RESPONSE TO SUBMISSIONS LETTER - TRAFFIC/VEHICLE MOVEMENTS

TO:	Mark Tartak (Skylife Properties)
CC:	Shivesh Singh (Skylife Properties), Anita Chiha (Skylife Properties), Anthony Williams (APP)
FROM:	Wayne Johnson (TTPP), Santi Botross (TTPP)
DATE:	13 July 2017
TTPP REF:	16222
RE:	Proposed Resource Recovery Facility, 20 Hearne Street Mortdale (SSD 7421) Response to Submissions

On 5 December 2016, APP lodged a Response to Submissions report to the Department of Planning and Environment (DPE) following the submission of a State Significant Development (SSD) application for a proposed development at 20 Hearne Street, Mortdale. The proposal was for the upgrade of the existing Resource Recovery Facility (RRF) to have an annual waste throughput of 220,000 tonnes and permitted hours of operation between 6:00am-10:00pm Monday to Saturday.

On Wednesday 28 June 2017, DPE and Georges River Council raised a concern in relation to the operation of the future facility as follows:

> ***"the RTS has provided information regarding the capacity for 'stacking' on the site during the busiest peak hour, being 11am-12pm on weekdays. For a few hours before and after this time there is also considerable traffic, which could impact on stacking build up over the course of a day. The worst case scenario has not been taken into account, being a cumulative back up of trucks over time, especially due to unexpected circumstances. Since the limited size of the site is of particular concern to the Department, please provide additional evidence that the site can cope with the proposed traffic volumes in the above circumstances. Provide mitigation measures to be implemented in the event the site reaches stacking capacity."***

In response to DPE and Council's concern, TTPP has extended the stacking capacity assessment as detailed in the initial RTS letter (version 6, dated 03/04/2017) to include an a-typical scenario. This scenario considers a greater duration for trucks carrying out waste activities onsite to determine the impact of an unexpected circumstance (or delay) in the waste processing operation. As stated in the RTS letter, 25 minutes is the average duration that a waste truck requires to complete its waste depositing or collection activities at the future RRF.

The sensitivity analysis herein assumes a duration of 50 minutes onsite between time of entry and exit. This is considered to be a conservative method of analysis since unforeseen circumstances are typically resolved by the Operator in a shorter timeframe. The assessment does not take into account the operator's discretion not to receive or

divert waste to another Bingo waste facility (or other tipping facility) during any period where there is an existence of an unexpected circumstance. It is highly unlikely that an unexpected delay in the operation would cause trucks to be onsite for twice the typical duration. Nonetheless, this scenario has been considered in this assessment as the "worst-case" scenario.

A summary of the key points in the RTS letter is provided below:

1. The future RRF's peak operation will occur between 11:00am – 12:00pm with an estimated 21 trucks expected to arrive at the site. In the shoulder periods before and after the peak, the number of vehicles anticipated to arrive at the site are as follows:

Period	No. of two-way trips	No. of trucks
9:00am-10:00am	32	16
10:00am-11:00am	40	20
Peak operation	**42**	**21**
12:00pm-1:00pm	38	19
1:00pm-2:00pm	32	16

2. A total of 31 stacking spaces will be provided across the site.

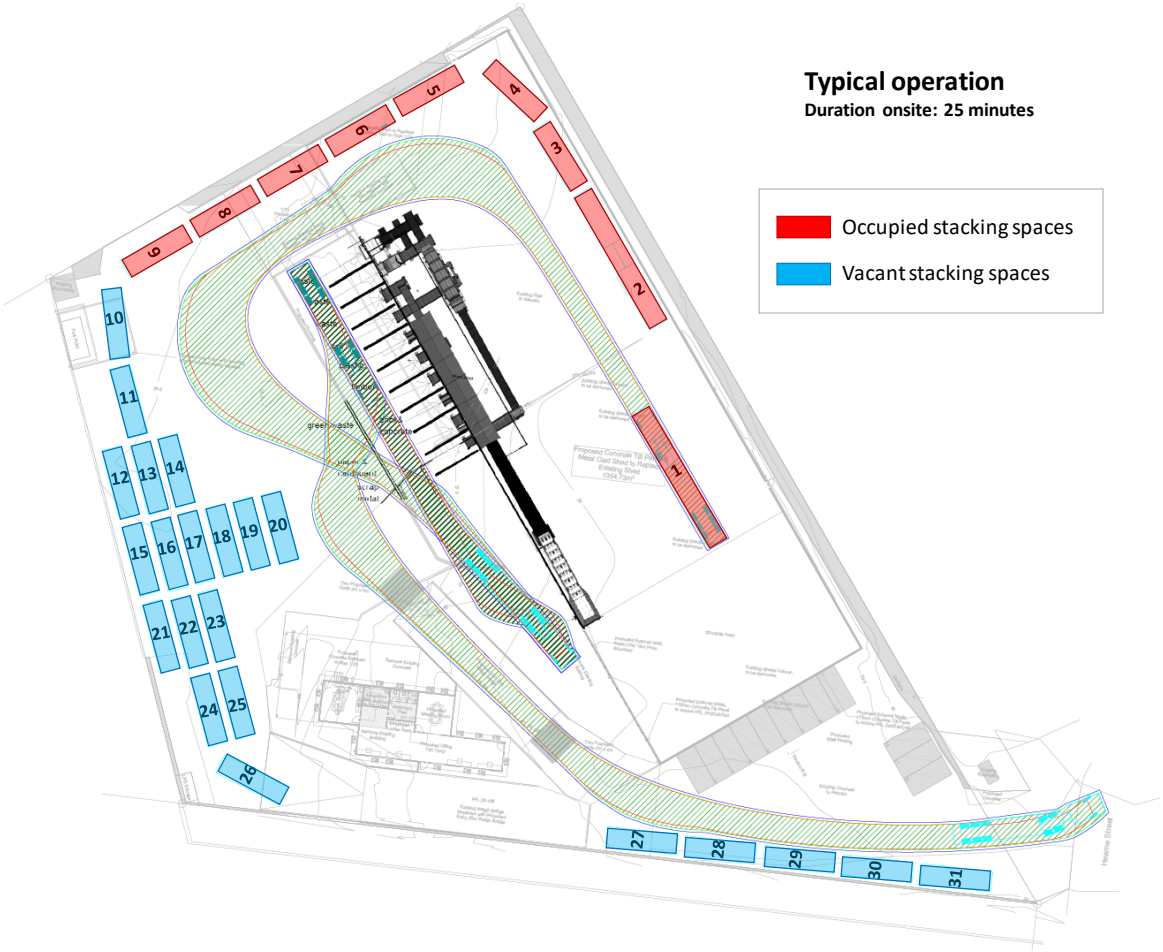
3. In typical operating conditions, a truck will spend an average of 25 minutes onsite between entry and exit. In calculating this duration, the time per activity was rounded up to the nearest 10 minutes to factor in additional waiting time. By doing so, this duration is considered to be slightly conservative.

Based on a duration of 25 minutes onsite, each stacking space could accommodate 2.4 vehicles in one hour (60 minutes / 25 minutes). Therefore, during any hour of operation across the day, the proposed stacking arrangement could accommodate the turn-over of 74 vehicles (2.4 vehicles x 31 spaces).

The availability of stacking space within the site would be able to adequately store the 21 vehicles expected to arrive during the site's peak hour. Hence, queuing of heavy vehicles would be entirely accommodated and managed within the site and would not be expected to cause any impact on Hearne Street.

Therefore, the 21 vehicles expected to arrive during the site's peak hour could be easily accommodated across only nine stacking spaces. This means that queuing along the property driveway and on Hearne Street is not predicted. As a result, there would be 22 vacant stacking spaces remaining, as illustrated in Figure 1.

Figure 1: Utilisation of Stacking Spaces – Typical Site Operation



It is appreciated that unforeseen circumstances could result in a back-up of vehicles onsite, particularly in the period prior to the site's operational peak. As a contingency, TTPP has carried out a sensitivity analysis whereby the time between entry and exit is increased two-fold. The time onsite and the turn-over rate of trucks are inversely proportional. Therefore, increasing the duration of a truck onsite by two-fold results in the vehicle turn-over rate of the site halving.

The sensitivity analysis assumes a-typical operating conditions in which a truck would spend 50 minutes onsite between entry and exit. Applying this conservative rate, each stacking space could accommodate 1.2 vehicles in one hour (60 minutes / 50 minutes). Therefore, the proposed stacking arrangement could accommodate the turn-over of 37 vehicles in any hour across the day (1.2 vehicles x 31 spaces).

In this scenario, the 21 vehicles in the busiest period of operation would be adequately accommodated across only 18 stacking spaces and queuing along the property driveway and into Hearne Street are not expected. As a result, there would be 13 vacant stacking spaces remaining which could accommodate a potential overflow of vehicles backing-up due to an unexpected delay. The use of stacking spaces in this scenario is illustrated in Figure 2.

Figure 2: Utilisation of Stacking Spaces – A-typical Site Operation

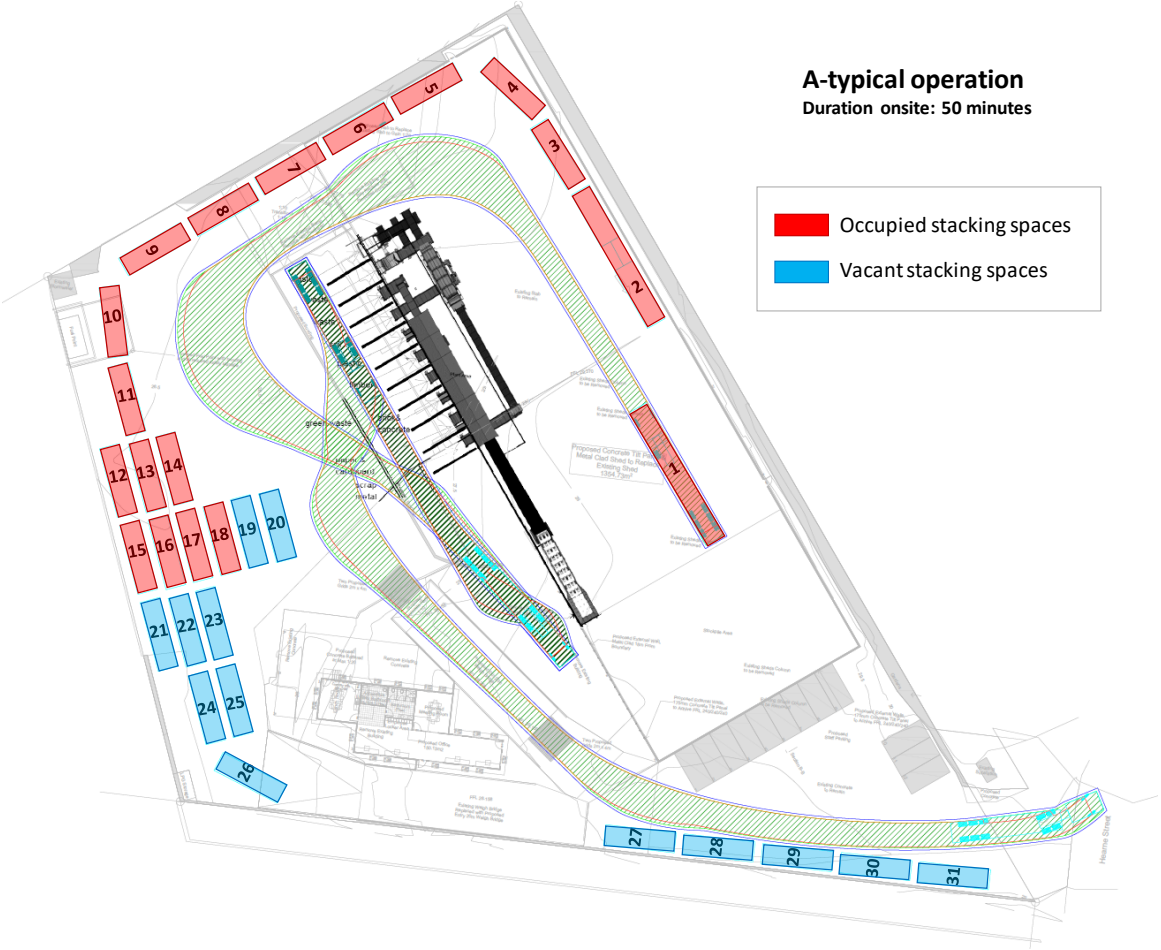


Table 3 summarises the utilisation of the stacking spaces during typical and a-typical operating conditions.

Table 1: Stacking Space Utilisation Summary

Operating Condition	Duration onsite per truck	Site Peak Operation (ie. Arrival of 21 trucks)			No. of Trucks which can be accommodated in vacant stacking spaces
		Occupied Stacking Spaces	Vacant Stacking Spaces	Total No. of Stacking Spaces	
Typical	25 mins [a]	9	22	31	52
A-typical	50 mins [b]	18	13		15

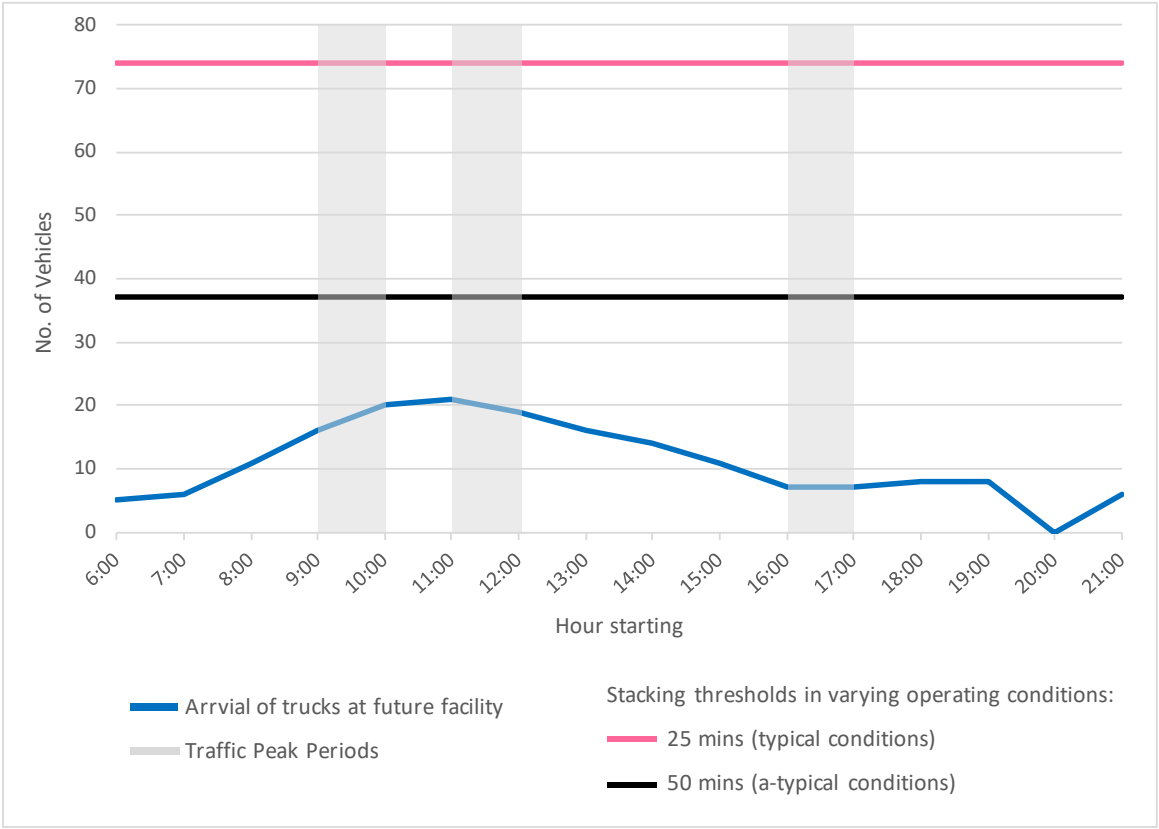
Notes:

a Based on waste disposal and collection activities in typical operating conditions.

b Considers unexpected delays in operation.

During regular operating conditions, it is estimated that the proposed stacking layout could accommodate an additional 52 trucks across the 22 vacant spaces (ie. difference between blue line and pink line in Figure 3.). If the site is to experience an unexpected delay, an additional 15 trucks could be catered onsite across the 13 vacant spaces (ie. difference between blue line and black line). Figure 3 shows the anticipated arrival of vehicles at the future RRF and truck turn-over thresholds which the proposed stacking arrangement can accommodate across the proposed hours of operation.

Figure 3: Truck Turn-Over Thresholds in Typical and A-Typical Operations



As shown in Figure 3, the anticipated number of vehicles arriving at the future facility (21 trucks) will not exceed the truck turn-over thresholds under typical and a-typical operating conditions across the day. Hence, the proposed stacking arrangement would be able to cope with the anticipated vehicles arriving at the future facility in regular operating conditions as well as in unexpected circumstances.

In summary, the 21 trucks expected to arrive onsite during the busiest period of site operation could sufficiently be accommodated within the premises. In the event of unforeseen circumstances, such as delays in waste disposal operation, the proposed stacking plan could adequately accommodate these trucks without causing queuing into Hearne Street.

In the "worst case" scenario whereby the site experiences a cumulative build-up of vehicles in the shoulder periods, the site will still be able to accept trucks using the remaining 13 vacant stacking spaces (Figure 2). In a-typical operating conditions, these

13 spaces could accommodate up to 15 trucks (Table 1) from the shoulder periods before and after the peak, if required.

Overall, this highly conservative assessment demonstrates that there will be sufficient stacking capacity onsite to accept trucks at the future RRF in typical and a-typical operating conditions without causing an impact on Hearne Street.

Under the supervision and direction of Traffic Controllers and Weighbridge Operators, queuing of heavy vehicles would be managed completely within the site and would not queue back onto Hearne Street during both typical and a-typical operating conditions.

Further, trucks can be rejected or diverted to other Bingo facilities (or other tipping facilities) during any period where there is an existence of an unexpected circumstance that requires such action to be taken to maintain orderly site operations.