEAust, RPEQ (08565)
Director – Q Traffic

ATTACHMENT 1

Proposed Development Plans



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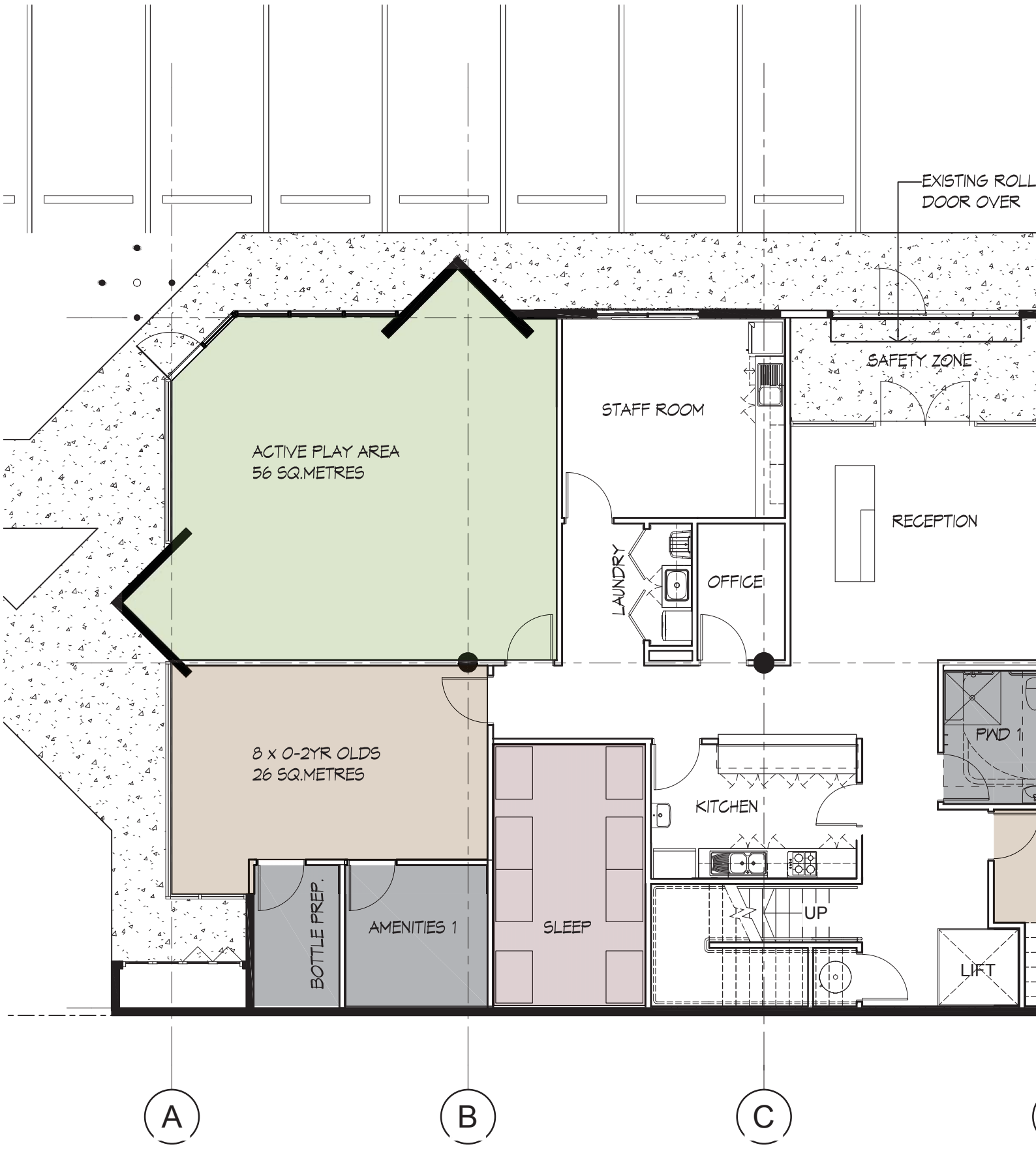
SITE PLAN

SCALE: 1:200 @ A3

PROJECT	**BOWEN HILLS CHILDCARE**
LOCATION	**THOMPSON STREET, BOWEN HILLS**
CLIENT	**TMG**
TITLE	**SITE PLAN**

tmg
THALLON MOLE GROUP

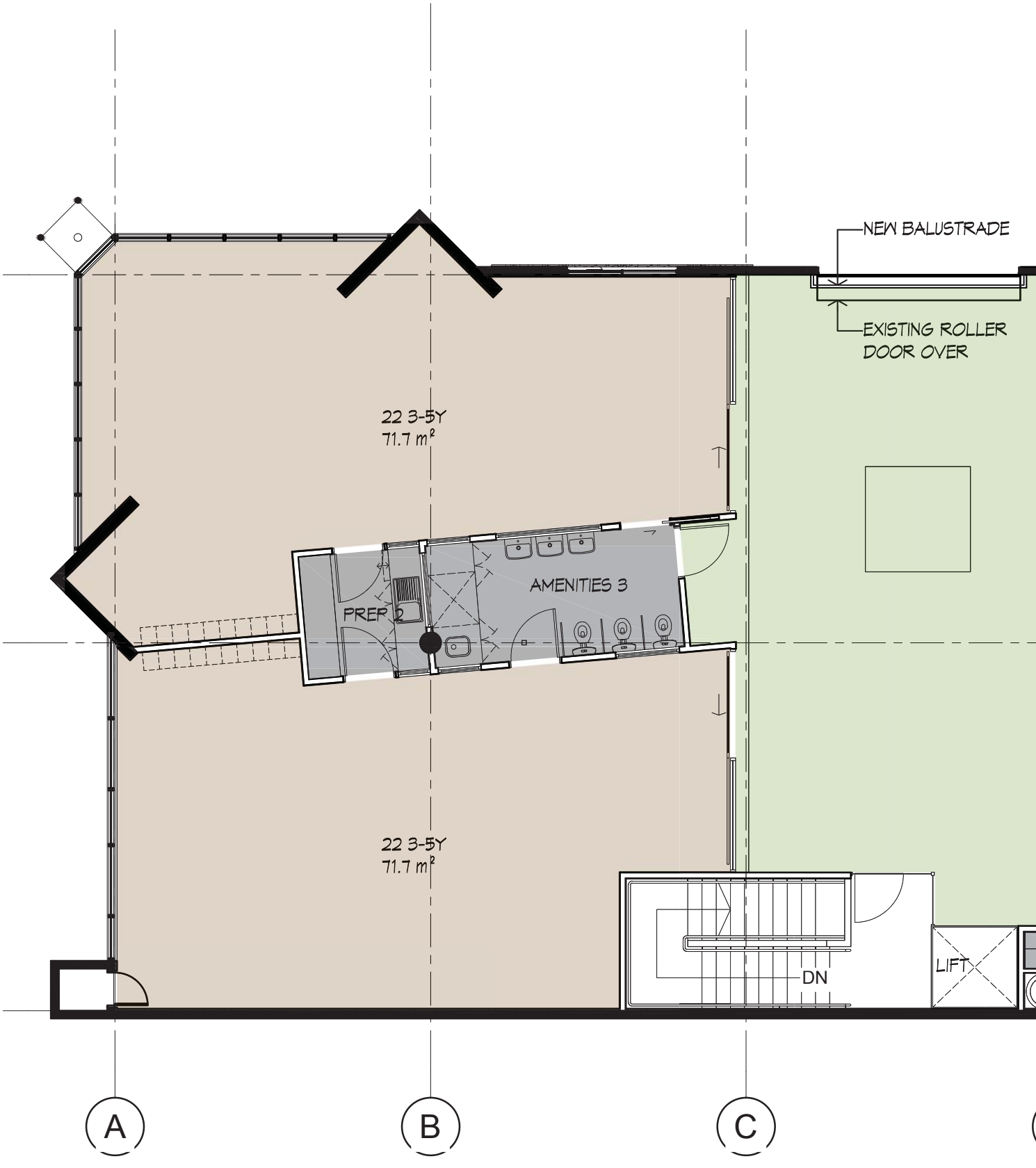


1 GROUND FLOOR PLAN

SCALE: 1:100 @ A3

PROJECT	**BOWEN HILLS CHILDCARE**
LOCATION	**THOMPSON STREET, BOWEN HILLS**
CLIENT	**TMG**
TITLE	**GROUND FLOOR PLAN**

THALLON MOLE GROUP



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UPPER FLOOR PLAN

SCALE: 1:100 @ A3

PROJECT	**BOWEN HILLS CHILDCARE**
LOCATION	**THOMPSON STREET, BOWEN HILLS**
CLIENT	**TMG**
TITLE	**UPPER FLOOR PLAN**

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ATTACHMENT 2

Trip Generation - Childcare

s

othwell	CC3	Oxley	CC4	Hendra
en	75 Children		75 Children	
ps/child	trips	trips/child	trips	trips/child
0.00	0	0.00	0	0.00
0.01	0	0.00	0	0.00
0.00	1	0.01	0	0.00
0.00	1	0.01	0	0.00
0.00	0	0.00	0	0.00
0.01	1	0.01	0	0.00
0.19	3	0.03	1	0.02
0.35	13	0.17	20	0.27
0.56	27	0.36	27	0.35
0.25	19	0.25	16	0.21
0.10	3	0.03	8	0.10
0.08	3	0.04	5	0.06
0.05	5	0.06	7	0.10
0.04	3	0.04	5	0.06
0.09	4	0.05	4	0.06
0.35	16	0.21	15	0.20
0.43	18	0.24	18	0.24
0.40	20	0.27	30	0.39
0.14	4	0.05	6	0.08
0.01	0	0.00	1	0.01
0.00	0	0.00	0	0.00
0.00	0	0.00	0	0.00
0.01	0	0.00	0	0.00
0.00	0	0.00	0	0.00
3.04	***138***	***1.84***	***162***	***2.17***

	31 Thompson St
Average	72 Children
trips/child	trips (in + out)
0.00	0
0.00	0
0.00	0
0.00	0
0.00	0
0.01	1
0.07	5
0.27	19
0.42	30
0.25	18
0.11	8
0.07	5
0.07	5
0.04	3
0.07	5
0.25	18
0.33	24
0.35	25
0.08	6
0.00	0
0.00	0
0.00	0
0.00	0
0.00	0
Total	***172***