

Reference: #15S124100

28 September 2016

Taronga Conservation Society Australia
Bradleys Head Road
MOSMAN NSW 2088

Attention: Mr. Matt Spooner

Dear Matt

**RE: SUPPLEMENTARY ASSESSMENT – AUSTRALIA HABITAT AND TARONGA
WILDLIFE RETREAT (\$SD 7419)**

I refer to the Department of Planning and Environment (DoPE) correspondence dated 2 June 2016 which requested further assessment and clarification to the following matters pursuant to the ongoing and proposed projects within the Zoo:

1. Expected cumulative traffic and parking demands between the Sumatran Tiger, Taronga Institute of Science and Learning (TISL) and the Taronga Wildlife Retreat (Retreat) projects.
2. Traffic and Parking impacts during the Zoo's night time events.
3. Clarification that onsite parking has been provided/included in guests' ticket/pass.
4. Clarification of strategies which have been considered to minimise on street parking impacts on surrounding neighbourhood.
5. Management of staff parking with respect to impact on surrounding on street parking.

This letter of assessment has been prepared to respond to the abovementioned items and summarised in the following sections.

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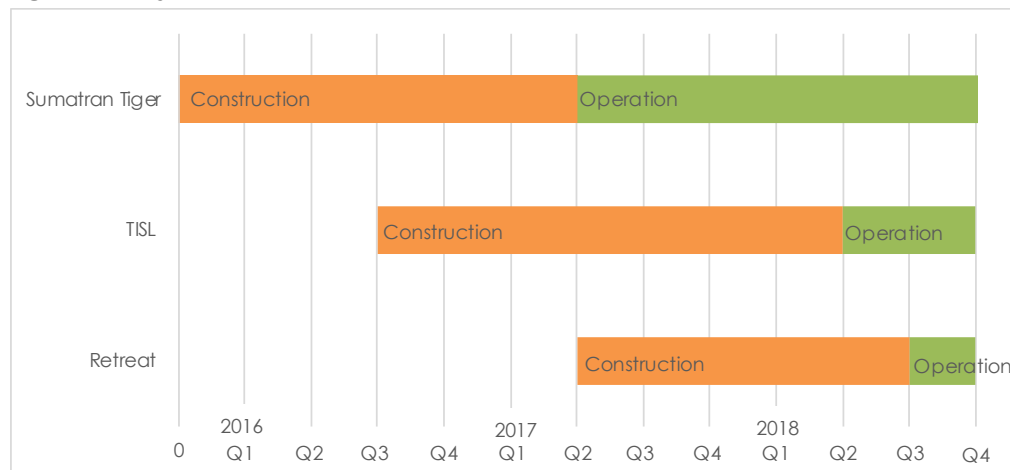
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Item 1

The cumulative traffic and parking impacts associated with the three projects are assessed based on their respective construction and operational timelines. Details of their envisaged timelines to this effect are provided by the Zoo and are summarised in Figure 1.

Figure 1: Project Timeline



Source: Taronga Zoo

The Zoo's peak operating periods fall between 11am and 3pm on Saturdays and Sundays. Concurrently, it is understood that construction activities conclude at 2pm during the weekends. As such, the assessment would consider the overlap between the Zoo's peak operation and Saturday construction periods, i.e. between 11am and 2pm.

The assessment for parking and traffic impacts in the surrounding neighbourhood considers the traffic and parking generation associated with the following overlapping activities:

- Movement of construction related workers
- Movement of staff members
- Movement of Zoo visitors.

Existing Traffic and Parking Circumstance

The Traffic Impact Assessment reports prepared by GTA Consultants reported a surveyed traffic generation of 310 vehicles per hour (vph) during the weekend peak. Corresponding to this period is the carpark occupancy survey which revealed a 90th percentile spare capacity of 160 spaces.

Anticipated Traffic and Parking Demand

The proposed developments and construction related traffic and parking demands are overlaid on the existing demands to identify their cumulative impacts. It is noted that not all developments will operate during the assessed peak period (i.e. Saturdays between 11am to 2pm). Where such overlap does not occur, the development's peak traffic generation is excluded from the cumulative traffic impact assessment.

On that basis, the Saturday peak traffic generation and parking demands of the three projects are indicated in Table 1.

Table 1: Saturday peak (11am-2pm) traffic generation and parking demand

Project		Construction		Operation	
		Workers ^[1]	Trucks	Staff ^[2]	Visitor
Sumatran Tiger	Traffic	Up to +25 vph	Up to +2 vph	No additional staff	Up to +30 vph
	Parking	Up to 12 required	No parking demand	No parking demand	Up to 30 required
TISL	Traffic	Up to +25 vph	Up to +2 vph	Up to +5 vph	Up to +2 vph ^[3]
	Parking	Up to 25 required	No parking demand	Up to 5 more occupied	Not applicable (coach parking)
Retreat	Traffic	Up to +25 vph	Up to +2 vph	Guest check in starts from 2pm therefore no/minimal overlap	
	Parking	Up to 25 required	No parking demand	No parking demand	

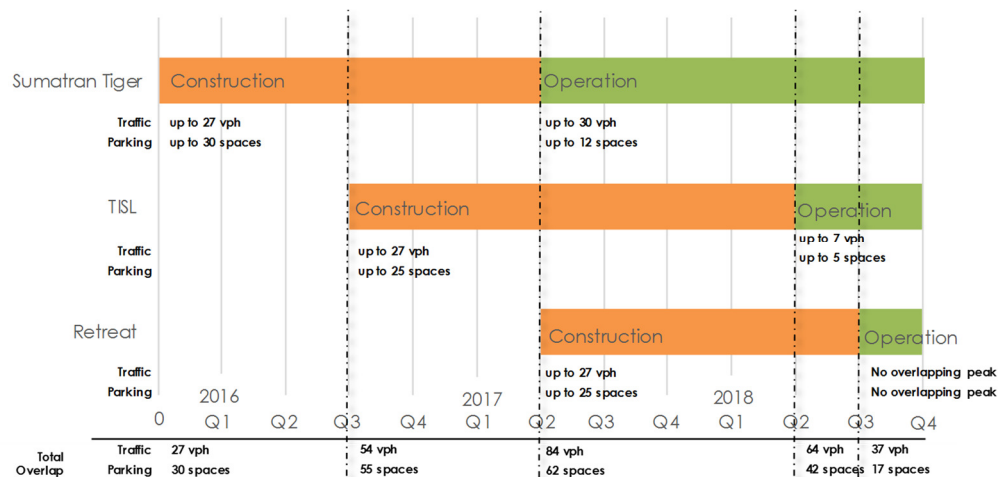
[1] Construction workers are assumed with a vehicle occupancy rate of 2:1

[2] Staff volumes are included in "Visitor" volumes for the Sumatran Tiger and Retreat projects

[3] TISL is only opened for school students and only comprised of arrivals/departures by coaches

Traffic Impact

Moving forward, the above traffic and parking demands are considered in the context of the overlap of construction and operational timelines (Figure 2).

Figure 2: Overlap of traffic and parking demand


The peak overlapping traffic and parking demands are expected to occur between 2017 quarter 2 and 2018 quarter 2, as follows:

- Traffic generation up to 84 vph
- Parking demand up to 62 spaces.

Of the 84 vph, some 54 vph are associated with construction workers. In reality, construction workers are not likely to be driving in/out of the site during the peak periods. In contrary, they are likely to remain at the site to pack up before shutting down for the day. As a result, it is anticipated that there will only be some 30 vph associated with the Zoo's visitation, while construction related vehicle movements are

likely to occur afterwards. On this basis, it is likely that the peak Saturday operation will generate a peak traffic flows of 340 vph (i.e. existing 310 vph plus 30 vph).

Parking Impact

The extensive parking survey revealed a 90th percentile spare capacity of 160 spaces across 24 months taking into consideration of seasonal effects. The anticipated peak overlapping parking demand, which sums to a total of 62 spaces will be adequately accommodated within the 90th percentile car parking capacity.

Similarly, the above assessment (Table 1) indicates that construction workers' parking demand is comprised of 50 spaces during the busiest overlap. It is noteworthy that the construction overlap here involves the mid-construction period of TISL and the beginning of Retreat works. While it is assessed that there would be up to 25 vph associated with the Retreat construction, it is generally the case that the commencement of works involves much lesser workers on site concurrently as the site is being prepared for full scale construction. On this basis, the envisaged overlapping parking demand will be somewhat conservative.

Items 2 & 3

Regular night time wedding events associated with the Zoo involve the use of the function centre. The use of the function centre is typically succeeded by wedding ceremonies held in the Harbourview Garden Court where the Retreat building is being proposed. It is advised that wedding ceremonies in the Zoo generally involve:

- Approximately 60 wedding ceremonies per year
- Up to 140 guests
- The use of the Garden Court between 3pm and 6pm.

Moving forward, the construction of the Retreat building, which also comprises a restaurant/terrace, will be capable of accommodating:

- The wedding ceremonies which are currently held at the Harbourview Garden Court, and
- The Retreat guests who participate in the Retreat program.

The wedding ceremonies and dinner reception generally occur in the following timelines:

- Wedding ceremony: 3pm – 6pm (as existing)
- Wedding reception: 7pm – 11pm (as existing).

Guests associated with the wedding ceremony typically arrive between midday and 1pm and would roam around the Zoo (e.g. For photography) after the ceremony before moving on to the existing function centre to proceed with the dinner reception.

Guests associated with the Retreat program is allowed to 'check in' between 2pm and 6pm. It is anticipated that majority of the arrivals would occur between 3pm and 5pm as the program is proposed to commence at 6:15pm. All Retreat guests would remain at the Zoo campus overnight and depart the next day.

Having regard for the manner in which the existing wedding events and the proposed Retreat operate, it is apparent that:

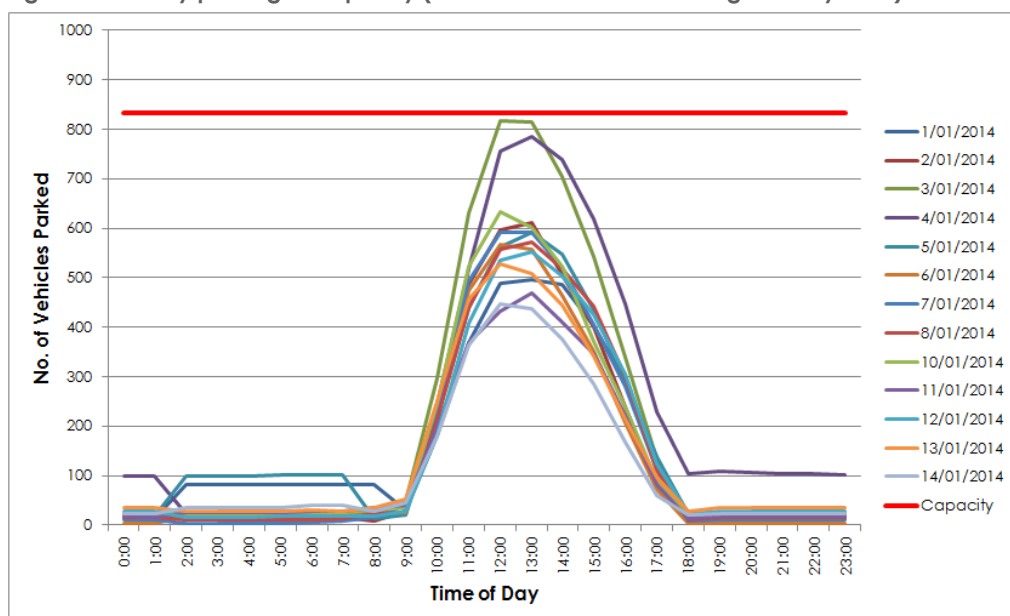
- Guests associated with the wedding events typically arrive by midday and depart in the late evening (as with existing).

- Guests associated with the Retreat program typically arrive between 3pm and 5pm and would not depart until the next day.

It is apparent that the Retreat will not impose any additional traffic activities during the evening over what is already existing as a result of the wedding events.

As with Roar and Snore, the Retreat guests will be provided with 'free' onsite parking as part of the room passes. Therefore, it is anticipated that up to 62 vehicles would arrive between 2pm and 6pm during the afternoon. If it is assumed that 75 per cent of the guests arrive between 3pm and 5pm, then the traffic generation during this period can be estimated as being 23 vehicles per hour, or one vehicle every three minutes. The carpark capacity at the Zoo, as indicated on the previously completed assessments and Figure 3, is ample after 2pm even during the busiest weekends.

Figure 3: Hourly parking occupancy (for the first two weeks during January 2014)



On this basis, it is our assessment that the Retreat is not anticipated to adversely impact on the Zoo's carpark capacity during its hours of operation.

In addition, it is understood the Zoo also hosts two other major night time events i.e. Vivid Sydney and Twilight at Taronga annually.

During these events, patrons are able to utilise the Zoo's carpark, which is largely vacant after 4pm, as indicated in Figure 3. In keeping with the Zoo's objective to prevent patrons from parking at the surrounding residential streets, it is understood that the Zoo consistently provide discounted rates for using the available Zoo carpark.

Items 4 & 5

Based on the findings presented in the previous section, in particular with respect to the available capacity outside of the peak times, it is assessed that the management of carpark usage and in particular its impact on surrounding on street parking is the subject of choice rather than capacity.

Initiatives

- It is understood that the Zoo has continually issued internal communications amongst staff members to avoid using on street parking.
- It is understood that the Zoo has implemented various strategies including discounted night time parking rates and 'staggered session' tickets for Vivid Sydney in order to avoid the concurrent arrival and departure of large number of crowd.
- Promotion of public transport.

I trust the above assessment is sufficient for your requirements. Naturally, should you have any questions or require any further information, please do not hesitate to contact me on (02) 8448 1800.

Yours sincerely

GTA CONSULTANTS

Nicole Vukic
Associate Director (NSW)