# Proposed Edward Millen Redevelopment

TRANSPORT IMPACT ASSESSMENT FOR DEVELOPMENT APPLICATION



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#### 1. INTRODUCTION

Blackoak Capital is proposing a redevelopment of several historical buildings within Edward Millen Park at Lot 9000 (No. 15) Hill View Terrace in East Victoria Park, which is located on the northern side of Hill View Terrace, west of Albany Highway, as shown in the Locality Plan in Figure 1.

The proposed mixed-use redevelopment includes commercial and specialty retail, various food & beverage eateries, a garden pavilion, an outdoor Market site and a Child Care Centre.

Development plans have been prepared by Benson Studios, and Uloth and Associates has been commissioned to prepare a Transport Impact Assessment report in support of the proposed Development Application.

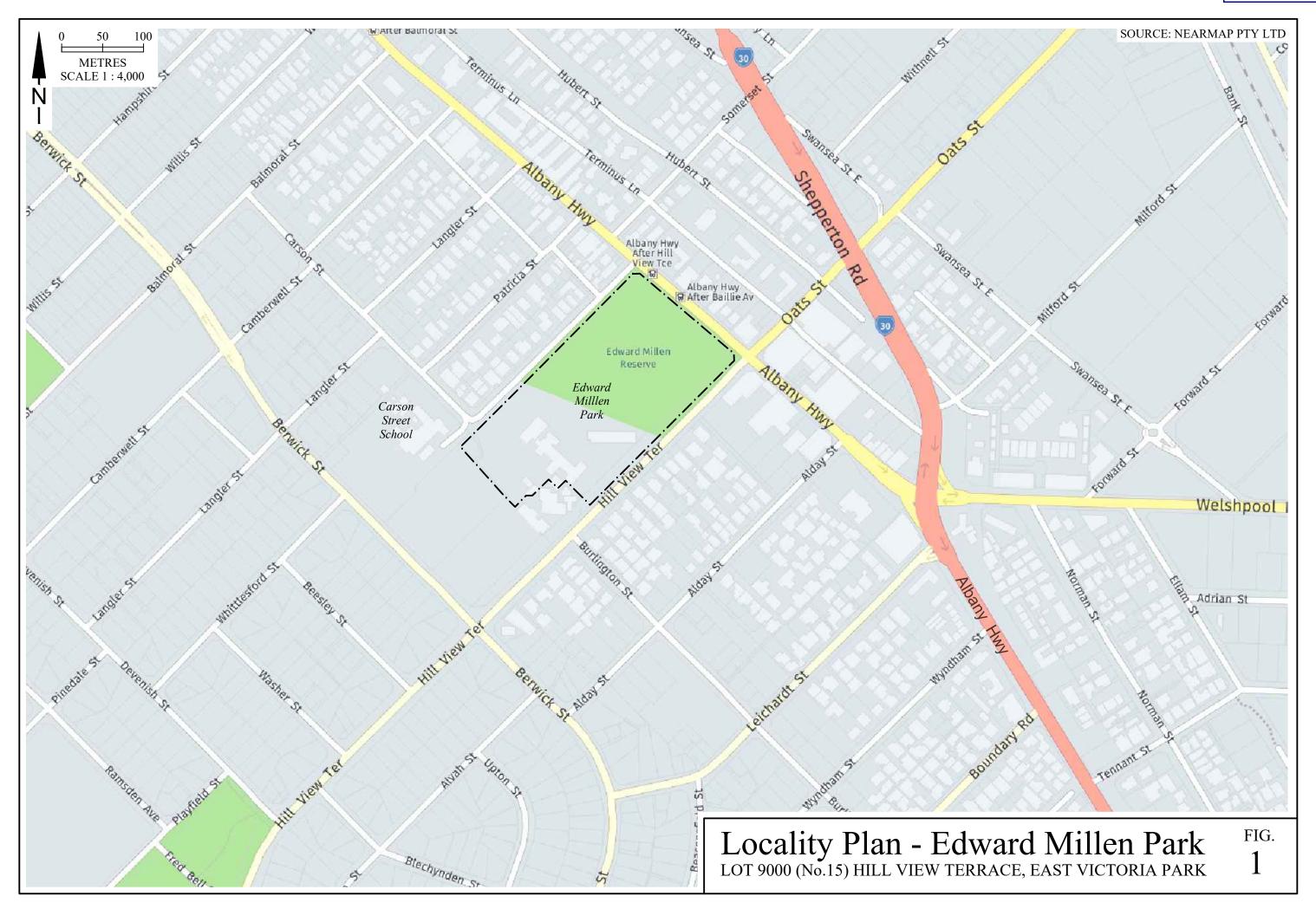
#### 2. STUDY FINDINGS AND CONCLUSIONS

The study findings and conclusions regarding the proposed Edward Millen redevelopment are presented and discussed in this chapter, with reference to more detailed information documented in the Technical Appendix.

#### 2.1 EXISTING SITUATION

The existing roads and intersections in the vicinity of the proposed development site are shown in the aerial photograph in Figure A.1 in Chapter A.1 in the Technical Appendix, while the existing situation is shown in more detail in Figure A.2.

- It can be seen in Figure A.1 that Edward Millen Park is located west of Albany Highway between Baillie Avenue and Hill View Terrace, with the proposed development site located at the westernmost end of the park. It can also be seen that there are currently 3 access driveways to/from the overall site, including Driveway 1 off Baillie Avenue, Driveway 2 off Hill View Terrace, and Driveway 3 off Albany Highway.
- Hill View Terrace and Berwick Street are both 2-lane divided roads with painted medians, identified as a Distributor A roads under the Main Roads WA Functional Road Hierarchy, and with a posted speed limit of 60 kilometres per hour. Albany Highway is also a 2-lane divided road with a painted median, but is identified as a Distributor B road and has a posted speed limit of 40 kilometres per hour.
- Baillie Avenue, Langler Street, Carson Street and other local roads in the vicinity of the proposed development site are all 2-lane undivided roads, identified as Access Roads, and operating under the default urban speed limit of 50 kilometres per hour. A school speed zone (of 40 kilometres per hour) also operates during school days (from 7.30am to 9am and from 2.30pm to 4pm), at the western end of Baillie Avenue and southern end of Carson Street, respectively, adjacent to Carson Street School.
- Figure A.2 in Chapter A.1 shows that there are several existing (historical) buildings on the proposed development site, including the 'Rotunda' and 'Mildred Creak' buildings, an 'Operating Theatre' building, and three other 'Out-buildings'. It can also be seen that there is an existing 'Department of Communities' building adjacent to the proposed development site, accessed via Driveway 2 off Hill View Terrace; however, this building has recently been demolished.



- Existing weekday traffic flows in vicinity of the proposed development site are shown in Figure A.3 in Chapter A.1 in the Technical Appendix, based on data available from the Main Roads WA Trafficmap website plus additional traffic surveys carried out by Uloth and Associates. It can be seen in Figure A.3 that Berwick Street south of Langler Street carries approximately 15,200 vehicles per average weekday (2021/22), while Albany Highway north of Hill View Terrace carries approximately 14,400 vehicles per weekday (Sept 2023) and Hill View Terrace east of Berwick Street carries 12,800 vehicles per average weekday (2020/21). It can also be seen that Baillie Avenue, Carson Street and Langler Street all currently carry between just 400 to 800 vehicles per day.
- The proposed development site is well serviced by public transport with bus stops nearby in Albany Highway, Berwick Street and Oats Street, as shown in Figure A.4 in Chapter A.2 in the Technical Appendix, and with Routes 177 to 179, 220 and 998/999 providing connections to/from Perth, Armadale Station, Cannington Station and Bull Creek Station.
- Figure A.4 also shows the existing pedestrian/cyclist facilities along Albany Highway, Hill View Terrace and Berwick Street, as well as along local roads in the vicinity of the proposed development site. This includes footpaths along every street and controlled crossings at the 2 signalised intersections, as well as on-street bicycle lanes on both sides of Hill View Terrace.
- It is also important to note that Baillie Avenue, Carson Street and Burlington Street (off Hill View Terrace) have been identified as Bicycle Boulevards within Department of Transport's Perth Active Transport maps, and Albany Highway adjacent to Edward Millen Park has been identified as part of the Tram Stop walking trail, indicating that good pedestrian and cycling facilities are available in the vicinity of the proposed development site.
- Historical crash data was also obtained from Main Roads WA, for the roads immediately adjacent to the proposed development site. A total of 4 crashes were recorded on Hill View Terrace over the past 5 years to December 2022, which included a rear-end collision, a collision due to a reversing vehicle from the driveway, a vehicle collision with a fence and a right-angle crash at the Burlington Street intersection.
- Public parking for approximately 90 vehicles is currently available in the immediate vicinity of the proposed development site, comprising marked on-street spaces on both sides of Albany Highway (for 9 vehicles), unmarked on-street parking along the northern side of Baillie Avenue (for approximately 20 to 21 vehicles), and informal verge parking along the southern side of Baillie Avenue (for approximately 60 vehicles).
- Parking surveys carried out on Thursday 21 September and Saturday 23 September 2023 show an overall peak parking demands of approximately 25 vehicles within Albany Highway and Baillie Avenue, during school pick-up time (2<sup>30</sup>pm) on the Thursday, reducing to approximately 20 vehicles (at 12pm) on the Saturday. This indicates an existing spare capacity for approximately 65 vehicles in close proximity to the proposed development.

#### 2.2 PROPOSED DEVELOPMENT

Figure A.5 in Chapter A.3 in the Technical Appendix shows the previously proposed Edward Millen Park Masterplan (January 2020), while Figures A.6 and A.7 show the latest overall site plans for the redevelopment of the Park, ready for construction. Figures A.8 and A.9 then show the currently proposed development site plan and ground floor plan, respectively, as prepared by Benson Studio architects.

• It can be seen in Figures A.5 to A.7 that the proposed masterplan includes a new car park mid-way along Hill View Terrace, together with new toilets/change rooms, in place of the recently demolished 'Department of Communities' building and existing private car park.

- Figure A.8 then shows that that same car park (for construction by Town of Victoria Park) will provide 35 car spaces, but will now merge with new on-site parking for the proposed redevelopment. The new car park is shown to provide an additional 52 spaces, bringing the total parking provision within the combined car park to 87 spaces.
- Figure A.8 also shows a second new car park, accessed off Baillie Avenue, to service the proposed Child Care Centre. The plan currently shows a total of 31 spaces (including 2 Accessible spaces); however, it will also be necessary to provide a turn-around bay at the end of the dead-end parking aisle, reducing the proposed parking provision to 30 spaces.
- The total on-site parking provision for the proposed development site is therefore 82 spaces, increasing to 117 spaces on the overall Edward Millen Park site. With an existing spare capacity for up to 65 vehicles on the street or verge along Albany Highway and Baillie Avenue (as identified above in Section 2.1), the overall parking provision available for use by the proposed development is therefore 182 spaces.
- Figure A.9 shows a ground floor plan of the proposed redevelopment which includes the 'Rotunda' and 'Mildred Creak' buildings (with indoor and outdoor seating), ancillary buildings (stables, garden pavilion, gelato/servery, greenhouses and art studios) and a Child Care Centre.
- The 'Rotunda' building proposes and a Cafe, Retail tenancy and a Bakery (on the ground floor) plus Offices (on the first floor), while the 'Mildred Creak' building will provide a Bar & Bistro and a Micro-brewery, plus a Museum/Gallery, additional Retail, and a Community Events Space. A 'pop up' Market site (which is expected to be used only at weekends) is also shown adjacent to the 'Rotunda' Building, while gardens and additional seating are proposed between the main buildings and the Child Care Centre and Gelato/Servery.
- It can also be seen in Figure A.9 that there is a service yard proposed behind the 'Mildred Creak' building, with access via the proposed new car park (off Hill View Terrace).
- Figure A.10 then shows a composite development plan for the overall proposed redevelopment in the context of the adjacent roads and intersections.

# 2.3 CHILD CARE CENTRE

- The development plan for the proposed Child Care Centre is shown on the proposed overall ground floor plan in Figure A.9 in Chapter A.3 in the Technical Appendix, as well as in the composite development plan in Figure A.10. The proposal includes the construction of a purpose-built Child Care Centre (for up to 104 children plus 20 staff), with a gross floor area of 950 square metres plus outdoor play areas of approximately 1,030 square metres.
- It can be seen in Figure A.10 that the proposed car park is located at the western end of the proposed development site, with 2-way access proposed off Baillie Avenue. The car park provides a proposed parking provision of 31 spaces (including 2 Accessible spaces); however, as noted above in Section 2.2, it is also necessary to provide a turn-around bay at the end of the dead-end aisle, to ensure that all vehicles accessing the car park can exit the site in forward gear, thereby reducing the proposed parking provision to 30 spaces.
- Rubbish collection for the Centre is proposed to occur within the proposed car park, with trucks utilising a mountable pavement area to the left of the access driveway (when entering) to reverse into the parking aisle, and with bins to be wheeled out from the bin enclosure into the car park.
- Car parking requirements are specified in Town of Victoria Park's Local Planning Policy No. 23 with a requirement for 'Child Care facilities' to provide 1 space per 5 children. The proposed Child Care Centre (with 104 children) should therefore provide a minimum of 21 car parking spaces. The

currently proposed plan (with the adjusted parking provision of 30 car spaces) therefore results in a parking surplus of 9 spaces.

- On the basis of previous surveys and available data, it is estimated that the proposed Child Care Centre will generate a total of 4 vehicle trips per child per day, with peak hour flows of 0.69 trips per child during the morning peak hour and 0.76 trips per child during the afternoon peak hour. The Child Care Centre is therefore estimated to generate a total of 420 vehicle trips per day, with 72 vehicle trips and 79 vehicle trips, respectively, during the AM and PM peak hours.
- With a trip generation of less than 100 vehicle trips during both the AM and PM peak hours, the proposed Child Care development is therefore expected to have only minimal impact on the overall road network.

## 2.4 OVERALL PARKING REQUIREMENTS AND SHARED PARKING ANALYSIS

- Overall development zones for the proposed redevelopment are shown in Figure A.11 in Chapter A.4 in the Technical Appendix, while Figure A.12 then shows a detailed plan of the public/seating areas for the overall site.
- Planning Scheme parking requirements for the proposed development are then shown in Table A.1 in Chapter A.4, based on Town of Victoria Park Local Planning Policy No. 23, while Table A.2 shows a 'Shared Parking' analysis for the proposed development.
- It can be seen in Table A.1 that the overall planning scheme parking requirement calculates to a total of 323 spaces. However, with different peak times for different parts of the development, Table A.2 shows that the overall shared parking demands combine for a reduced total of 169 vehicles during a Weekday lunchtime, and 214 vehicles during a Weekend evening (if the Market is running), or 199 spaces during a Weekend lunchtime (without the proposed Market).
- It is suggested, however, that parking demand on proposed Market days could be managed under a special event parking management plan. The overall peak parking demand for 'normal operations' is therefore 169 vehicles on a weekday, or 199 vehicles on a weekend.
- As noted above in Section 2.2, the overall parking provision available for use by the proposed development (within or immediately adjacent to the overall development site) is 182 spaces. The calculated parking demands therefore translate to an overall parking surplus of 13 spaces during the Weekday peak, and a parking shortfall of 17 spaces during the Weekend peak. However, this simply means that parking during the Weekend peak period would extend further north along Albany Highway.

# 2.5 OVERALL FUTURE TRAFFIC FLOWS AND TRAFFIC IMPACTS

- Future traffic generation for the proposed redevelopment (including the Child Care Centre) is calculated in Table A.3 in Chapter A.5 in the Technical Appendix. It can be seen in Table A.3 that the proposed redevelopment is estimated to generate a total of 3,420 vehicle trips per average weekday, with 203 and 402 trips during the weekday AM and PM peak hours, respectively.
- Taking into account the surrounding residential areas and available approach routes, it is estimated that 35 percent of development traffic will travel via the Albany Highway Oats Street intersection to/from the east and south-east, while 30 percent is expected to travel via Berwick Street to/from the north-west. This leaves 20 percent of development traffic via the Berwick Street Hill View Terrace intersection to/from the south and south-east, and 15 percent to/from Albany Highway north.
- The resulting overall travel routes for the Weekday AM peak hour, PM peak hour and Daily traffic flows accessing the proposed development are therefore as shown in Figure A.13 in Chapter A.5.

- With parking opportunities available on both Hill View Terrace and Baillie Boulevard, and with multiple approach routes also available, it is clear that development traffic flows will be spread out (rather than being focussed on any one location). The development is therefore not expected to have a significant traffic impact on any single intersection.
- It can also be seen in Figure A.13 that Driveway 2 (off Hillview Terrace) is expected to carry 2,470 vehicles per day (to/from the main on-site parking areas), followed by 530 vehicles per day using the on-street and verge parking along Baillie Avenue, and 420 vehicles per day using Driveway 1 (off Baillie Avenue) to access the Child Care Centre.
- Intersection operational (SIDRA) analysis has been carried out for the Hill View Terrace Driveway 2 junction during the weekday PM peak hour, confirming that the critical right-turn movement out of Driveway 2 will operate at an acceptable Level of Service C (indicating satisfactory operating conditions with average traffic delays).
- Additional analysis was also carried out to reflect the corresponding Saturday peak hour operations, with conservative traffic assumptions adopted, as a sensitivity test. The additional analysis suggests that the right-turn movement out of Driveway 2 could fall to a poor but manageable Level of Service D; however, the resulting delay is still well-below the maximum permitted under the WAPC Transport Assessment Guidelines.

## 2.6 SWEPT PATH ANALYSIS

- As discussed in Section 2.3, rubbish collection for the proposed Child Care Centre is proposed to occur within the adjacent car park.
- Figure A.14 in Chapter A.6 in the Technical Appendix therefore shows the swept path for a 10.0-metre rubbish truck accessing the proposed Child Car Centre car park, utilising a mountable pavement area adjacent to the pop-up Market Site to reverse back into the parking aisle.
- All other servicing will occur within the proposed service yard, to be accessed via the new car park off Hill View Terrace, with the swept path for a 10-metre Rubbish Truck as shown in Figure A.15.

#### 3. OVERALL CONCLUSIONS AND RECOMMENDATIONS

The overall conclusions and recommendations regarding the proposed Edward Millen redevelopment are drawn from the study findings and conclusions presented above in Chapter 2, and the additional information documented in the Technical Appendix, as follows:

# Parking and Access

- The existing situation provides a total parking capacity for 90 vehicles within Albany Highway and Baillie Avenue, immediately adjacent to the overall Edward Millen Park. With a surveyed peak parking demand of 25 vehicles (at school pick-up time on a weekday), this leaves a spare parking capacity of at least 65 spaces for use during the peak parking periods of the proposed development.
- The currently proposed plans for the overall redevelopment provide a total of 117 off-street parking spaces (including 35 spaces to be constructed by Town of Victoria Park). The total parking capacity available for use by the proposed redevelopment is therefore 182 spaces.
- Planning Scheme parking requirements for the proposed overall development calculate to a total provision of 323 spaces, including 21 spaces for the proposed Child Care Centre. However, the 'Shared Parking' analysis (in Table A.2 in the Technical Appendix) shows that with different peak times for different parts of the development, the actual peak parking demands will be 169 vehicles on a Weekday and 199 vehicles on a Weekend (excluding the pop-up Markets, which should be dealt with separately under a 'special event parking management plan').
- The proposed development therefore provides an overall parking surplus of 13 spaces during the Weekday peak period, but a parking shortfall of 17 spaces during the Weekend peak period. Parking demand during the Weekend peak period will therefore extend further north along Albany Highway.
- However, it is important to note that these overall calculations already assume that when the Child Care Centre is not operating, the car park will be made available as alternative parking for other developments on the overall site.

# **Development Traffic Flows**

- The proposed Child Care Centre trip generation during both the AM and PM peak hours is less than 100 vehicle trips; it is therefore expected to have only minimal impact on the overall road network.
- The overall proposed redevelopment (including the Child Care Centre) is expected to generate 3,420 vehicle trips per average weekday, with 203 trips in the AM peak hour and 402 trips in the weekday PM peak hour. However, with traffic well spread-out on multiple approach routes, the development is not expected to have a significant impact on any single intersection.
- Analysis shows that the critical right-turn-out movement at the Hill View Terrace Driveway 2 junction will operate at an acceptable Level of Service C during the weekday PM peak hour, indicating satisfactory operating conditions with average traffic delays, while additional analysis also confirms acceptable operations during the weekend peak period.

# Service Vehicles

- Rubbish collection for the Child Care Centre is proposed to occur within the car park accessed off Baillie Avenue, while all other servicing will occur within the proposed service yard, to be accessed via the proposed car parks off Hill View Terrace.
- Swept path diagrams in Figures A.14 and A.15 in the Technical Appendix confirm suitable access for a 10-metre Rubbish Truck in both locations.

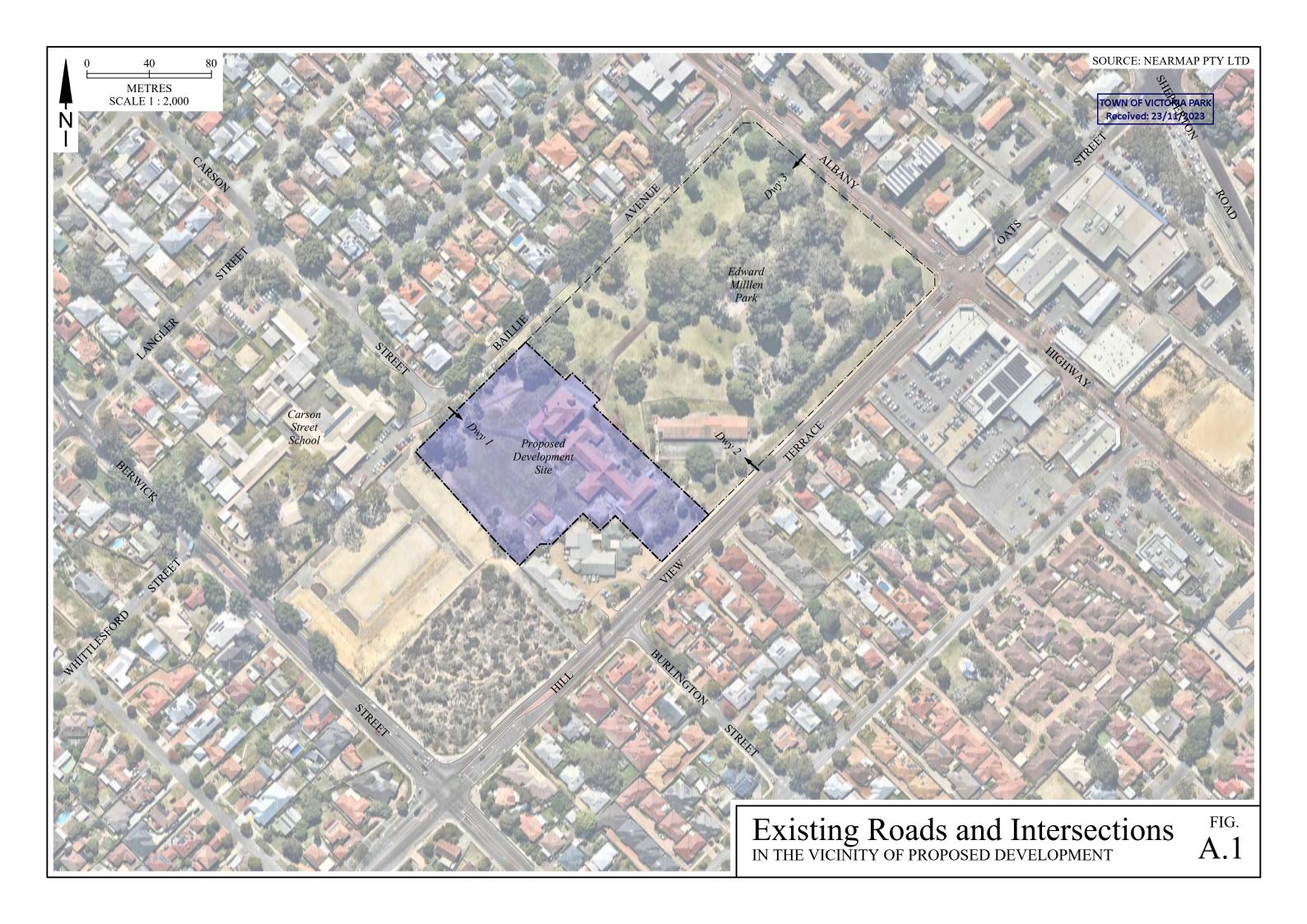
# **TECHNICAL APPENDIX**

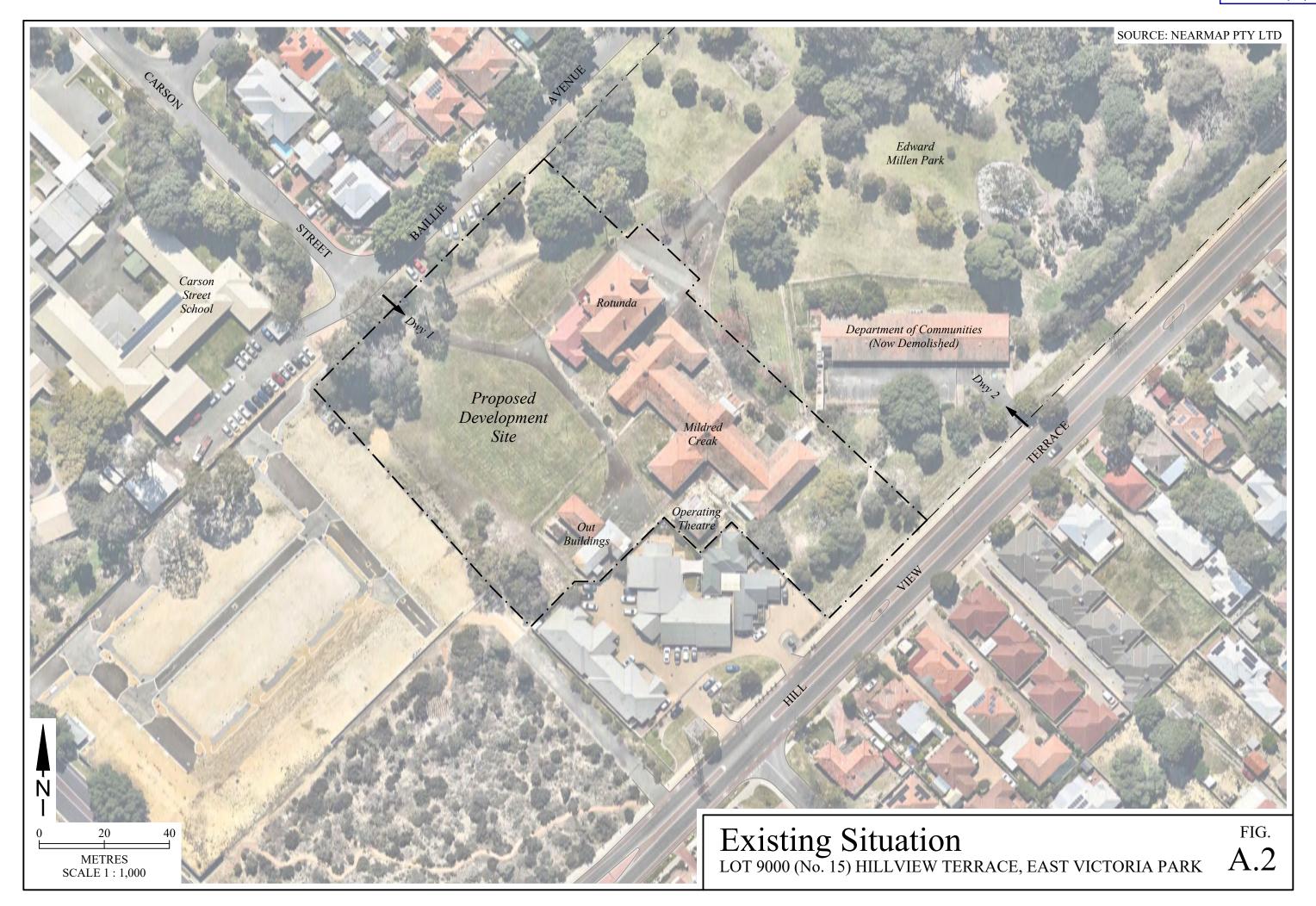
The Technical Appendix documents the existing situation and existing traffic flows, together with the proposed development plans, development traffic flows, and swept paths for service vehicles.

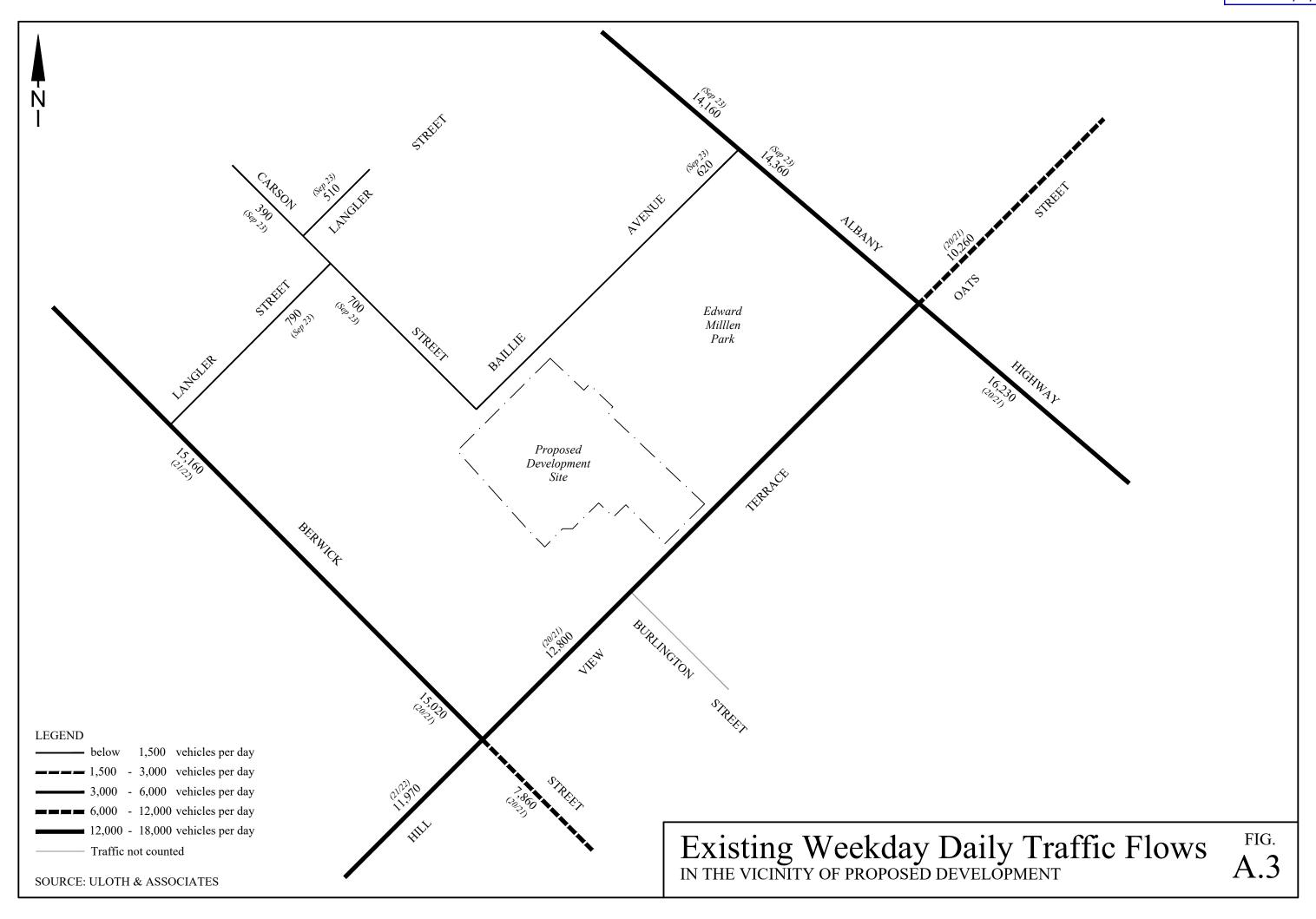
# A.1 EXISTING ROADS AND INTERSECTIONS

Figures A.1 shows the existing roads and intersections in the vicinity of the proposed development site, while the existing situation within and immediately adjacent to the site is shown in more detail in Figure A.2.

Figure A.3 shows existing weekday traffic flows in the vicinity of the proposed development site.

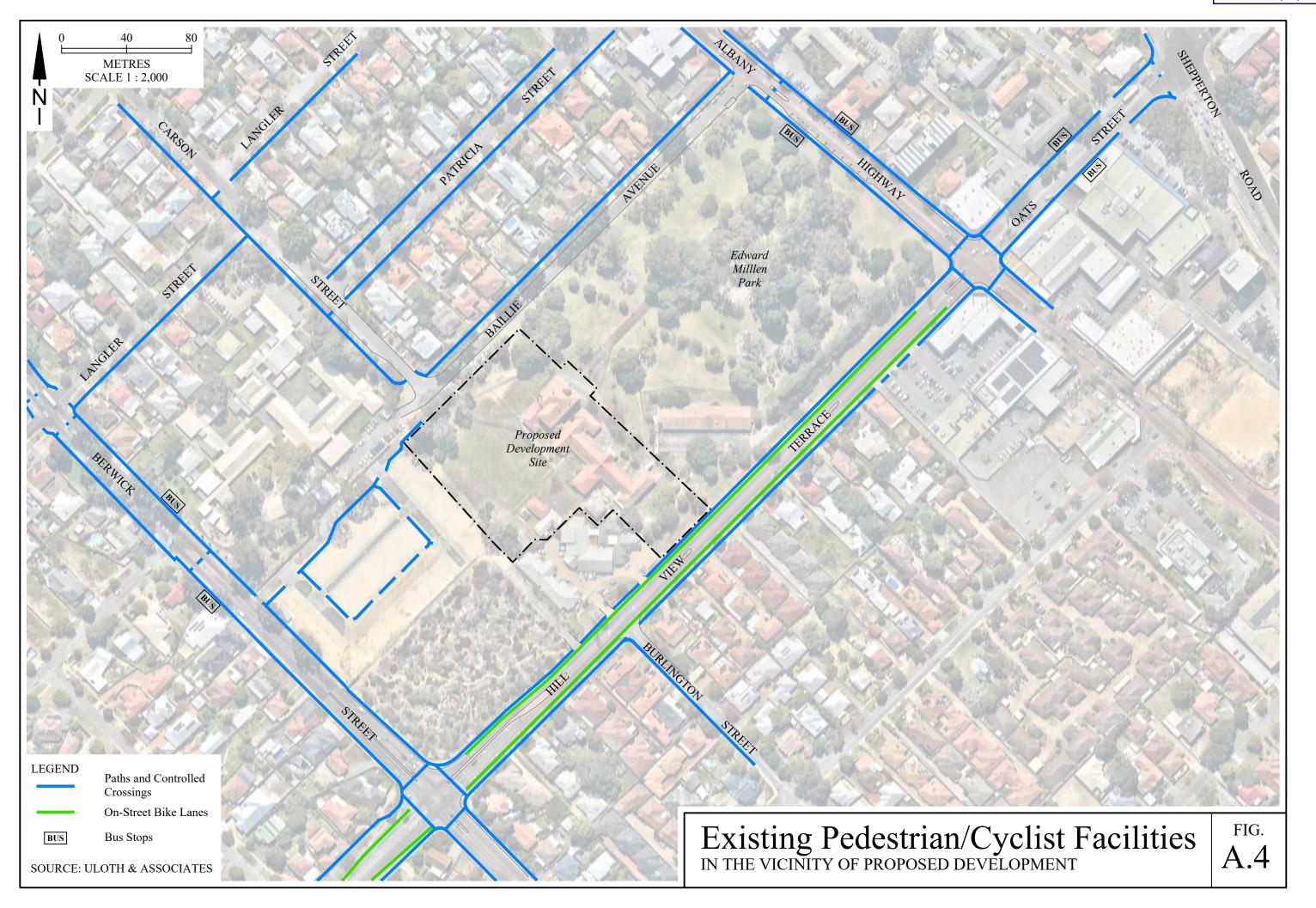






# A.2 EXISTING PEDESTRIANS/CYCLISTS

Figure A.4 shows the existing pedestrian/cyclist facilities in the vicinity of the proposed development site including existing footpaths and controlled crossings, on-street bike lanes, and Bus Stops.



## A.3 OVERALL MASTERPLAN AND PROPOSED DEVELOPMENT

Figure A.5 shows the Edward Millen Park Masterplan prepared for Town of Victoria Park (in January 2020), while Figures A.6 and A.7 show the latest overall site plans, ready for construction.

Figured A.8 and A.9 show the proposed site plan and corresponding ground floor plan for the currently proposed redevelopment, as prepared by Benson Studio architects.

Figure A.10 then shows the various proposals for the overall development site as a composite development plan (including the proposed car park accessed off Hill View Terrace), in the context of the adjacent roads and intersections.

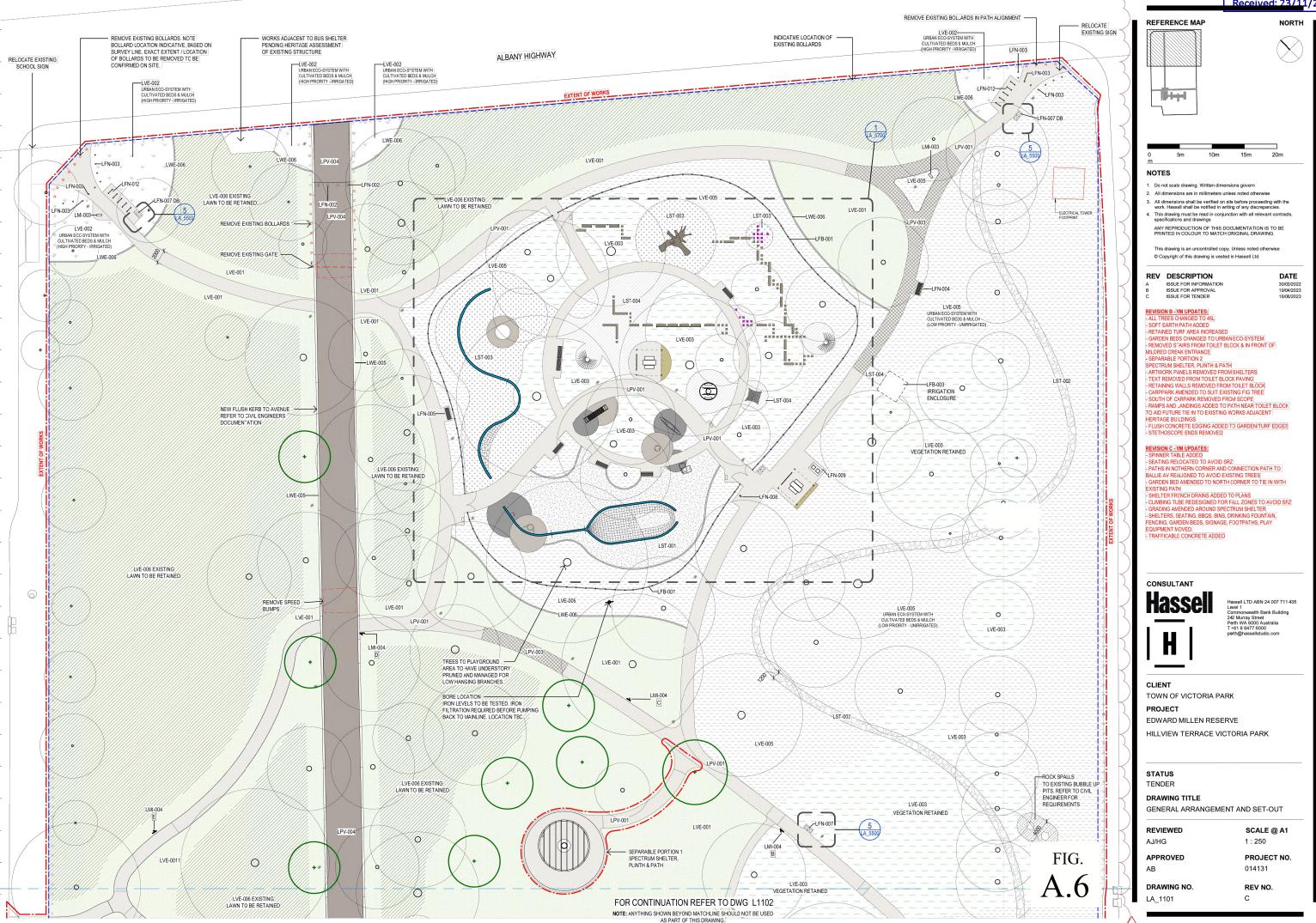
# **Master Plan**

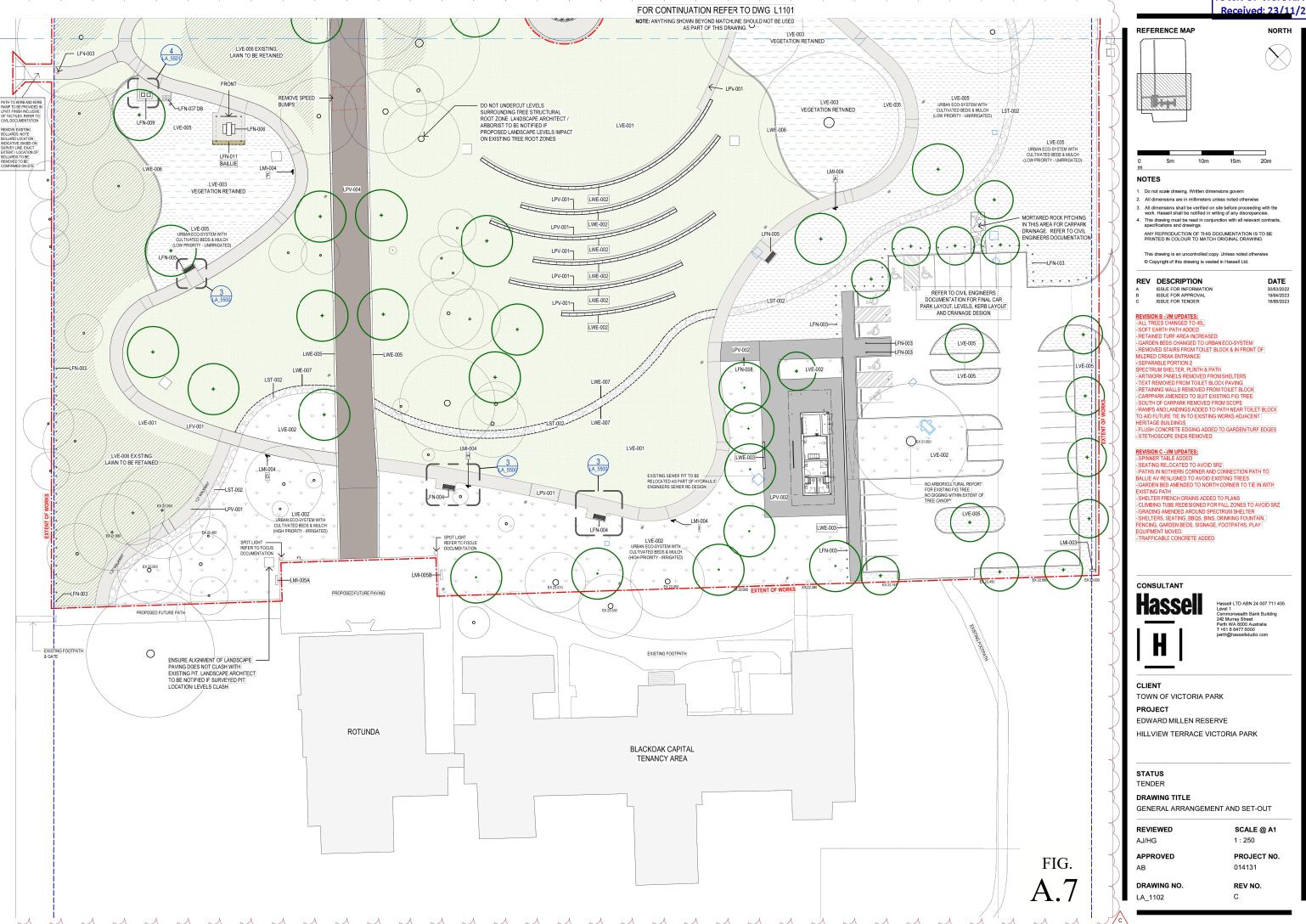
## **LEGEND**

- Heritage avenue retained and re-surfaced with kerb upstands removed. Avenue reinforced with supplementary tree planting
- Rotunda building entry space re-paved with high quality natural stone
- Activated Rotunda space including alfresco seating/tables and lawn with seating positioned underneath the large tree
- Future development zone
- New paved axis connecting the Mildred Creek and Rotunda buildings to the edge streets
- Generously proportioned landscaped terracing, edged with seat height walls
- Circulation path graded to ensure universal access
- Family shelters with lighting and BBQ's surrounded by planting
- 9 Park edge eco-zone planting including water-wise native species
- 10 New car park (approx. 49 spaces)
- Cafe and 'changing places' toilet and change room facility
- 12 Cafe alfresco space
- 13 Feature seating node under landmark tree
- Central focal point including space for performance, as well shade/rain shelter structure
- 15 New Trees
- Nature play zone utilising bespoke play elements within expanses of native planting and tracks. Play features to include all abilities play, tree houses, cubbies, exercise and balancing elements, rope play, swings and benches. This area has a particular opportunity to integrate unique art pieces to double up as play
- Expansive lawn spaces for ball play and dog walking
- 18 New entry point
- 19 Wayfinding node
- 20 Bicycle racks
- Passive receation area with picnic tables to serve as break-out space from heritage buildings
- Proposed trees to create ecological connection to Hillview Terrace bushland









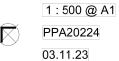
NEW ROOF SERVICE YARD 

TOWN OF VICTORIA PARK Received: 23/11/2023

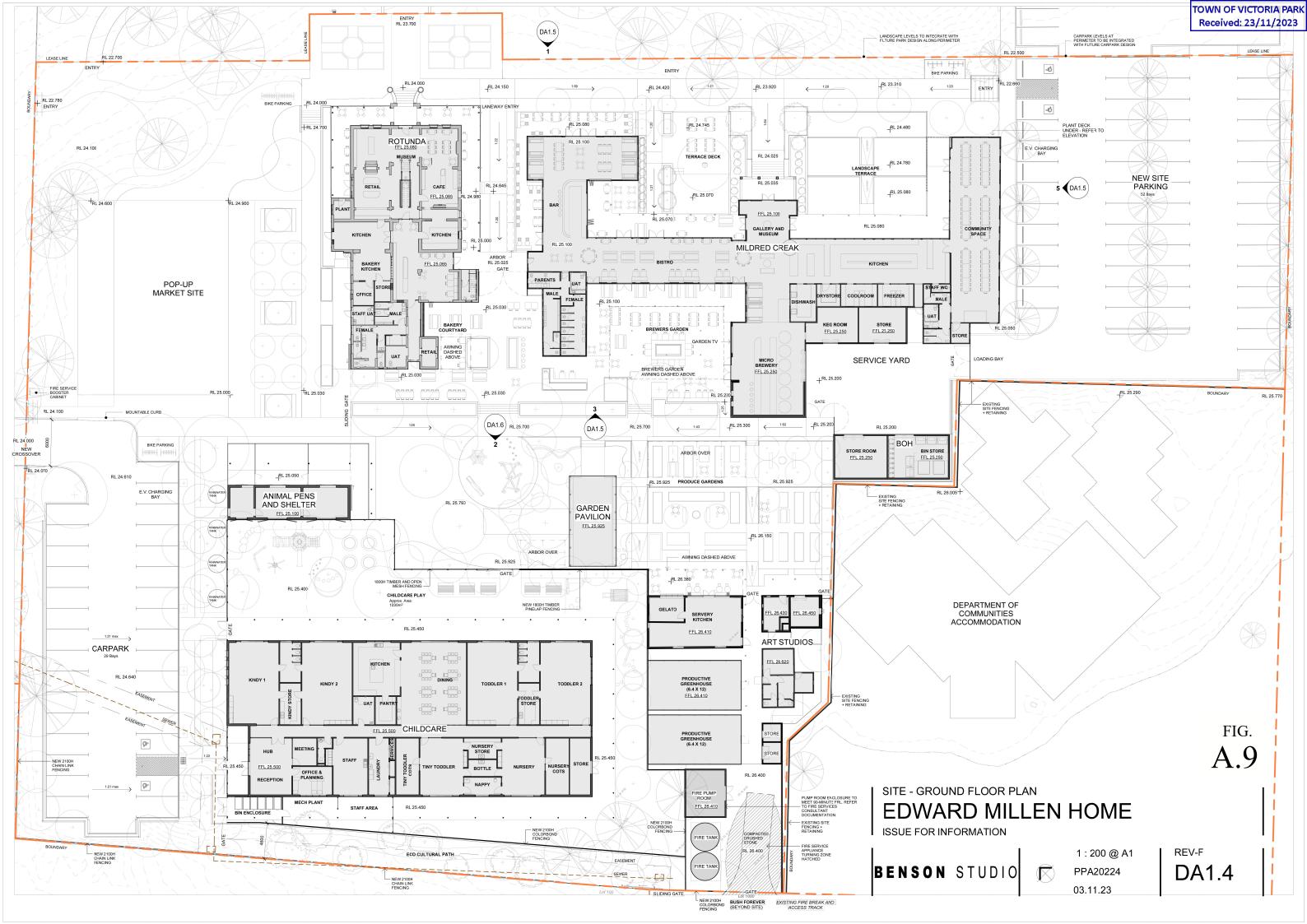
FIG. A.8

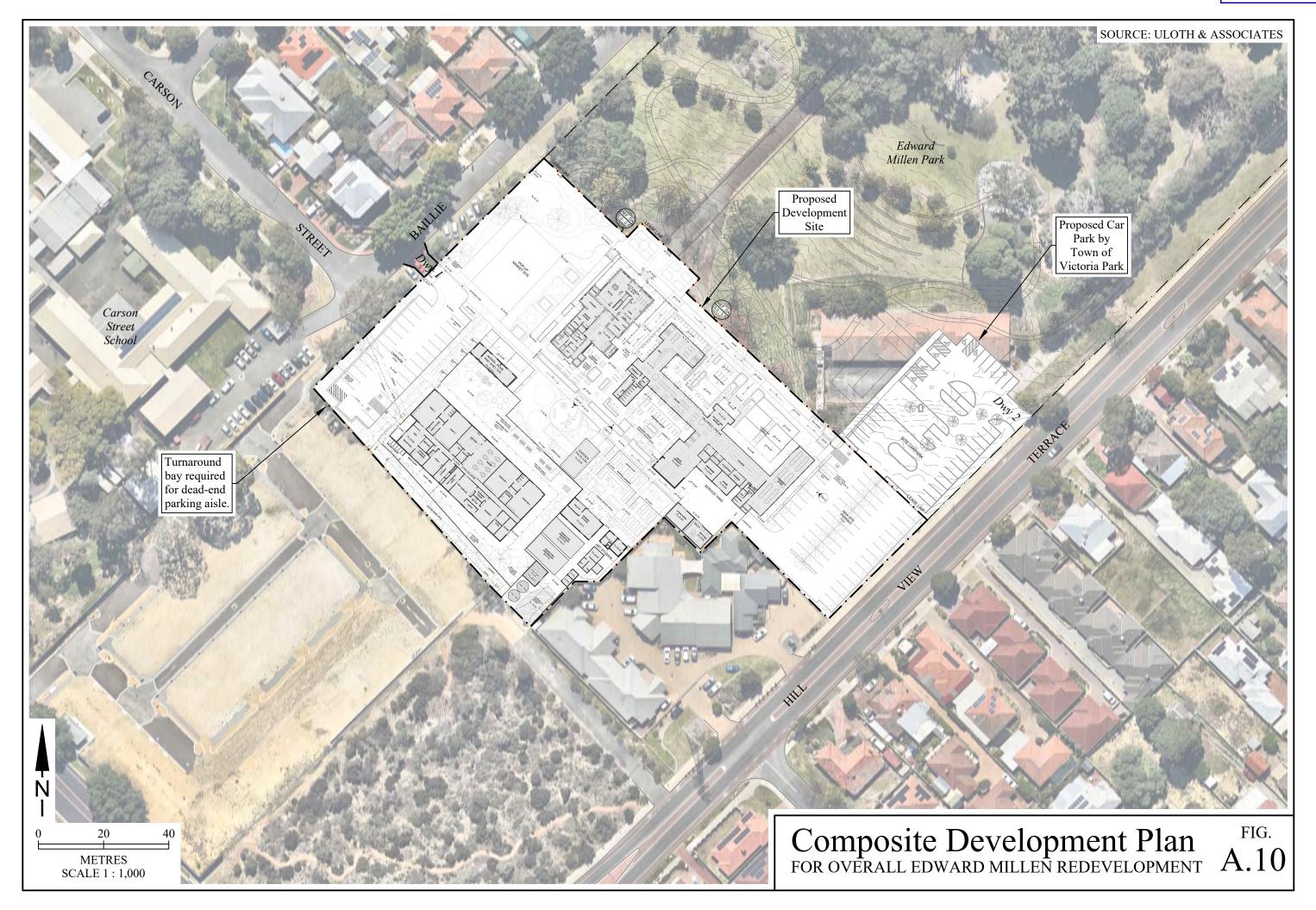
# SITE PLAN EDWARD MILLEN HOME ISSUE FOR INFORMATION

BENSON STUDIO



DA1.3





#### A.4 SHARED PARKING ANALYSIS

Figure A.11 shows the overall development zones for the proposed Edward Millen redevelopment site, while Table A.1 shows the Local Planning Scheme parking requirements for the proposed redevelopment, based on the detailed public/seating areas shown in Figure A.12.

Table A.2 then shows the 'Shared Parking' analysis for the proposed redevelopment, taking into account the different peak parking periods for each different part of the overall development.

TABLE A.1
PLANNING SCHEME PARKING REQUIREMENTS
PROPOSED EDWARD MILLEN REDEVELOPMENT

LAND USE/ACTIVITY	AREA (m <sup>2</sup> )	NO. OF SEATS/PEOPLE 1)	REQUIRED PARKING <sup>2)</sup> (SPACES)
<ul> <li>Mildred Creak Building</li> <li>Bar &amp; Bistro/Brewery</li> <li>Community Events Space</li> <li>Museum/Gallery</li> <li>Retail</li> </ul>	932 106 52 7	500 seats 120 seats - -	125 30 5 <sup>3)</sup> 1 <sup>3)</sup>
<ul> <li>Rotunda Building</li> <li>Bakery</li> <li>Cafe</li> <li>Retail</li> <li>Office</li> </ul>	174 155 52 146	80 seats 64 seats - -	20 16 5 <sup>3)</sup> 4 <sup>4)</sup>
Garden Pavilion	58	46 seats <sup>5)</sup>	11
Gelato/Servery	84	39 seats <sup>6)</sup>	10
Market Garden Site 7)	644	300 people	75
Child Care Centre	-	104 children	21 8)
• Total			323

Notes:

- 1) Seat numbers are based on detailed public seating area plan as shown in Figure A.10, unless otherwise stated.
- 2) Where number of seats/people are provided, a parking rate of 1 car space per 4 seats/people is assumed, unless otherwise stated.
- 3) Based on Town of Victoria Local Planning Policy 23 parking rate of 1 per 10m<sup>2</sup> for 'Shop' land use.
- 4) Based on Town of Victoria Local Planning Policy 23 parking rate of 1 per 40m<sup>2</sup> for 'Office' land use.
- 5) Garden Pavilion seats are calculated based on an assumed 4 seats per 5 square metres.
- 6) Based on 24 seats for the Gelato and 15 seats for Servery, with Servery seats calculated using a seating area of 19m<sup>2</sup> and an assumed 4 seats per 5 square metres.
- 7) Assumed maximum 300 people in attendance.
- 8) Based on Town of Victoria Local Planning Policy 23 parking rate of 1 per 5 children for 'Child Care' land use.

Source: Uloth and Associates

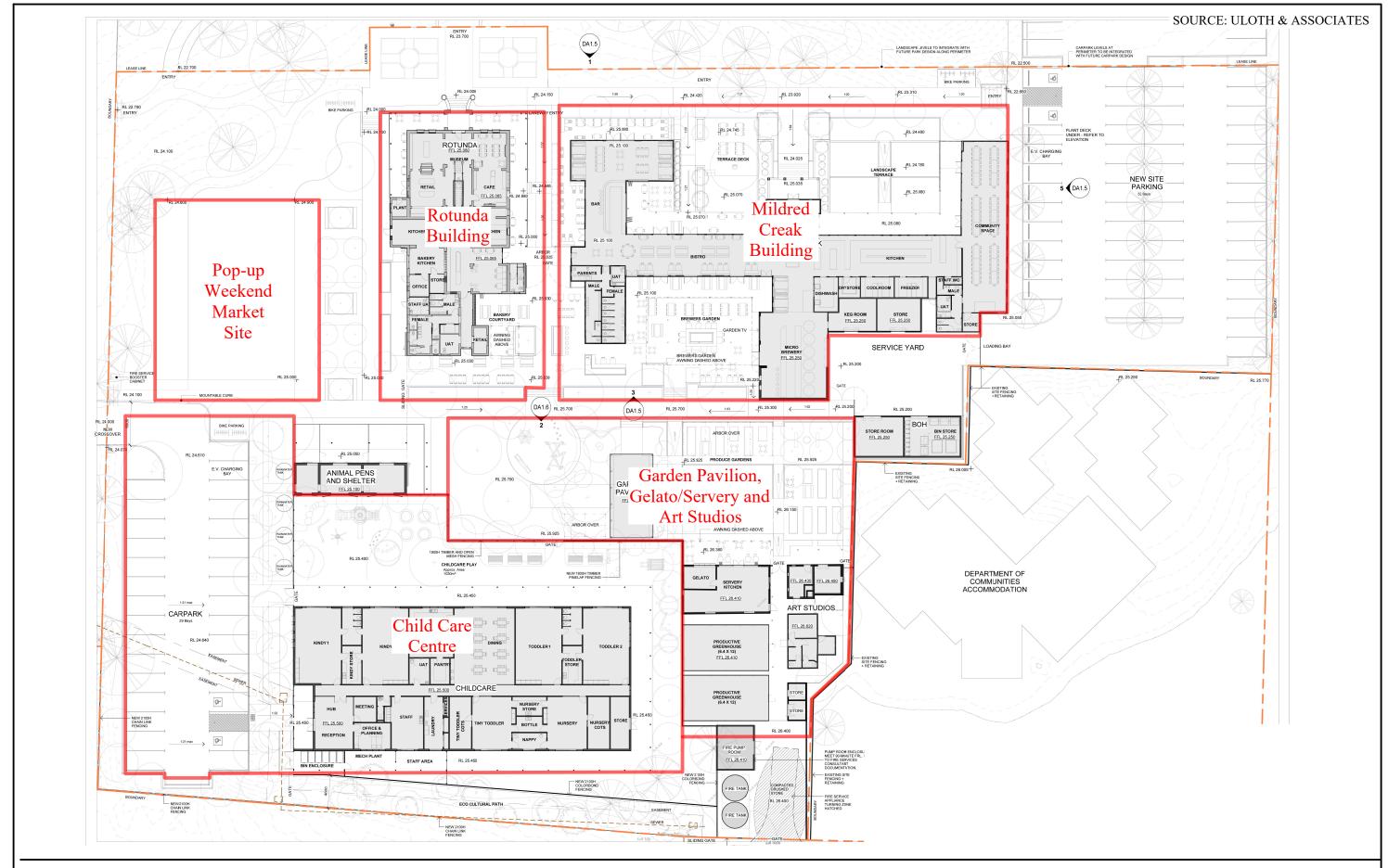
TABLE A.2 SHARED PARKING ANALYSIS EDWARD MILLEN REDEVELOPMENT

	INITIAL PARKING 1)	PARKING FLUCTUATIONS AND RESULTING SHARED PARKING REQUIREMENTS					
	REQUIREMENT	Weekday		Weekend			
LAND USE/ACTIVITY	(SPACES)	Morning	Lunch/Afternoon	Evening	Morning	Lunch/Afternoon	Evening
Mildred Creak Building							
- Bar & Bistro/Brewery	125	-	75 (60 percent)	100 (80 percent)	-	112 (90 percent)	125 (100 percent)
- Community Events Space	30	18 (60 percent)	24 (80 percent)	-	21 (70 percent)	30 (100 percent)	-
- Museum/Gallery	5	-	3 (60 percent)	2 (40 percent)	-	5 (100 percent)	3 (60 percent)
- Retail	1	1 (55 percent)	1 (95 percent)	-	1 (55 percent)	1 (100 percent)	-
Rotunda Building							
- Bakery	20	16 (80 percent)	14 (70 percent)	-	20 (100 percent)	16 (80 percent)	-
- Café	16	13 (80 percent)	11 (70 percent)	-	16 (100 percent)	13 (80 percent)	-
- Retail	5	2 (55 percent)	5 (95 percent)	-	2 (55 percent)	5 (100 percent)	-
- Office	4	4 (95 percent)	4 (100 percent)	-	-	-	-
Garden Pavilion	11	-	4 (40 percent)	7 (60 percent)	-	9 (80 percent)	11 (100 percent)
Gelato/Servery	10	8 (80 percent)	7 (70 percent)	-	10 (100 percent)	8 (80 percent)	-
Pop-up Market Site <sup>2)</sup>	75	-	-	-	75 (100 percent)	-	75 (100 percent
Child Care Centre	21	19 (90 percent)	21 (100 percent)	-	-	-	-
Grand Total	323	81	169	109	145	199	214
Alternative Total     (Excl. Pop-up Market)	248	81	169	109	70	199	139

Notes:

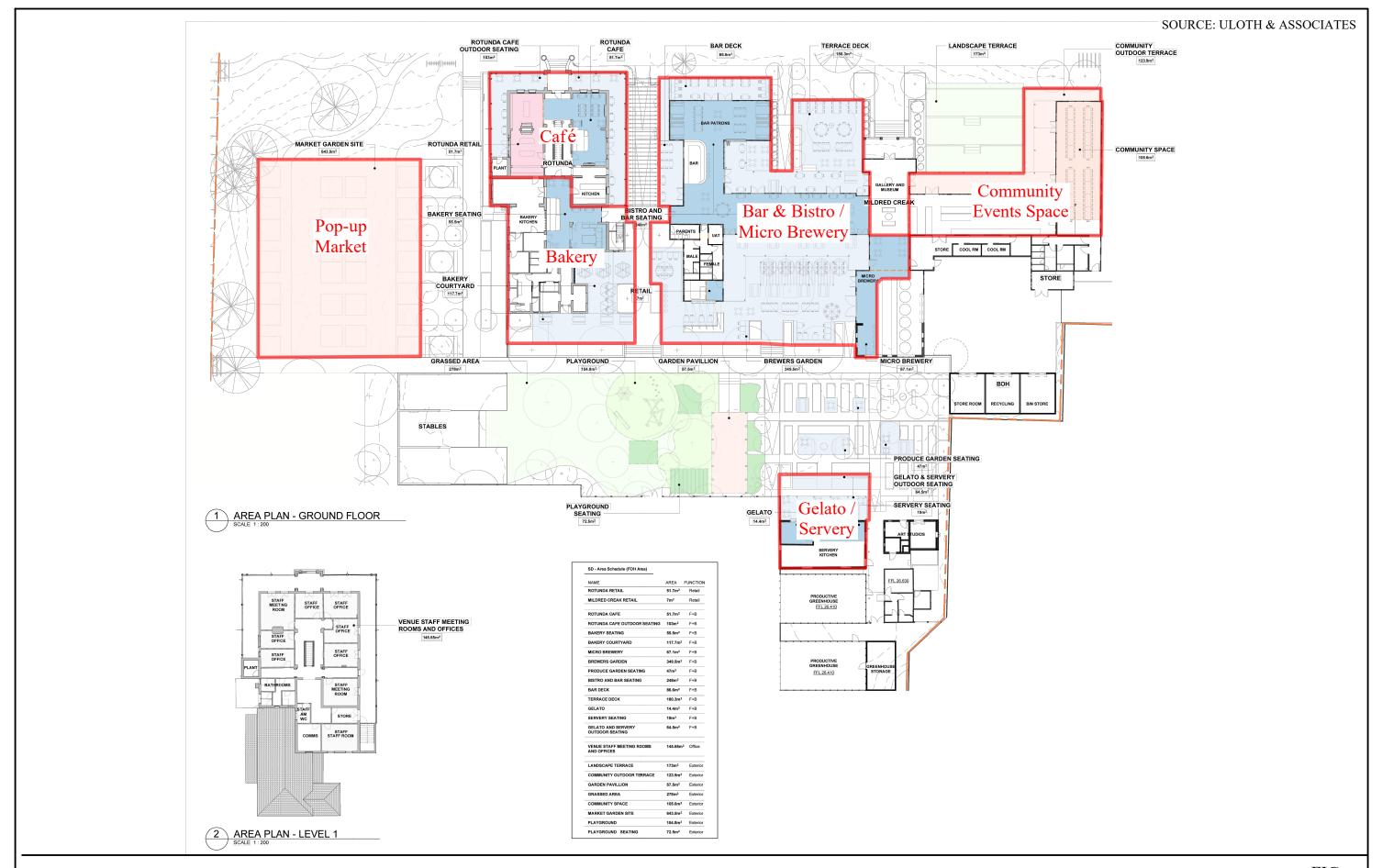
Initial parking requirements as shown in Table A.1.
 Assumes Market events are only held on weekends, but could be either morning or evening.
 Bold figures denote peak parking demands.

Source: Uloth and Associates



Overall Development Zones FOR SHARED PARKING ANALYSIS

A.11



Detailed Public/Seating Areas FOR SHARED PARKING ANALYSIS

FIG. **A.12** 

#### A.5 DEVELOPMENT TRAFFIC FLOWS

Table A.3 shows the land use and trip generation calculations for the proposed development, based on industry standard trip generation rates within the NSW RMS 'Guide to Traffic Generating Developments' handbook and the ITE 'Trip Generation' manual - 11<sup>th</sup> Edition.

Figure A.13 shows the assignment of weekday AM peak hour, PM peak hour and Daily traffic flows generated by the proposed overall development.

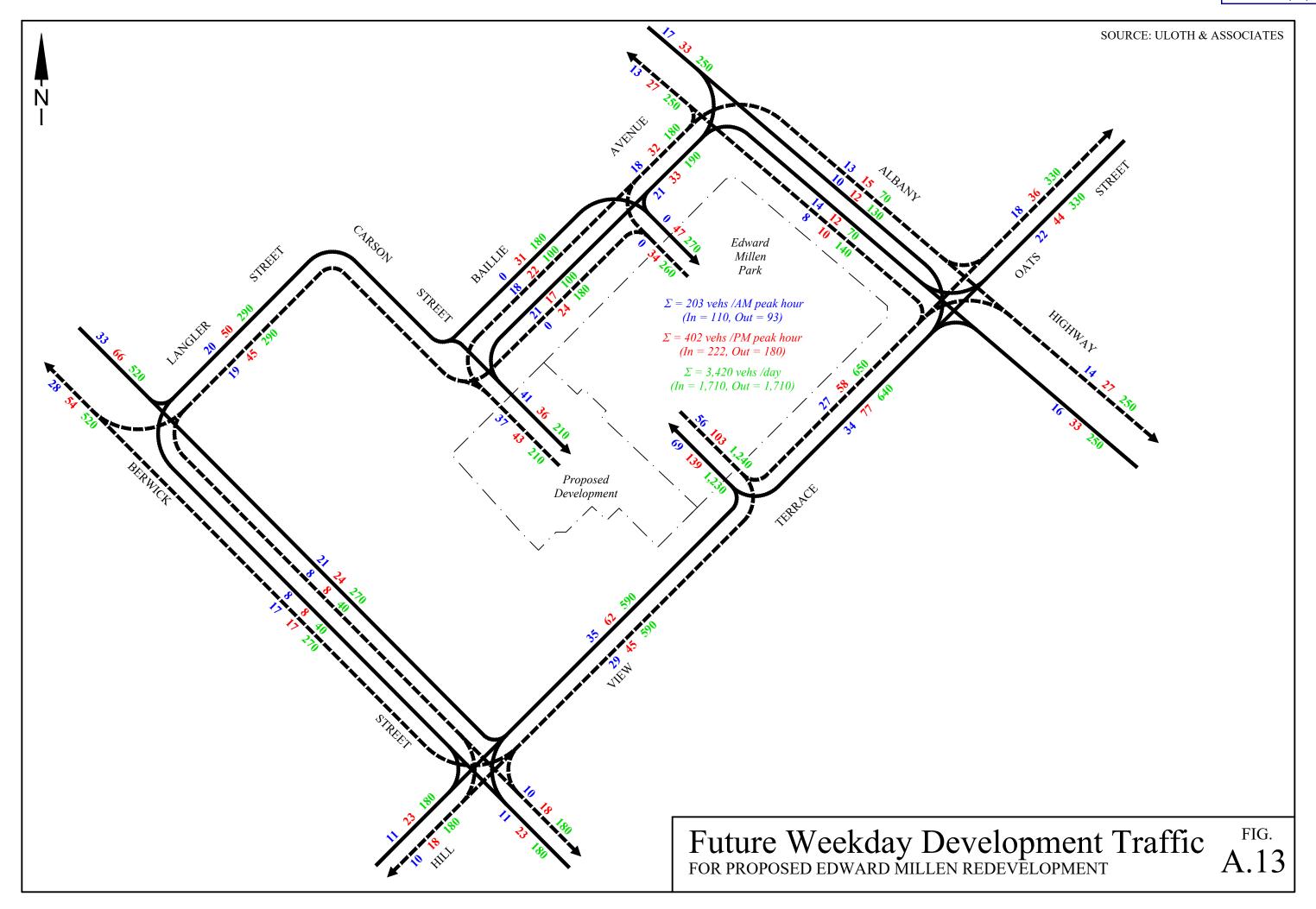
TABLE A.3
PROPOSED LAND USE AND ESTIMATED TRIP GENERATION
EDWARD MILLEN REDEVELOPMENT

	TRIP GENERATION				
	AM Peak				
LAND USE	Hour (vph)	Hour (vph)	Daily (vpd)		
<ul> <li>Mildred Creak Building</li> <li>Bar &amp; Bistro/Brewery (1,115m²) 1)</li> <li>Community Events Space (496m²) 2)</li> <li>Museum/Gallery &amp; Retail (59m²) 3)</li> </ul>	0 8 1	136 67 2	1,100 520 40		
<ul> <li>Rotunda Building</li> <li>Bakery (381m²) 4)</li> <li>Café (227m²) 4)</li> <li>Retail (52m²) 3)</li> <li>Office (273m²) 5)</li> </ul>	55 33 1 4	52 30 2 6	600 360 20 20		
<ul> <li>Other</li> <li>Garden Pavilion (58m²) <sup>4)</sup></li> <li>Gelato/Servery (149m²) <sup>4)</sup></li> <li>Market Garden Site (644m²) <sup>6)</sup></li> <li>Child Care Centre (104m²) <sup>7)</sup></li> </ul>	8 21 0 72	8 20 0 79	100 240 0 420		
Total Trip Generation	203	402	3,420		

Notes:

- 1) Based on ITE Trip Generation for 'Drinking Place' (#975) 11<sup>th</sup> Edition. Daily estimated to be 8 times PM peak.
- 2) Based on ITE Trip Generation for 'Fast Casual Restaurant' (#930) 11th Edition.
- 3) Based on NSW RMS rate for 'Specialty Shops', with AM peak assumed to be 40 percent of PM peak.
- 4) Based on ITE Trip Generation for 'High Turnover (sit-down) Restaurant' (#932) 11<sup>th</sup> Edition, but increased by 40 percent to reflect 'Fast Casual Restaurant' (#930).
- 5) Based on NSW RMS rate for 'Office and Commercial', with AM peak assumed to be 80 percent of PM peak.
- 6) Assumed to only run on weekends.
- 7) Based on previous surveys and available research.

Source: Uloth and Associates



# A.6 SWEPT PATHS

Figure A.14 shows the swept path for a 10-metre Rubbish Truck accessing the proposed Child Care Centre car park, off Baillie Avenue.

Figure A.15 shows the swept path for a 10-metre Rubbish Truck accessing the proposed service yard off Hill View Terrace.

