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SELLICK CONSULTANTS PTY LTD
TRAFFIC IMPACT ASSESSMENT

Job Title: **Pialligo Village & Animal Reference Hospital**

Job Location: **Block 17 Section 2 Pialligo**

Client: **Pialligo Village Pty Ltd**

Reference #: **161310**

Project Details

For the Attention of:

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1.0 INTRODUCTION

On behalf of Pialligo Village Pty Ltd, Sellick Consultants has prepared this Transport Assessment Report (TAR) for a proposed Animal Reference Hospital and Doggy Day Care on Block 17 Section 2 Pialligo (site).

In accordance with the Territory Plan the existing site is a designated zone that is contained within the National Capital Plan. The existing site is summarised as follows:

- The area is 20,281m^2;
- A landscaping supply business operates from the site;
- It contains an existing gravel carpark of approximately 2,456m^2 in area, which could accommodate approximately 82 car parking spaces.

Figure 1 - Site Plan (source – ACTMAPi accessed 2/8/2017)

2.0 EXISTING CONDITIONS

For the purpose of this assessment the following existing site conditions are considered:

- The local road network;
- Car parking facilities;
- Traffic conditions;
- Public transport facilities; and
- Cycling facilities.

2.1 EXISTING ROAD NETWORK

The existing road network surrounding the site is comprised of Pialligo Avenue, Fairbairn Avenue and an unnamed road that connects the site to Fairbairn Avenue.

Pialligo Avenue is located to the south of the Site and can be summarised as following:

- The road is 4 lanes wide and permits two way travel;
- It is an arterial road that connects Canberra to the Canberra Airport and Queanbeyan beyond.
- The road is designated with a 70km/hr speed limit;
- The carriageway consists of the following:
    - A 172m long left turn auxiliary lane connects Pialligo Avenue to Fairbairn Avenue.
    - A 87m long right turn auxiliary lane connects Pialligo Avenue to Beltana Road;
    - East bound and westbound on-road cycling lanes; and
    - A raised central median.
- Traffic volumes on Pialligo Avenue during the AM peak hour (8.00am – 9.00am) and PM peak hour (4.45pm – 5.30pm) is indicated in Table 1. Traffic volumes provided are based on SCATS data for the intersection of Pialligo Avenue/Fairbairn Avenue.

Table 1 - Pialligo Avenue Traffic Volumes

DIRECTION	AM PEAK HOUR (8.00am – 9.00am)	PM PEAK HOUR (4.45pm – 5.30pm)	DAILY VOLUMES
Eastbound	1,594 vph	1,408 vph	16,125 vpd
Westbound	1,384 vph	1,763 vph	15,366 vpd
TOTAL	2,978 vph	3,171 vph	31,491 vpd

Fairbairn Avenue is located to the east of the Site and can be summarised as follows:

- The road is 4 lanes wide and permits two way travel;
- It is an arterial road that connects the northern districts of Canberra to the Canberra Airport and Queanbeyan;
- The road is designated with a 60km/hr speed limit;
- The carriageway contains the following:
    - Two right turn auxiliary lanes connecting Fairbairn Avenue to Pialligo Avenue;
    - A raised central median;
    - Northbound and southbound on-street cycling lanes;

- Traffic volumes on Fairbairn Avenue during the AM peak hour (8.00am – 9.00am) and PM peak hour (4.45pm – 5.30pm) is indicated in Table 2. Traffic volumes provided are based on SCATS data for the intersection of Pialligo Avenue/Fairbairn Avenue.

Table 2 - Fairbairn Avenue Traffic Volumes

DIRECTION	AM PEAK HOUR (8.00am – 9.00am)	PM PEAK HOUR (4.45pm – 5.30pm)	DAILY VOLUMES
Northbound	706 vph	1,359 vph	11,769 vph
Southbound	1,370 vph	848 vph	11,191 vph
TOTAL	2,076 vph	2,207 vph	22,900 vph

- An unnamed road connects the Site and Blocks 42, 49, 50 and 53 of Section 2 Pialligo to Fairbairn Avenue. Registration of the road as an ACT Government asset cannot be found however it is primarily contained with Block 49 Section 2 Pialligo (a TCCS Municipal unleased block). The unnamed road can be summarised as follows:
  - The road is 2 lanes wide and permits two way travel;
  - The road is not included in the ACT Road Hierarchy;
  - Signage indicates the road is designated as a 10km/hr shared zone; and
  - The intersection of the road with Fairbairn Avenue is priority controlled and permits left-in left-out movements only.

2.2 EXISTING TRAFFIC CONDITIONS

The following observations of the existing traffic conditions were taken during the AM and PM peak hour:

- Platoons of vehicles regularly turned right from Pialligo Avenue onto Fairbairn Avenue. It took approximately 40 seconds for the platoon to pass the unnamed road. This period corresponds with the phase time for the respective right turn movement at the signalised intersection of Pialligo Avenue and Fairbairn Avenue.
- Once the aforementioned platoon passed the site there was little traffic observed on Fairbairn Avenue. That is, for approximately 40 seconds only 1 or 2 vehicles passed the site.
- There was good coordination between the signalised intersections of Pialligo Avenue/Fairbairn Avenue and Majura Road/Fairbairn Avenue. Traffic was observed turning right from Pialligo Avenue onto Fairbairn Avenue and continuing through the signals on Fairbairn Avenue/Majura Road;
- There weren't any queues observed on Fairbairn Avenue that originated from the Intersection of Fairbairn Avenue/Majura Road.

2.3 EXISTING CAR PARKING FACILITIES

The shoulders of the unnamed road adjacent to the site accommodates informal parking. The utilisation of these parking spaces is not included in this assessment.

2.4 EXISTING PUBLIC TRANSPORT

The site is located approximately 900m from the nearest ACTION bus stop at Majura Park. The use of public transport by staff and visitors is unlikely considering the bus stops remote location and the absence of pedestrian facilities connecting the bus stop to the site.

Figure 2 – Weekday Transport Canberra Bus Routes

2.5 EXISITING BICYCLE FACILITIES

As per Section 2.1, on-road cycling facilities are available on both Pialligo Avenue and Fairbairn Avenue. A shared path is located to the west of the site and immediately to the north of the site within Block 50 Section 2 Pialligo.

Visitors will be travelling with pets to the site that require specialist medical care. Subsequently, visitors will not use the available cycling facilities to access the site. Some staff that work during standard hours may cycle to work. Subsequently, a reduction in the proposed developments staff parking demand and traffic generation could be considered.

Conservatively, allowances for staff cycling to the proposed development is not included in this assessment.

3.0 PROPOSED DEVELOPMENT

The proposed development includes an Animal Reference Hospital that will provide specialist veterinary services to Canberra and the surrounding NSW regions. A Doggy Day Care facility will provide animal minding services. The proposed development will be comprised of the following:

- 9 Examination rooms;
- 3 operating theatres;
- Animal imaging facilities;
- Animal physical therapy facilities;
- Doggy day care for 60 animals;
- A basement carpark with 23 parking spaces; and
- An at-grade carpark with 17 parking spaces.

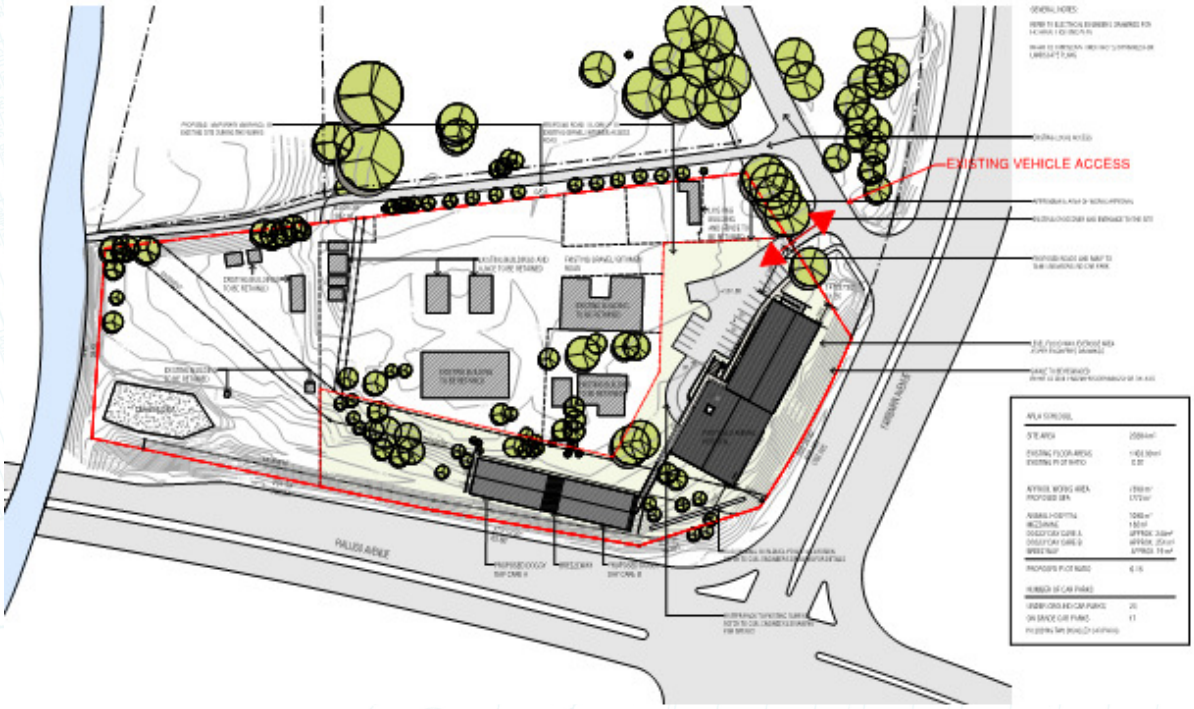
The operation of the proposed development is based on the following advice received from the client.

- Day staff for the Animal Reference Hospital will include the following:
  - 3 specialist vets;
  - 3 veterinary residents/interns;
  - 10 veterinary nursing staff; and
  - 3 office staff.
- Night staff for the Animal Reference Hospital will include the following:
  - 3 veterinary residents/interns; and
  - 4 veterinary nursing staff.
- Day staff and night staff for the Animal Reference Hospital will have shift changeovers at 8.00am and 6.00pm;
- Appointments/veterinary services at the Animal Reference Hospital will occur at the following times:
  - 8.30am – 12.00pm;
  - 4.30pm – 6.00pm; and
  - 7pm – 11pm.
- The Doggy Day Care will operate similar to a child care centre. That is, animals will be dropped off from 7.00am - 9.00am and picked-up from 5.00pm - 6.00pm.

3.1 VEHICLE ACCESS

The proposed development will retain the existing vehicle access location off the unnamed road, refer to Figure 3. The existing driveway is located approximately 20m from the tangent point of the private roads' intersection with Fairbairn Avenue, which is compliant with AS2890.1 *Parking Facilities Part 1: Off-street car parking*, Figure 3.1 'Prohibited locations of access driveways'

Figure 3 – Architects Site plan



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4.0 CAR PARKING ASSESSMENT

The proposed developments' car parking demand and supply is assessed within this Section.

4.1 CAR PARKING DEMAND

Based on the client's advice on the operation of the proposed development the parking space demand is indicated in Table 3. The parking demand for the proposed development is summarised as follows:

- The isolated location of the site and the absence of local public carparks means that the parking space demand of the proposed development is to be accommodated on site;
- The Animal Reference Hospital is a specialist facility that is a referral only business with limited specialists on site and consultations generally taking 30 minutes. Subsequently, a parking space demand of 4 visitor parking spaces for the Animal Reference Hospitals has been anticipated; and
- Animals will be dropped off/picked-up from the doggy day care between 7.00am-9.00am and 5.00pm-6.00pm respectively. A pick-up and drop-off rate compliant with the Territory Plans' 2008 *Parking and Vehicular Access General Code* for childcare centres is adopted in this assessment. That is, 1 parking space per 10 placements.

Table 3 – Proposed Developments' Parking Demand

FACILITY	USE	PARKING DEMAND	QUANTITY	PARKING SPACE DEMAND
Animal Reference Hospital	Specialist Vets	1 space per specialist	3	3
	Veterinary Residents/Interns	1 space per resident vet	3	3
	Nursing Staff	1 space per Nursing Staff	10	10
	Office Staff	1 space per office staff	3	3
	Visitors/clients	1 space per visitor	4	4
Doggy Day Care	Staff	1 space per staff	10	10
	Pick-up & Drop-off	1 space per 10 animals	60	6

4.2 CAR PARKING SUPPLY

The proposed developments' parking supply will be 23 basement parking spaces and 17 at-grade parking spaces (40 parking spaces total).

The parking spaces demand for all 19 day staff to the Animal Reference Hospital and the 10 Doggy Day Care staff is to be accommodated on site. Subsequently, all 23 basement parking spaces and 6 at-grade parking spaces will need to be allocated to staff.

The parking spaces demand for 4 visitors to the Animal Reference Hospital and the 6 Doggy Day Care pick-up/drop-offs is also to be accommodated on site. Subsequently, the remaining 11 at-grade parking spaces available will exceed the visitor parking demand of 10 parking spaces.

The allocation of parking spaces for each user group is indicated in Table 4.

Table 4 – Parking space allocation

CAR PARK	USE	PARKING ALLOCATION
Basement (23 parking spaces)	Specialist Vets	3
	Veterinary Residents/Interns	3
	Nursing Staff	10
	Office Staff	3
	Doggy day care staff	4
SUB-TOTAL		**23**
At Grade Carpark (17 parking spaces)	Doggy day care staff	6
	Doggy day care pick-up & drop-off	6
	Visitors	4
SUB-TOTAL		**16**

5.0 TRAFFIC ASSESSMENT

The proposed developments' traffic generation, queuing and impact on the local road network is assessed in this section.

5.1 TRAFFIC GENERATION

The proposed developments' traffic generation is directly related to its operation (refer to Section 3.0) and parking space demand. The traffic generation during the AM peak hour (8.00am – 9.00am) and PM peak hour (5.00pm – 6.00pm) is indicated in Table 5. The traffic generation is summarised as follows:

Table 5 – AM and PM Peak hour Traffic Generation

FACILITY	USAGE	AM PEAK HOUR (8.00am – 9.00am)		PM PEAK HOUR (5.00pm – 6.00pm)	
		IN	OUT	IN	OUT
Animal Reference Hospital	Day Shift: Specialist Vets, Nursing Staff and Office Staff	19 vph	0	0	19 vph
	Night Shift: 3 vet staff, 4 nurses	0 vph	7 vph	7 vph	
	Visitors	8 vph	8 vph	8 vph	8 vph
Doggy Day Care	Visitors	30 vph	30 vph	30 vph	30 vph
TOTAL		**57 vph**	**45 vph**	**45 vph**	**57 vph**

Subsequently traffic movements during the AM peak hour and PM peak hour of 102 vph is anticipated.

5.2 SERVICE VEHICLES

The proposed development will be serviced by the following vehicles:

- Waste and Recycling collection;
- Good deliveries; and
- A small van to pick-up and drop-off animals.

Waste and recycling collection is expected to occur daily. Private contractors' incorporate traffic conditions into their planned routes. The collection operations is subsequently expected to occur outside of the AM and PM peak period.

Based on the clients' advice good deliveries will occur 3-4 times a day and van collections will be undertaken 4-6 times per day. Service vehicles are expected to be operate outside of the peak hour periods to minimise conflict with pick-up and drop-off traffic generated by the Doggy Day Care.

Waste collection, recycling collection, good deliveries and small van pick-ups/drop-offs are not expected to conflict with traffic during the AM and PM peak hour.

5.3 QUEUING ASSESSMENT

A control mechanism has not been proposed for the at-grade carpark. Subsequently, visitor access to the development is not restricted and queuing associated with an access control facility will not occur.

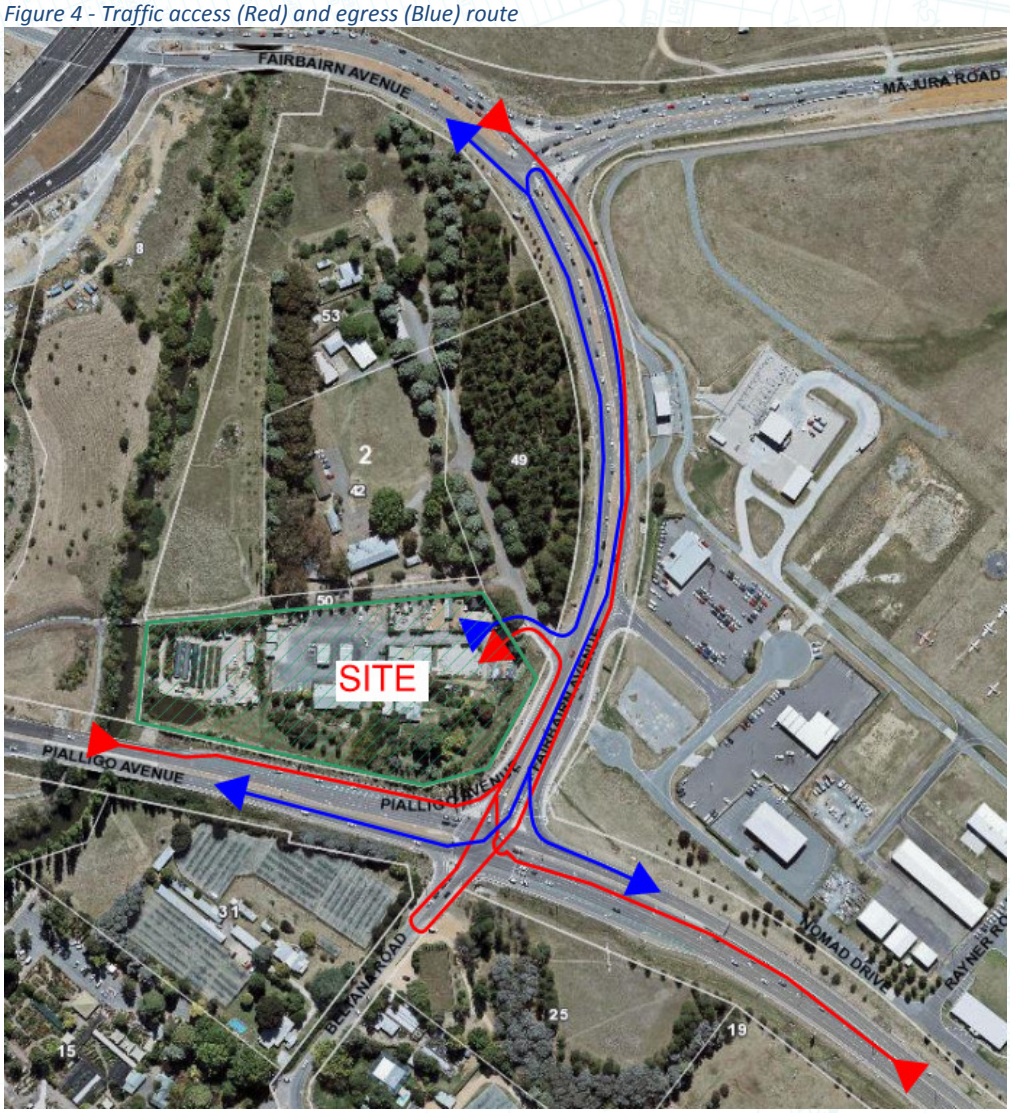
5.4 TRAFFIC IMPACT ON LOCAL ROAD NETWORK

The existing landscape supply on site will generate some traffic during the AM and PM peak hour periods. However a landscape supplies peak traffic period typically occurs mid-day on weekends, which does not align with the proposed developments shift changeover or pick-up and drop-off times. Subsequently, it is not considered in this assessment.

The proposed development traffic generation is 102 vph during the AM (8.00am-9.00am) and PM (4.00pm-5.00pm) peak hour. The existing traffic volume on Fairbairn Avenue is 2,076 vph and 2,207 vph during the AM and PM peak hour respectively. Subsequently, there will be an increase in traffic volume of 4.9% and 4.6% during the AM and PM peak hour respectively. In accordance with standard industry practice an increase in traffic volumes of less than 5% will not be perceivable to existing road users.

Traffic routes for staff and visitors to enter and exit the Site during the AM and PM peak hour is indicated in Figure 4.

Figure 4 - Traffic access (Red) and egress (Blue) route



The approach routes for traffic generated by the Site is summarised as follows:

- Traffic can approach the Site from the east and west via Pialligo Avenue. Traffic will need to pass through the intersection of Pialligo Avenue/Fairbairn Avenue, and turn left into the site;
- Traffic can approach the site from the north via Fairbairn Avenue and Majura Road. The existing road network would require traffic to pass the site, cross Pialligo Avenue, undertake a U-turn on Beltana Road (in accordance with the Australian Road Rules), and re-cross Pialligo Avenue before accessing the Site. More convenient access for traffic approaching the site from the north could be achieved with one of the following treatments:
    - Permitting traffic to turn right off Fairbairn Avenue into the Site by breaking the existing median on Fairbairn Avenue. Additional analysis is required to substantiate this arrangement, which is not part of the assessment.
    - Permitting traffic to perform U-turns manoeuvre at the intersection of Fairbairn Avenue/Pialligo Avenue. Both the signal phasing and the width of the carriageway would permit vehicles on Fairbairn Avenue southbound lane to perform U-turns.

The departure routes for traffic generated by the proposed development is summarised as follows:

- All traffic must exit the Site to the north.
- U-turns are permitted on Fairbairn Avenue at its intersection with Majura Avenue, which facilitates traffic with destinations to the east, west and south of the site.

The proximity of the site to the signalised intersection of Fairbairn Avenue/Pialligo Avenue is beneficial. The signals control traffic patterns on Fairbairn Avenue during the AM and PM peak hour and permit the formation of tightly bunched platoons. The regular platoons last for approximately 30 – 40 seconds and are then followed by a 30-40 second gap in the traffic. This gap will permit the traffic generated by the proposed development to exit onto Fairbairn Avenue during the AM and PM peak hour. The gap will also permit traffic exiting the proposed development to undertake a U-turn at the intersection of Fairbairn Avenue/Majura Road.

In addition to the above, the coordinated phasing between the intersection of Pialligo Avenue/Fairbairn Avenue and Majura Road/Fairbairn Avenue will ensure traffic exiting the development will not be blocked by queues.

6.0 CONCLUSION AND RECOMMENDATIONS

Based on this assessment the following is concluded:

- The on-site parking space supply will accommodate the parking space demand of staff and exceed the parking space demand for visitors;
- The public transport facilities are unlikely to be used by the proposed developments' staff and visitors;
- Conservatively the use of cycling facilities by staff has not been included in this assessment;
- The proposed developments' traffic generation won't be discernible to existing road users on Fairbairn Avenue;
- The existing traffic conditions on Fairbairn Avenue will permit traffic generated by the proposed development to exit onto Fairbairn Avenue during the AM and PM peak hours.
- Installation of a U-Turn permitted sign on Fairbairn Avenue could be considered to provide traffic approaching the site with a more convenient route.

Sellick Consultants recommends approval of the proposed works approval with respect to parking and traffic.