

Proposed Child Care Centre - 10 Harbour Elbow, Banksia Grove

SUPPLEMENTARY TRAFFIC REPORT
FOLLOWING SAT MEDIATION

Prepared for
THE ATLANTIS GROUP

Prepared by
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1. INTRODUCTION

The Development Application for a Child Care Centre at Lot 400 (No. 10) Harbour Elbow (in Banksia Grove) was initially lodged with City of Wanneroo on 14 June 2018, together with a Traffic Impact Statement prepared by MW Urban Planning and Development. The application was refused by Council in October 2018, however an application for review was then lodged with the State Administrative Tribunal. At the subsequent mediation, further information was requested regarding the anticipated trip generation and traffic impacts of the proposed development, in addition to a number of design changes which now have been adopted (including a reduction in the number of children to be accommodated).

Uloth and Associates has therefore been appointed to provide the additional trip generation and traffic impact information requested, based on the now revised plans.

1.1 STUDY OBJECTIVES

The overall objectives for this supplementary traffic report are as follows:

- Confirm the anticipated traffic generation for the reduced-size child care centre;
- Identify the expected travel routes to/from the centre, in order to quantify the overall traffic impacts of the proposal; and,
- Comment on the overall anticipated traffic increases, and the possible impacts of this additional traffic on the affected streets.

2. EXISTING SITUATION

The proposed development site is located between Harbour Elbow and Greenvale Place, in Banksia Grove, at the northern end of Greenvale Place (just south of Joondalup Drive), as shown in the Locality Plan in Figure 1. The adjacent roads and intersections are then shown in Figure 2, including Viridian Drive, Turquoise Loop and Malachite Fairway.

It is important to note that Viridian Drive is classified as a Local Distributor road within the Main Roads WA functional road hierarchy, while Turquoise Loop, Malachite Fairway, Harbour Elbow and Greenvale Place are all identified as Access Roads.

However, it is also important to note that under Liveable Neighbourhoods, Viridian Drive would be classified as a Neighbourhood Connector B road (with an indicative maximum traffic flow of 3,000 vehicles per day), while Turquoise Loop would be an Access Street C (also suitable for up to 3,000 vehicles per day), and Malachite Fairway would be classified as Access Street D (with an indicative maximum traffic flow of 1,000 vehicles per day).

In order to identify the existing traffic flows in the area, peak period traffic counts were carried out at the intersection of Viridian Drive and Turquoise Loop, from 7am to 10am and from 3pm to 6pm, on Thursday 28 February 2019. On the basis of these surveys, it is estimated that Viridian Drive currently carries 1,450 vehicles per day south of Joondalup Drive and 870 vehicles per day south of Turquoise Loop, while Turquoise Loop carries 630 vehicles per day east of Viridian Drive. By taking into account the number of dwellings accessed off both Turquoise Loop and Harbour Elbow, it is then also estimated that Malachite Fairway carries perhaps 100 to 200 vehicles per day, while Greenvale Place carries a maximum of perhaps 20 to 30 vehicles per day north of Malachite Fairway and therefore only around 180 vehicles per day south of Malachite Fairway.

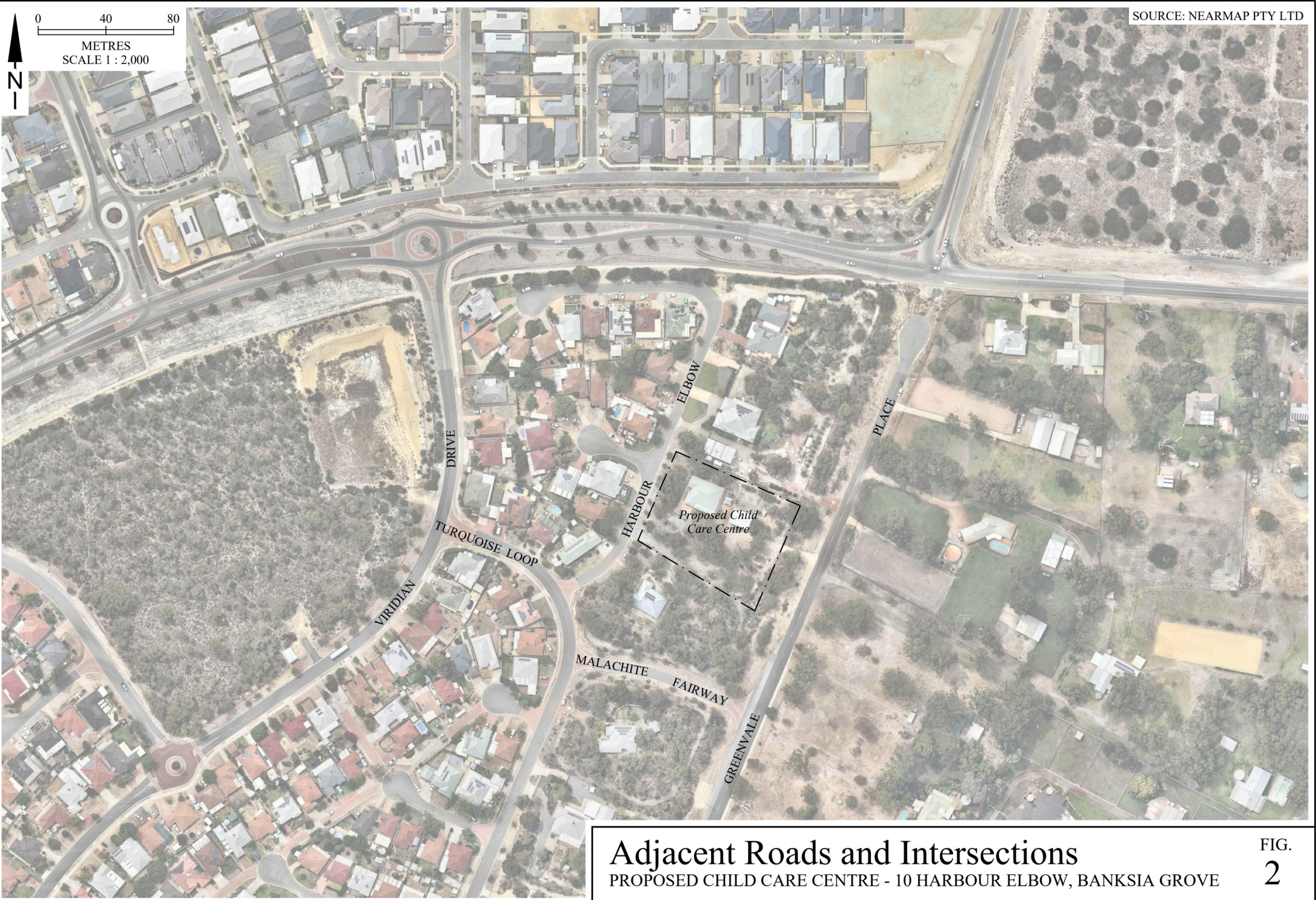
0 75 150
METRES
SCALE 1 : 4,000

SOURCE: NEARMAP PTY LTD



Locality Plan and Proposed Development Site
PROPOSED CHILD CARE CENTRE - 10 HARBOUR ELBOW, BANKSIA GROVE

FIG.
1



Adjacent Roads and Intersections
PROPOSED CHILD CARE CENTRE - 10 HARBOUR ELBOW, BANKSIA GROVE

FIG.
2

3. PROPOSED DEVELOPMENT

Although the initial application was for a child care centre catering for up to 120 children and 21 staff, this has now been reduced (following mediation) to a maximum of 92 children and 17 staff, with operating hours between 6:30am and 6:00pm, Monday to Friday.

The proposed site plan has also been modified, including changes to the car park layout to avoid the removal of significant trees. The revised plan reflecting the proposed changes is as shown in Figure 3, and the resulting overall access arrangement (together with the adjacent roads and intersections) is as shown in Figure 4.

It is important to note in Figures 3 and 4 that vehicular access to the proposed Child Care Centre is via a single access driveway off Greenvale Place.

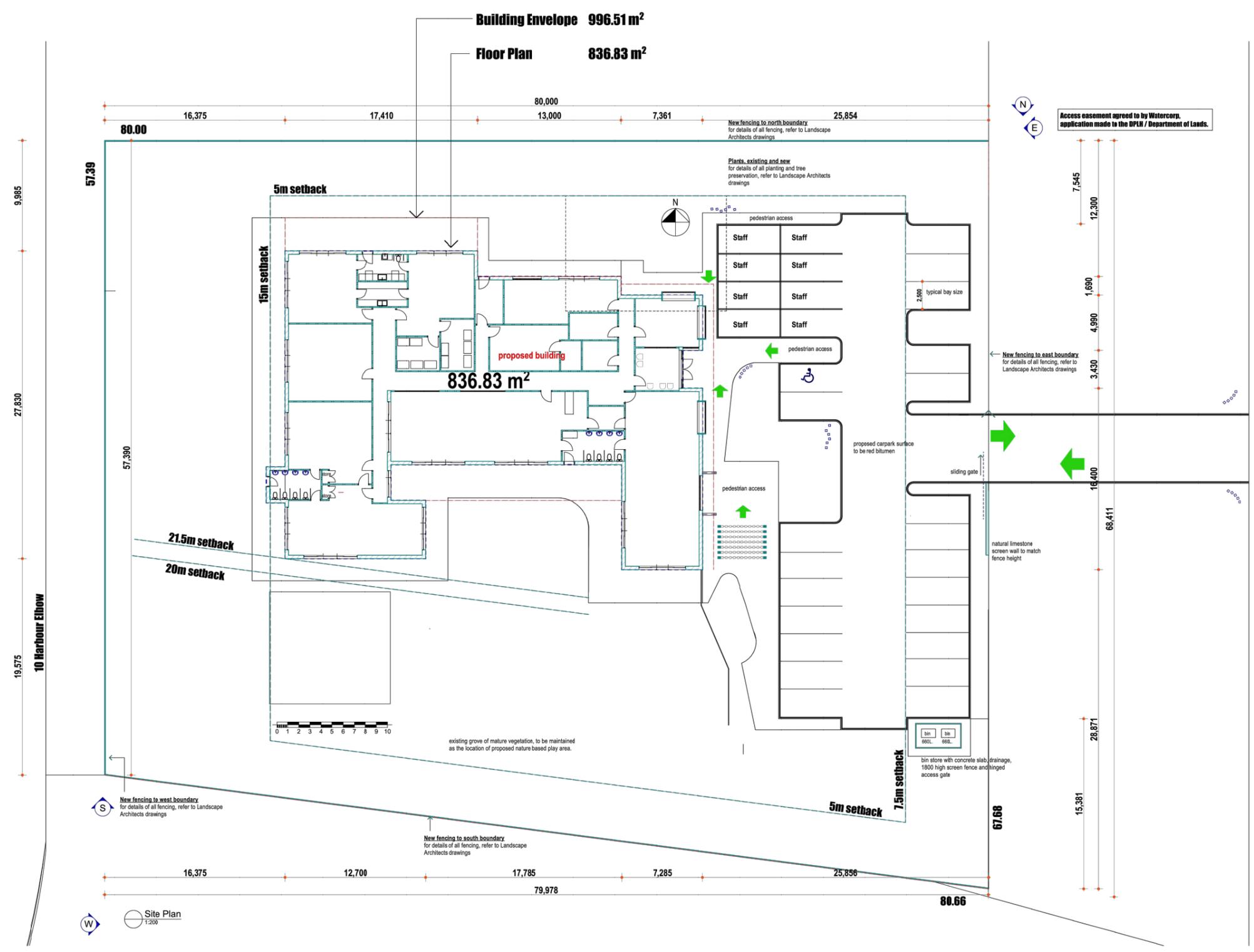
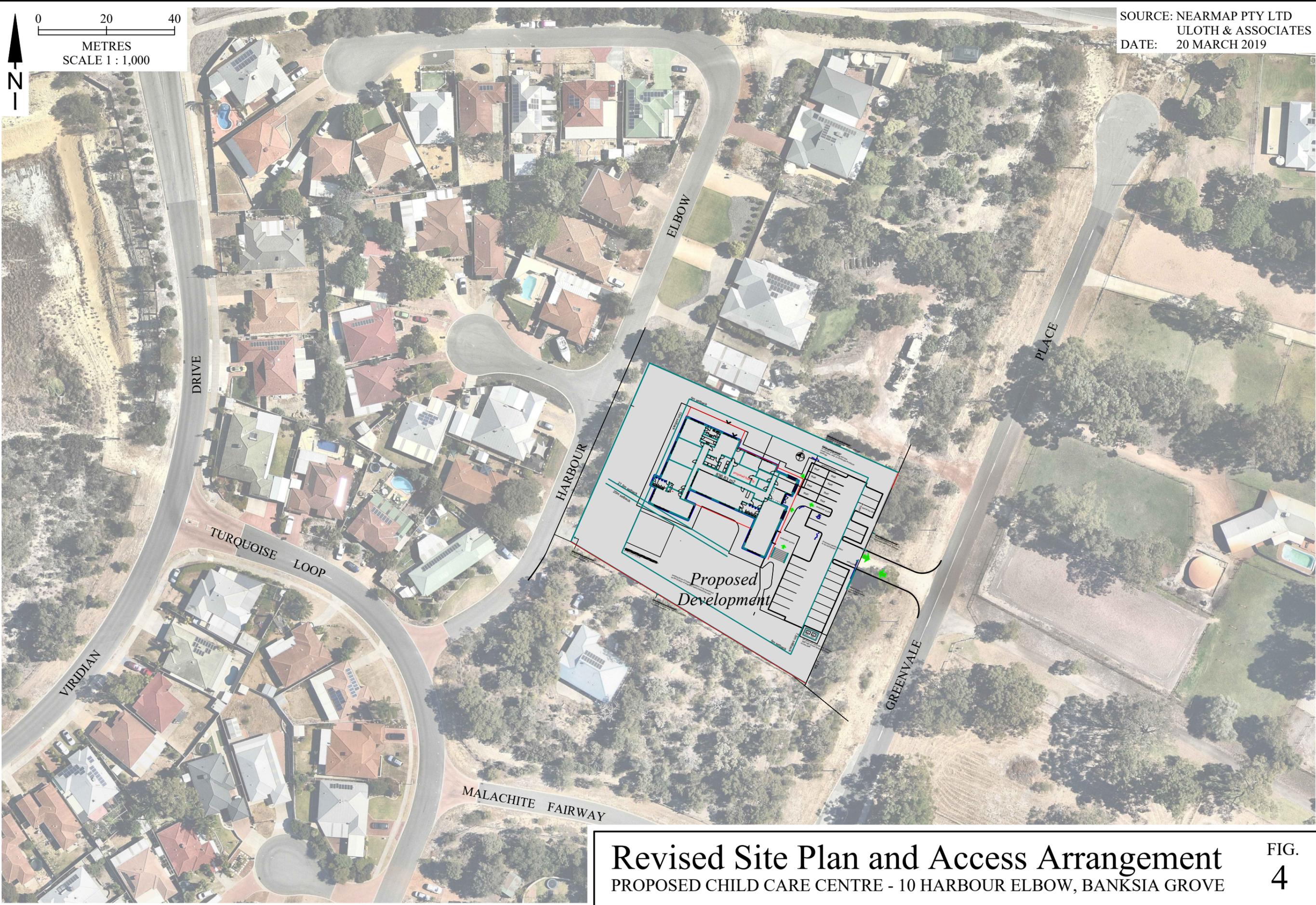


FIG. 3

				Project: Childcare Centre 10 Harbour Elbow, Banksia Grove		Drawing: Site Plan		Date: 19/03/2019 Drawn: JC			
BUILDING DESIGN & VISUALISATION 1 9397 2919 m. 0438 323 399 www.jonchisholm.com		NATIONAL ASSOCIATION OF BUILDING DESIGNERS 11000 High Street, Perth WA 6000 www.nabdb.com.au		Job No: 1702 Rev: A101 K		Date: 16/8/2018 Date: 18/2/2018 Date: 14/2/2018 Date: 4/3/2018 Date: 20/4/2018 Date: 13/2/2019 Date: 21/1/2019		Issued for planning Issued for information Issued for information Issued for information Issued for information Issued for information Issued for information		Date: 19/03/2019 Date: 19/03/2019 Date: 12/3/2019 Date: 4/3/2019 Date: 13/2/2019 Date: 21/1/2019	
The builder must verify all dimensions on site before commencing any work or shop draws.											



Revised Site Plan and Access Arrangement
PROPOSED CHILD CARE CENTRE - 10 HARBOUR ELBOW, BANKSIA GROVE

FIG.
4

4. TRIP GENERATION AND TRAVEL ROUTES

On the basis of previous surveys and analyses, the proposed child care centre is anticipated to generate a total traffic flow of 322 vehicle trips per day at an overall rate of 3.5 trips per child for the proposed 92 children accommodated. This includes staff trips as well as pick-up and drop-off trips and any deliveries.

Table 1 then shows the resulting total traffic movements for the proposed child care centre during the AM and PM peak periods, including a total of 299 trips between the hours of 7am to 10am and 3pm to 6pm, with the peak hours identified as 8-9am and 5-6pm.

TABLE 1
ANTICIPATED TRIP GENERATION FOR PROPOSED CHILD CARE CENTRE
LOT 400 (NO. 10) HARBOUR ELBOW, BANKSIA GROVE

TIME	TRIP GENERATION		
	In	Out	Total
7 - 8 am	38	18	56
8 - 9 am	40	25	65
9 - 10 am	16	22	38
3 - 4 pm	18	22	40
4 - 5 pm	18	15	33
5 - 6 pm	25	42	67
Total (6 Hours)	155	144	299
Total Daily	161	161	322

Note: Bold Figures denote AM and PM peak hours.

Source: Uloth and Associates

With a likely catchment area of perhaps 2 to 3 kilometres, it is clear from the layout of the surrounding areas that the majority of traffic flows accessing the proposed Child Care Centre will do so via Joondalup Drive, Viridian Drive, Turquoise Loop and Malachite Fairway. However, it is also expected that some trips will be linked with the pick-up and drop-off of children at the nearby Neerabup Primary School, while some local trips will also access the Centre to/from the south via Greenvale Place, Tumbleweed Drive and Mornington Drive. The overall anticipated travel routes are therefore as shown in Figure 5.

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METRES
SCALE 1 : 4,000

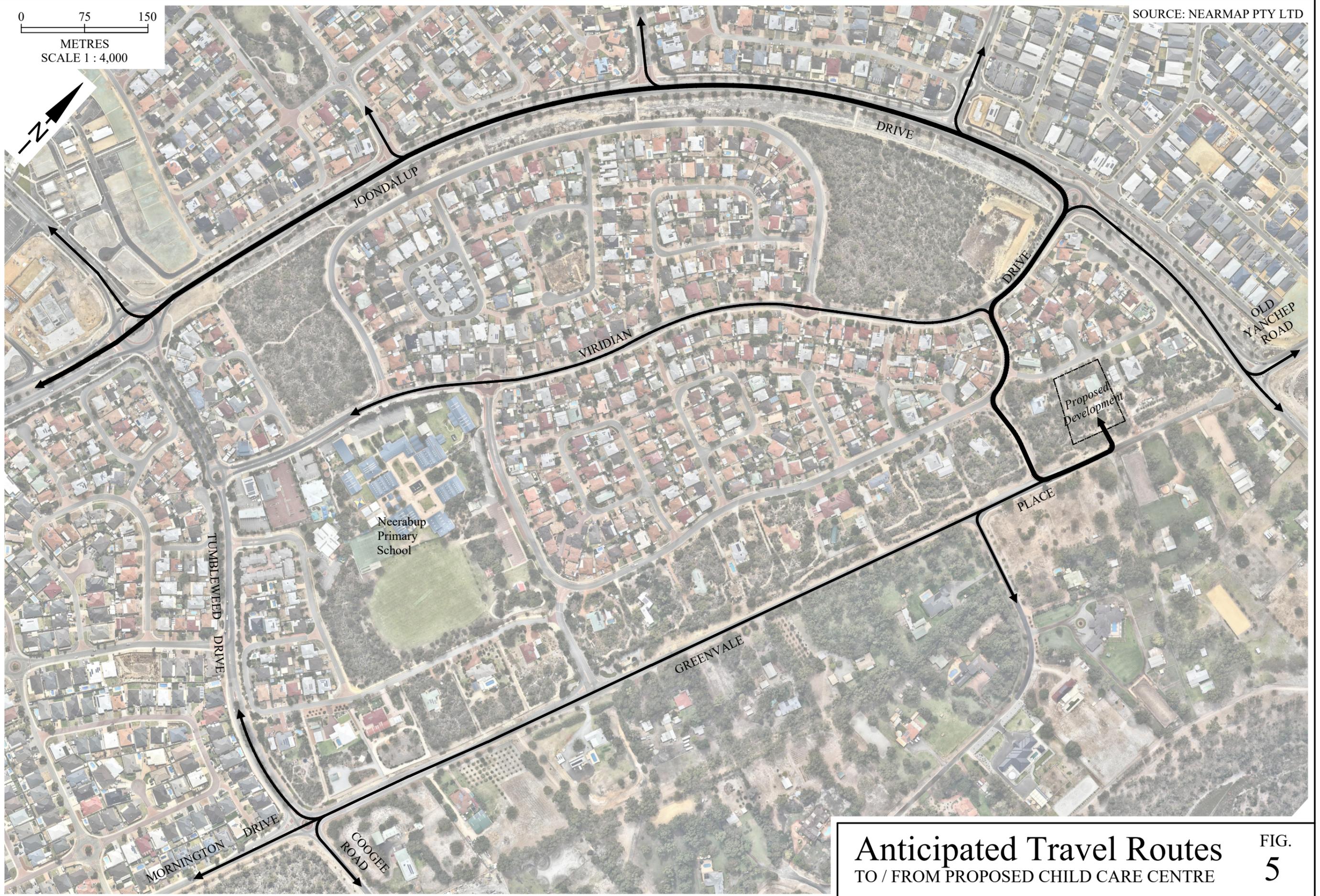


FIG.
5

5. RESULTING TRAFFIC IMPACT AND OVERALL CONCLUSIONS

As noted above in Chapter 2, it is estimated that Viridian Drive currently carries 1,450 vehicles per day south of Joondalup Drive and 870 vehicles per day south of Turquoise Loop, while Turquoise Loop carries 630 vehicles per day east of Viridian Drive.

It is also estimated that Malachite Fairway carries perhaps 100 to 200 vehicles per day, while Greenvale Place carries approximately 180 vehicles per day south of Malachite Fairway but a maximum of just 20 to 30 vehicles per day north of Malachite Fairway.

With the maximum additional traffic flow of 322 vehicles per day for the proposed child care centre, it is clear that Greenvale Place and Malachite Fairway will both remain well below 1,000 vehicles per day, while Turquoise Loop and Viridian Drive will both remain below their indicative maximum traffic flows of 3,000 vehicles per day (as specified under Liveable Neighbourhoods).

It is also important to note that the maximum hourly traffic flow generated by the proposed child care centre is 65 vehicle trips during the morning peak hour, and 67 vehicle trips during the afternoon peak hour.

These maximum traffic increases translate to an average of just over one vehicle trip per minute, which will not have any significant impact on the amenity of the surrounding residents or the efficiency and the safety of the road system.