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APPENDIX I ADDENDUM TRAFFIC IMPACT ASSESSMENT

Minto Resource Recovery Facility Response to Submissions

15 DECEMBER 2017

Incorporating Hyder

Addendum Transport Impact Assessment Report of Proposed Resource Recycling Facility at 13 Pembury Road, Minto (SSD 7462)

Prepared for:

Skylife Properties

30/11/2017

The Transport Planning Partnership

ACN: 607 079 005

Addendum Transport Impact Assessment Report of Proposed Resource Recycling Facility at 13 Pembury Road, Minto (SSD 7462)

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1 Introduction

Approval is sought to increase the processing capacity of the existing Minto Resource Recovery Facility, located at 13 Pembury Road, Minto (the Proposal site), from 30,000 tonnes per annum (tpa) to 220,000 tpa. An approval would supersede previous approvals issued over the Proposal site and provide a new suite of operating requirements and mitigation measures commensurate to the increased processing capacity. The facility would continue to process general solid waste (non-putrescible), as described in the Waste Classification Guidelines, 2014, prepared by the NSW Environment Protection Authority (EPA). The facility is defined as a resource recovery facility under Part 3, Division 23 of *State Environmental Planning Policy (Infrastructure), 2007* (SEPP).

The Transport Planning Partnership prepared a Transport Impact Assessment (TIA) for the proposed resource recovery facility (RRF) at 13 Pembury Road, Minto in June 2016 which has been documented in the Environmental Impact Statement (EIS) dated May 2017.

Amendments are now proposed to the Proposal based on changed operation at the facility. This Addendum Transport Impact Assessment (TIA) has been prepared by The Transport Planning Partnership (TTPP) to quantify recent changes at the RRF and to assess the future facility based on its current operational conditions (the Amended Proposal).

The purpose of this Addendum TIA is to assess the changes proposed in the Amended Proposal and quantify any change in impacts compared to those identified in the EIS.

1.1 Amended Proposal Description

The key components of the Amended Proposal include:

- Construction of a shed and roof structure to enclose the existing waste processing and handling area
- Demolition of minor wall and cladding extents within Shed A and Shed C to accommodate the proposed shed extension, to facilitate changes to internal heavy vehicle flow paths
- Minor vegetation and landscape clearing, and planting of new landscaping
- Provision of 16 on-site car parking spaces and 1 accessible car space
- Relocation of demountable site office and amenities buildings
- Provision of a single ingress at the eastern entrance and a single egress at the western exit
- Removal of the existing above-ground wheel wash

- Installation of a new 20 m long weighbridge and in-ground wheel wash at the western exit
- Relocation of the 30,000 L self-bunded fuel tank closer to the rear of Shed A
- Extension of the dust suppression and sprinkler system across the new shed and its openings
- Provision of ancillary infrastructure and internal structures including new internal push walls
- Demarcation of an internal unloading floor and visual inspection area
- Extension of internal tipping floor and provision of new push walls
- Provision of an internal dangerous goods storage area.

The key operational components of the Amended Proposal would include:

- Increasing operational (including processing and waste delivery and collection) hours 6 am to 10 pm, Monday to Saturday (no works on Sundays or public holidays would be undertaken)
- Processing of up to 220,000 tpa of non-putrescible waste
- Waste storage of up to 10,000 tonnes of non-putrescible waste at any given time.

1.2 Proposal Amendments

Section 1.1 above describes the Amended Proposal for which approval is sought. The purpose of this assessment is to assess the above changes and quantify any change in impacts compared to those identified in the EIS. The key changes to the Proposal made since the EIS, and the subject of this assessment include:

- Construction of a shed and roof structure to enclose the waste processing and handling area
- Minor removal of walls and cladding
- Adjustments to the location of the proposed site office and amenities buildings and the provision of additional on-site parking spaces
- Alterations to landscaping
- Extension of a dust suppression and sprinkler system
- Minor changes and additions to internal infrastructure and operational layout
- Removal of the existing above-ground wheel wash and installation of a new 20 m long weighbridge and in-ground wheel wash at the vehicle egress point
- Relocation of the 30,000 L self-bunded fuel tank closer to the rear of Shed A.
- An assessment of the overall Amended Proposal (described in Section 1.1 and including these amendments) is also provided.

1.2.1 Construction

The EIS Proposal previously identified minor construction works only. To support the Amended Proposal a four-month construction phase is now proposed.

The construction period of the Amended Proposal would be approximately four months, and is anticipated to commence in early 2018. Construction of the Amended Proposal would be undertaken in three key phases:

- **Stage 1** – Site preparation, demolition and installation of hardstand
- **Stage 2** – Construction of the enclosed processing shed, site office, amenity building and ancillary facilities
- **Stage 3** – Commissioning and demobilisation.

Operation of resource recovery activities would cease during the construction period.

1.3 Report Structure

This report is structured to address specific changes to site layout, Proposal site operation and travel patterns since the preparation of the original TIA report, as follows:

- **Section 3:** Existing conditions of the Proposal site at the time of traffic data collection, that is, in September 2017 in relation to:
    - vehicle access and circulation
    - traffic volumes, and
    - roadway capacity for a two-way urban road, and
- **Section 4:** Details of the amended Proposal, and analysis of the car parking provision and site layout with regard to:
    - on-site stacking and internal circulation
    - site access, and
    - traffic and pedestrian access.
- **Section 5:** Assessment of the traffic impacts associated with the Amended Proposal, in relation to:
    - the local road network and neighbouring properties
    - on-site stacking and internal circulation,
    - construction traffic
    - roadway capacity for two-way urban road, and
- **Section 6:** Comparison of the original Proposal and the Amended Proposal
- **Section 7:** Summary and conclusion of the findings of the assessment.

2 Background

2.1 Transport Impact Assessment, June 2016

The initial TIA assessed the operation of the facility in June 2016. The Proposal (SSD application (SSD 7462)) sought to increase the amount of waste throughput from 30,000 tonnes per annum (tpa) to 220,000 tpa and an extension to the hours of operation from 6:00am – 7:00pm to 6:00am – 10:00pm on Monday to Saturday.

The TIA prepared to support the original Proposal concluded:

- The originally proposed supply of 10 parking spaces would have adequately accommodated the proposed 13 full-time employees. The proposed parking provisions considered car-pooling amongst staff and the use of public transport. Due to the infrequent number of visitors expected at the site, visitor parking spaces would not be provided as part of the proposal.
- The originally proposed parking layout was consistent with the dimensional requirements as set out in the Campbelltown City Council's Development Control Plan and Australian Standard for Off Street Car Parking (AS2890.1:2004 and AS2890.6:2009).
- On the basis of weighbridge traffic data at the existing site (June 2016), the site generated 18 two-way vehicle movements during its peak hour between 9:00am – 10:00am.
- Based on the 220,000 tpa sought for the Proposal site, the Proposal site is expected to generate, on average, an additional 376 two-way vehicle trips per day or 188 vehicles on the road network. During the busiest day of operation (Thursday), there would be an estimated 61 two-way vehicle movements during peak operation (12:00pm – 1:00pm). This equates to 31 vehicles, which are expected to be sufficiently accommodated within the 17 stacking spaces available on-site.
- A comparison of the existing and future intersection operating conditions showed that the impact of traffic generated by the development would not result in a significant change to the existing intersection Level of Service for the intersections of Campbelltown Road with Ben Lomond Road and Rose Payten Drive.
- There is adequate capacity in the surrounding road network to cater for traffic generated by the proposed development.
- In comparison with existing traffic volumes within the vicinity of the Proposal site, the additional traffic generated by future operation is negligible and is not expected to compromise the safety and function of the surrounding road network.

2.2 Data Collection Methodology

Traffic surveys were undertaken across one week of typical operation at the RRF between Tuesday 19th September and Monday 25th September 2017. The surveys captured recent site-generated traffic movements at the site accesses which have been used to predict the future traffic generated by the Proposal site.

Queue length and queue duration surveys were carried out across the same week to capture any queues that occurred beyond the access driveways to 13 Pembury Road.

Traffic movements were also recorded on Pembroke Road. Pembroke Road forms the alternate heavy vehicle haul route to/from the Proposal site, which would be used by some trucks. This detour would be used when the gross weight of a vehicle exceeds the bridge load limits located along the regular haul route.

Information that has been collected through the traffic surveys includes:

- Hourly turning movement counts of vehicles at the Proposal site ingress/egress during hours of operation between 6:00am and 7:00pm.
- Observation of any queues formed by site-generated vehicles extending onto Pembury Road, noting the time of queue formation, queue length and duration during the bulk period of site operation between 10:00am and 3:00pm.
- Duration of time spent on-site per vehicle while carrying out waste disposal or waste collection activities during the peak day of site operation.
- Classified hourly vehicle movements on Pembroke Road across 24 hours for each day of the survey week.

Analyses of traffic in the existing and future conditions are detailed in Chapter 3 and Chapter 4 of this report, respectively. An impact analysis of the proposed detour on current traffic flows is given in Section 3.8.

2.3 Changes to 'Existing Conditions' at the Proposal Site

Since the preparation of the original TIA in June 2016, the RRF has experienced a change in the amount of annual waste throughput due to a rise in market demand for materials recycling. Enhancements to the RRF's operation have been implemented to be able to cope with the greater volume of waste processed at the site. The major improvements to site operation are as follows:

1. Adjustment of the Proposal site's peak hour of operation to the earliest hour of operation in the day, to minimise the impact of site-generated traffic on the surrounding road network during the road network peak periods.
2. Utilisation of less small to medium sized trucks for transporting waste to/from the Proposal site. This has been achieved through greater efficient use of larger

vehicles which are already travelling to the site by having them loaded with waste to their fullest capacity.

The key changes in operation and traffic patterns at the RRF in June 2016 and September 2017 have been summarised in Table 2.1.

Table 2.1: Comparison of 'Existing' Site Operation in June 2016 and September 2017

'Existing' Site Operation	June 2016	September 2017
Operational Peak Period	9:00am-10:00am, 12:00pm-1:00pm	6:00am-7:00am
Peak hourly site-generated traffic	18 two-way movements	34 two-way movements
Average amount of waste per delivery vehicle	3.4 tonnes	6.8 tonnes
Annual waste throughput	30,000 tonnes	140,000 tonnes
Duration of a vehicle on-site	20 minutes (estimated)	17 minutes (actual)
Peak Hourly traffic flows on Pembury Road	192 vehicles two-way movements	165 two-way movements

Table 2.1 shows that the operation of the RRF has changed since June 2016, when the original TIA report was completed. In particular, there has been a rise in the amount of annual waste throughput from 30,000 tonnes to 140,000 tonnes. The Site Operator has responded to the recent rise in market demand for waste material recycling that has resulted from the current infrastructure boom across Sydney.

At the discretion of the Site Operator, the operational peak period has been shifted from 9:00am-10:00am and 12:00pm-1:00pm to 6:00am-7:00am. It is noted that previously where there were two peak periods there is currently only one peak period. Furthermore, the current peak period is also earlier than the local road network morning peak period.

Consolidation of the operational peak periods to a single hour can be more effectively managed by the Site Operator in terms of waste and traffic operations. Furthermore, having the busiest hour of operation occur earlier in the day (ie. 6:00am - 7:00am) allows the facility to operate without impacting the surrounding roads during peak traffic periods.

It is noteworthy that this shift in the peak hour results in lower base peak hourly flows on Pembury Road (192 to 165 two-way movements). This further reduces the impact of future traffic flows on local roads, in particular, Pembury Road.

Two-way movements at the Proposal site's ingress and egress have almost doubled during the peak hour of operation (18 to 34) while the average annual waste throughput has increased by around 4.6 times (30,000 to 140,000 tonnes). The Site Operator has enhanced the operational efficiency of vehicles transporting waste

to/from the RRF by ensuring vehicles are loaded up to their fullest capacity prior to arrival. Since June 2016, the average amount of waste per delivery vehicles has doubled (3.4 tonnes to 6.8 tonnes), which has been aided by the increase in market demand for materials recycling.

Consequently, the anticipated volume of two-way traffic movements at the Proposal site with a waste throughput of 220,000 tpa is anticipated to be lower than originally forecasted in the TIA prepared in June 2016.

The duration of time that vehicles are onsite between entry and exit has decreased from 20 minutes to 17 minutes. At the time that the original TIA was prepared, the Minto RRF was newly opened. Therefore, the duration onsite was estimated based on similar operation at comparable sites. Given that the facility has now been operating for over 12 months, more accurate data are now available which shows the actual time onsite per vehicle to be 17 minutes.

Changes to the 'existing' site operation in June 2016 have made it possible to achieve an enhanced design in the Amended Proposal. Improvements at the Proposal site with regard to traffic generation, onsite vehicle stacking, and off-street car parking have been assessed quantitatively in Chapter 4 and Chapter 5 of this report.

3 Existing Conditions

An updated analysis of existing conditions is warranted given that the RRF has experienced changes in its operation between June 2016 and September 2017. These changes have been detailed in Section 2.2 above.

A review of existing conditions at the RRF in September 2017 has been undertaken herein to more accurately assess site operation, traffic and parking generation and surrounding road network performance.

3.1 Waste Throughput

TTPP has been informed by Bingo Recycling that during the surveyed week, Tuesday 19th to Monday 25th September 2017, the RRF processed on average 2,691.65 tonnes of waste.

Annualising the existing weekly throughput of inbound and outbound waste results in an estimate of approximately 140,000 tonnes per annum.

In regard to the above, the proposed 220,000 tpa of waste throughput would result in a 58% increase in traffic movements entering and exiting the Proposal site compared to current conditions.

3.2 Traffic Volumes

Traffic surveys were undertaken across one week of typical site operation to determine the number of vehicles accessing the RRF and the duration a vehicle is present on-site. The surveys also captured the distance and duration of any queuing on Pembury Road beyond the site's access driveways.

A summary of the traffic survey data is detailed in the following Sections.

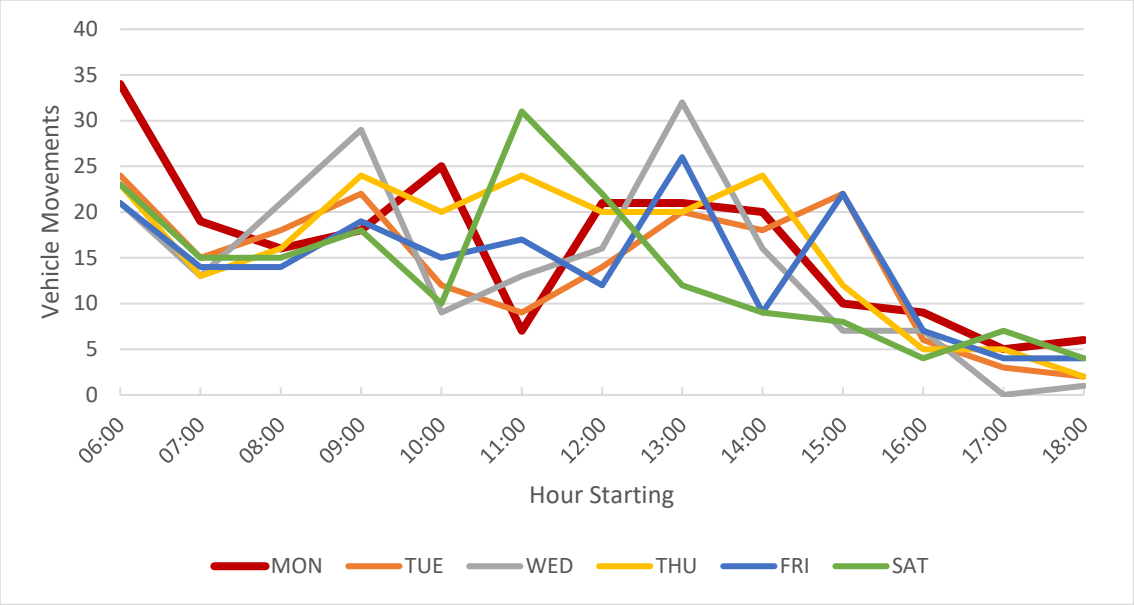
3.2.1 Turning Movements

The number of vehicles entering and leaving the site were recorded across a 13-hour period for six days. Daily vehicle movements in and out of the site are summarised in Table 3.1 while traffic flows on an hourly basis are shown in Figure 3.1.

Table 3.1: Existing Two-Way Vehicle Movements

Starting Hour	Mon	Tue	Wed	Thu	Fri	Sat	Weekly Total
Inbound	132	103	92	108	105	101	**641**
Outbound	79	82	93	100	79	77	**510**
Total (two-way movements)	**211**	**185**	**185**	**208**	**184**	**178**	**1,151**

Figure 3.1: Hourly Summary of Vehicle Movements



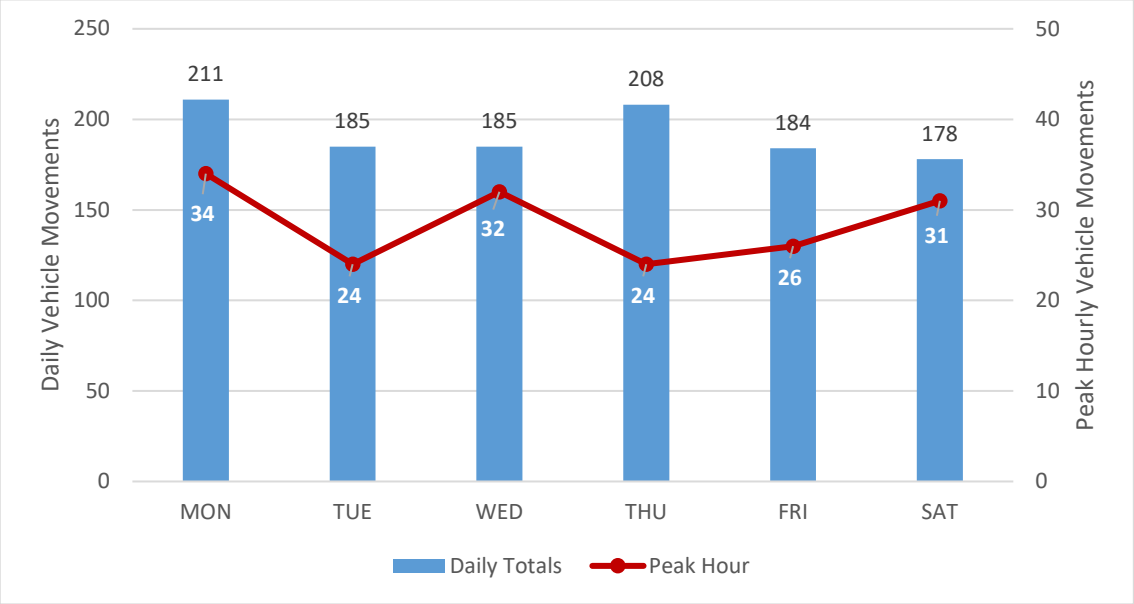
Source: Data Audit Systems, 2017

In Table 3.1, it is evident that the peak day of operation during the survey week is Monday. Figure 3.1 identifies the peak hour as 6:00am - 7:00am and peak day as Monday.

For the purpose of conservatively assessing site-generated traffic for existing and future conditions, TTPP has analysed traffic movements for the peak hour of the peak day.

A comparison of daily two-way movements (Table 3.1) and peak hourly vehicle movements per day are shown in Figure 3.2.

Figure 3.2: Hourly Summary of Vehicle Movements



Source: Data Audit Systems, 2017

Based on traffic movements at the Proposal site, Monday has been identified as the busiest day of operation with 211 two-way vehicle movements across the day. In the busiest hour on this day, there are 34 two-way vehicle movements.

A single vehicle generates two movements; one inbound movement and one outbound movement. Thus, the 34 two-way movements in the peak hour are equivalent to 17 vehicles.

A breakdown of existing two-way vehicle movements at the Proposal site on the peak day is provided in Table 3.2. The information is summarised based on the number of light vehicle and heavy vehicle movements on an hourly basis during site operation.

Table 3.2: Existing Two-Way Vehicle Movements

Starting Hour	Light Vehicles	Heavy Vehicles	All Vehicles
6:00 [a]	4	30	34
7:00	8	11	19
8:00	5	11	16
9:00	7	11	18
10:00	9	16	25
11:00	4	3	7
12:00	10	11	21
13:00	10	11	21
14:00	8	12	20
15:00	4	6	10

Starting Hour	Light Vehicles	Heavy Vehicles	All Vehicles
16:00	5	4	9
17:00	2	3	5
18:00	3	3	6
Total	**79**	**132**	**211**

Notes:
a Site operation peak hour

3.2.2 Duration of Vehicles On-site

The entry and exit times of every vehicle at the Proposal site have been surveyed across the peak day to determine the average duration that a vehicle requires to complete waste disposal or waste collection activities. Based on traffic survey data for existing operating conditions, a vehicle spends on average 17 minutes on-site.

Activities undertaken by vehicle drivers within the 17-minute duration include:

- Enter the Proposal site and record vehicle weight at the inbound weighbridge
- Visual identification of waste carried by site personnel while vehicle weight is recorded,
- Proceed towards vehicle stacking area,
- Wait in line to be called-up to the tip floor by site personnel,
- Manoeuvre on to the tip floor and unload waste,
- Spread waste on tip floor to be inspected by secondary site personnel,
- Proceed towards exit,
- Drive vehicle through automatic wheel-wash, and
- Record vehicle weight at the outbound weighbridge and exit the Proposal site.

At the inbound weighbridge, site personnel visually identify waste carried by the vehicle. The purpose of this inspection is to be a fast and non-intrusive check to confirm that the waste material generally matches the description provided by the driver.

Site personnel conducting this inspection are situated on a platform above the weighbridge office which is elevated above the height of a truck stationed on the weighbridge itself. The waste material is inspected for any unauthorised waste, such as asbestos, on the surface of the load.

Site personnel stationed at the tip floor undertake a more thorough visual inspection of the waste. Once site personnel have authorised the waste to be unloaded, they would continue to inspect the waste as it is placed onto the tip floor for any concealed unauthorised waste. Site personnel would inspect the load for any contaminants and once cleared, the load would be pushed into the stockpile ready for processing.

Disposal of unauthorised waste would not be permitted at the Proposal site. Any vehicle carrying unauthorised waste would be required to exit the Proposal site with its waste.

3.3 Site Access, Layout and Circulation

The Proposal site is located at 13 Pembury Road, Minto, towards the western end of the cul-de-sac road. It is located within an industrial precinct, and has neighbouring properties with similar industrial and light industrial uses.

The Proposal site is accessible via two separate driveways along its northern boundary. All vehicles enter and exit the Proposal site in a forward motion. Vehicle circulation through the Proposal site is permitted as separated two-way traffic flow.

Within the Proposal site, there are weighbridges located at the main access driveway where entry and exit of vehicles to the Proposal site are recorded. There are three sheds on-site, namely, Sheds A, B and C.

3.4 Types of Vehicles

The types of waste delivery and collection vehicles that currently access the Proposal site range in size from a car/ van to a 25m B-double truck. Delivery of waste to the Proposal site is undertaken by vehicles ranging between a car/van to 19m semi-trailer and 19m truck and dog. Collection of waste is undertaken by 19m semi-trailer, 19m truck and dog and 25m B-double trucks.

Waste collection vehicles have a capacity greater than 15 tonne each, and due to their large carrying capacity are able to efficiently clear the site of material. It would be inefficient to utilise small to medium size trucks to remove waste off site. Therefore, the removal of waste is limited to trucks that are 19m in length or larger.

Details on these vehicles are summarised Table 3.3.

Table 3.3: Vehicle Classifications

Waste Delivery of Collection Vehicle	Vehicle Classification	Type	Photo Example
Waste delivery	Small Rigid Vehicle (up to 6.4m)	Car, van	-
	Medium Rigid Vehicle (6.4m to 8.8m)	Car with trailer [a]	-

Waste Delivery of Collection Vehicle	Vehicle Classification	Type	Photo Example
		4-Tonne Baby Marrel Truck (W2.5 x H2.5 x L5.9)	
		6-Tonne Baby Marrel Truck (W2.5 x H2.8 x L6.3)	
		Single Axel Marrel Truck (W2.7 x H3.0 x L7.6)	
		Double Axel Marrel Truck (W3.0 x H3.0 x L8.3)	
		Hook Truck (W2.7 x H3.3 x L8.6)	
	Heavy Rigid Vehicle (8.8m to 12.5m)	Front Lift Truck (W3.1 x H4.1 x L11.0)	
Waste delivery and collection	Articulated Vehicles	19m Semi-trailer	

Waste Delivery of Collection Vehicle	Vehicle Classification	Type	Photo Example
		19m Truck and Dog	
Waste collection		25m B-double truck	-

Notes:
a A car and trailer combination has an articulation point, however, is classified as a medium rigid vehicle based on the length of the combination.

3.5 On-site Vehicle Stacking

Currently, there is space onsite to accommodate up to 17 vehicles waiting before tipping waste. This space takes the form of an informal and un-linemarked vehicle stacking area that can accommodate a mixture of vehicle sizes, ranging from a car to a 19m truck and dog.

The largest truck to access the RRF is a 25m B-double truck. These vehicles collect waste from the Proposal site and transport it to the relevant material reuse facility. As B-doubles trucks remove waste off-site only, they do not utilise the stacking spaces. Instead, these trucks are referred directly from the site entry to the storage bins for waste collection.

Given that a vehicle spends 17 minutes on-site, each stacking space can accommodate 3.5 vehicles in one hour (60 minutes / 17 minutes). Therefore, during any hour of operation across the day it is possible for the site to turn-over up to 60 vehicles (3.5 x 17 spaces).

The available stacking room on-site adequately caters for the 17 vehicles (34 two-way vehicle movements) that arrive during the site's peak hour between 6:00am – 7:00am.

To accommodate the 17 vehicles entering the site during the peak hour, a total of five stacking spaces are required to accommodate these vehicles (17 vehicles / 3.5). As a result, there are up to 12 vacant stacking spaces during the site's peak hour (17 – 5).

3.6 Queuing on Pembury Road

During the week-long survey period, a total of eight occasions of short-duration queuing were recorded. Out of the eight occasions, seven lasted less than 30 seconds while one lasted just over two minutes.

At most, queues on Pembury Road comprised one truck only at the main access driveway to the Proposal site. On half of the occasions, the queue extended past the access driveway to the neighbouring site, 11 Pembury Road. The other occasions comprised shorter queues which occurred within the Proposal site's access driveway.

The causes for queues have been recorded by the external survey company as summarised in Table 3.4.

Table 3.4: Causes for Queuing on Pembury Road

Causes or Queuing in Pembury Road	Occurrences
Another vehicle occupying weighbridge ahead	3
Vehicle stopped temporarily (no queuing ahead observed)	3
Vehicle giving way to vehicle exiting site	2

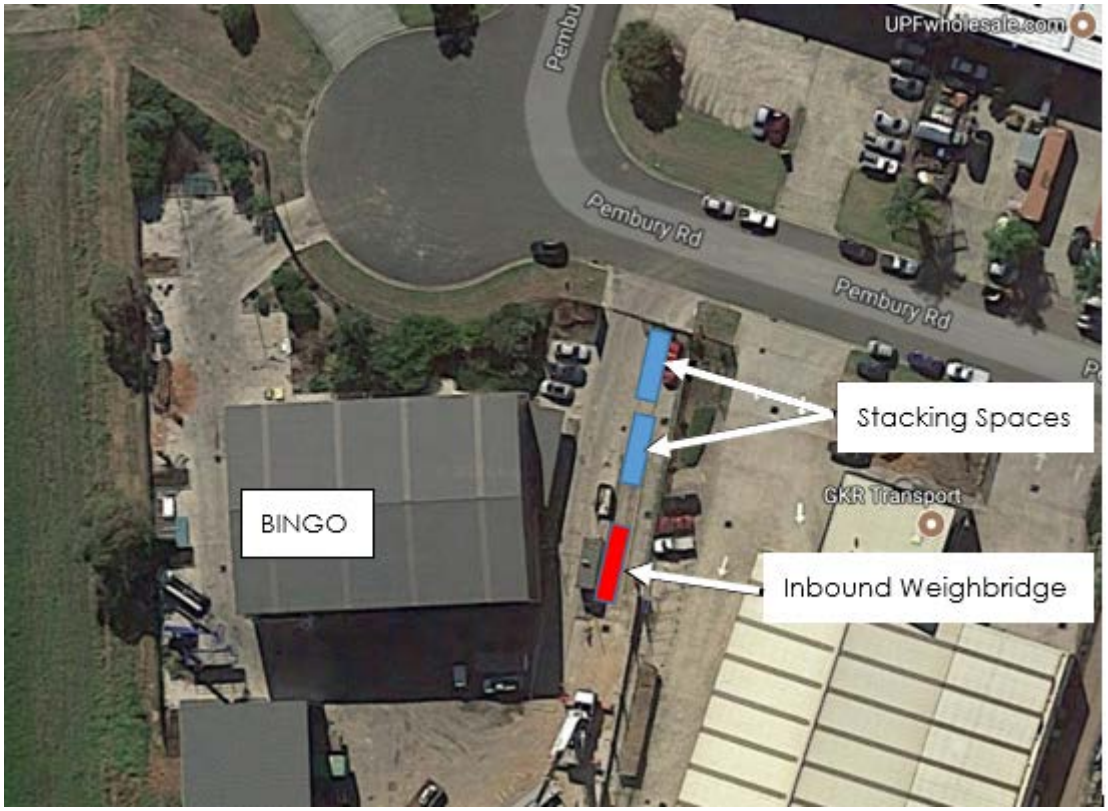
Most queues were short-lived queues lasting less than 30 seconds. These queues were observed to occur due to:

- A vehicle ahead occupying the inbound weighbridge,
- Temporarily being stopped by the site traffic controller, and
- Giving way to a vehicle exiting the Proposal site.

On the one occasion where a queue lasted longer than two minutes, the queue was caused by a 19m semi-trailer giving way to another vehicle exiting the Proposal site.

Between Pembury Road and the inbound weighbridge, two stacking spaces are provided as shown in Figure 3.3.

Figure 3.3: Existing Stacking Capacity On Approach to Inbound Weighbridge



Background Image: Google Maps

Table 3.4 shows that on five occasions vehicles were held in Pembury Road to enable a B-double vehicle to exit the site via the inbound weighbridge.

TTPP understands that B-double vehicles are not able to exit the site via the outbound weighbridge due to height restrictions of the outbound weighbridge infrastructure. Therefore, the Proposal site's gate controller temporarily stops vehicles in Pembury Road to enable a B-double truck to exit.

In summary, Table 3.4 shows that vehicles primarily stop in Pembury Road when the gate controller stops vehicles to control heavy vehicle movements at the access point. TTPP notes that queues do not extend from within the Proposal site, past the weighbridge and onto Pembury Road. Queuing capacity is available within the Proposal site once a truck travels forward from the weighbridge.

3.7 Roadway Capacity for Two-way Urban Road

As reported in Sections 2.6 and 6.6 of the original TIA, an assessment of the roadway capacity on Pembury Road has been carried out with reference to Roads and Maritime Services (Roads and Maritime) *Guide to Traffic Generating Developments* (the "Guide"). The Guide prescribes an operational capacity threshold for different types of an urban road.

Pembury Road is a two-way undivided road with one lane per direction. For this road classification, the Guide stipulates a threshold of 900 passenger car units (pcu) per hour per lane as shown in Figure 3.4

Figure 3.4: Operational Capacity for Urban Roads

Table 4.3
Typical mid-block capacities for urban roads with interrupted flow

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Source: Roads and Maritime's Guide to Traffic Generating Developments (dated 2002)

Traffic flows along Pembury Road have been recorded for 24 hours each day for one week in September 2017. Analysis of the roadway capacity considers the day with the greatest vehicle flows. Traffic surveys identify Wednesday as having the highest number of vehicle movements on Pembury Road. Two-way traffic flows across Wednesday are summarised in Table 3.5.

Table 3.5: Existing Traffic Flows on Pembury Road - Wednesday

Starting Hour	Eastbound	Westbound	Combined (Two-way Movements)
0:00	5	4	9
1:00	8	11	19
2:00	5	4	9
3:00	4	3	7
4:00	13	26	39
5:00	13	93	106
6:00	48	59	107
7:00	31	68	99
8:00	53	89	142
9:00	52	64	116
10:00	77	86	163
11:00	66	67	133
12:00	67	61	128

Starting Hour	Eastbound	Westbound	Combined (Two-way Movements)
13:00	74	91	165
14:00	55	22	77
15:00	47	47	94
16:00	73	45	118
17:00	79	25	104
18:00	35	13	48
19:00	11	6	17
20:00	6	3	9
21:00	4	2	6
22:00	12	5	17
23:00	1	4	5

Having regard to Table 3.5, the highest number of vehicles movements recorded is 93 westbound vehicles between 5:00am - 6:00am. When compared against Roads and Maritime's 900 pcu per hour threshold, 93 vehicles per hour is considered low. Hence, the roadway currently operates with traffic volumes well within its operational capacity threshold set within Roads and Maritime Guidelines.

The full set of traffic survey data for Pembury Road has been included in Appendix A.

3.8 Haul Routes

The main haul routes to/from the Proposal site include Hume Highway, Campbelltown Road and Airds Road. The northbound route includes Ben Lomond Road and the southbound route includes Rose Payten Drive.

Recent bridge load limits have been imposed by Campbelltown City Council at two locations along the haul routes which restrict trucks greater than 40 tonnes, on the Ben Lomond Road bridge and 32 tonnes on the Airds Road bridge over the Bow Bowing Channel.

When loaded with waste material, some trucks travelling to/from the Proposal site can weigh in excess of 60 tonnes (gross weight). These trucks include 19m semi-trailers, 19m truck and dogs and 25m B-double trucks. The alternate haul route for trucks weighing greater than 32 tonnes and 40 tonnes is via Pembroke Road.

Although the alternate route via Pembroke Road seems circuitous, it is deemed as required given the recent bridge load limit restrictions which have been implemented on Airds Road and Ben Lomond Road.

As assessed in the Original TIA, the alternate route is deemed acceptable on the basis that Pembroke Road is a wide road located in an industrial area that is regularly used as a haul route by surrounding businesses for large trucks, and forms the shortest alternative route to the Proposal site. According to RMS' Higher Mass Limit (HML) and Restricted Access Vehicle RAV map and the National Heavy Vehicles Regulator (NHVR), the alternate route is approved for use by vehicles up to 25m in length.

Based on the current and future split of vehicles, 19m semi-trailers, 19m truck and dogs and 25m B-doubles collectively comprise 25% of all vehicles arriving at the site (Table 4.2). Therefore, up to a quarter of site-generated traffic would need to use the alternate route.

Currently, there are 211 two-way movements generated by the RRF during the busiest day (Table 3.2). A quarter of these movements equates to approximately 53 two-way movements in one day. On average, this equates to four heavy vehicle movements per hour on Pembroke Road across a 13-hour operational day.

Traffic movement surveys on Pembroke Road were undertaken across 24 hours each day during the survey week in September. The surveys indicate that, on average, Pembroke Road carries around 20,000 two-way movements (bi-directional) per day. Daily traffic generated by the RRF which use Pembroke Road (53 movements) make up less than 1% of the daily flows on Pembroke Road (20,000 movements). Overall, site-generated traffic is a minuscule portion of all traffic on Pembroke Road. Furthermore, the site-generated four heavy vehicle movements per hour on Pembroke Road has a minor impact on the existing road.

It is noted that this calculation conservatively considers all semi-trailers, truck and dogs and B-double trucks travelling via the alternate route. Empty B-double trucks en route to the Proposal site (to collect waste) would weigh less than 32 tonnes and would use the regular route when travelling to the RRF. Overall, these vehicles would comprise a small number of these movements. Thus, they have been included in the four vehicle movements for ease of estimation.

Traffic surveys show the maximum number of vehicle movements on Pembroke Road in any given hour is 904 movements per lane per direction. This occurs on Thursday in the southbound direction between 4:00pm – 5:00pm.

Pembroke Road is a two-way divided road with one lane per direction. RMS' Guide to Traffic Generating Developments stipulates a threshold of 1,000 passenger car units (pcu) per hour per lane for this roadway classification. Given that the current peak hourly flow remains less than the threshold, the detour along Pembroke Road is considered to be acceptable.

The full data set of traffic survey results are contained in Appendix A.

4 Proposed Development

4.1 Development Description

The Proposal involves the construction and operation of increased processing capacity from around 140,000 tpa to 220,000 tpa at the existing RRF in Minto.

All tipping, sorting and processing activities at the Proposal site would be undertaken in a fully enclosed shed-like structure on the Proposal site. The all-encompassing shed would house the former separated Sheds A, B and C. It would also include the vehicle stacking area and internal circulation routes.

Amendments to the Proposal, for which approval is sought as part of the Amended Proposal include:

- Construction of a shed and roof structure to enclose the waste processing and handling area
- Minor removal of walls and cladding
- Adjustments to the location of the proposed site office and amenities buildings and the provision of additional on-site parking spaces
- Alterations to landscaping
- Extension of a dust suppression and sprinkler system
- Minor changes and additions to internal infrastructure and operational layout
- Removal of the existing above-ground wheel wash and installation of a new 20m long weighbridge and in-ground wheel wash at the vehicle egress point
- Relocation of the 30,000 L self-bunded fuel tank closer to the rear of Shed A.

This section provides an assessment of the Amended proposal.

4.2 Traffic Generation

Based on annualising weighbridge data for the survey week as per Section 3.1,the annual waste throughput at the Proposal site is set to increase from around 140,000 tpa to 220,000 tpa. Therefore, under the Amended Proposal the site would operate at a capacity of 1.58 times the current operation. Traffic generated by the Amended Proposal is expected to experience a comparable rate of increase in vehicle movements.

Based on recent traffic survey data, the current operation generates a maximum of 34 two-way vehicle movements per hour (or 17 vehicles). Applying a rate of 1.58 to existing traffic flows generates 54 two-way movements per hour (or 27 vehicles) which is

the maximum number of trips per hour expected to be generated by the Amended Proposal.

A breakdown of the anticipated two-way vehicle movements under the Amended Proposal operation scenario is provided in Table 4.1. The information is summarised based on the number of light vehicle and heavy vehicle movements on an hourly basis during site operation.

Table 4.1: Future Two-Way Vehicle Movements

Starting Hour	Light Vehicles	Heavy Vehicles	All Vehicles
6:00 [a]	6	48	54
7:00	12	16	28
8:00	8	16	24
9:00	10	15	25
10:00	11	23	34
11:00	5	5	10
12:00	15	15	30
13:00	14	16	30
14:00	11	17	28
15:00	5	11	16
16:00	7	5	12
17:00	5	5	10
18:00	5	5	10
19:00	4	4	8
20:00	2	4	6
21:00	2	4	6
Total	**122**	**209**	**331**

Notes:
a Site operation peak hour

As shown in Table 4.1, the Proposal site is estimated to generate 122 light vehicle movements and 209 heavy vehicle movements, giving a total of 331 two-way movements in one day.

4.3 Site Access, Layout and Vehicle Circulation

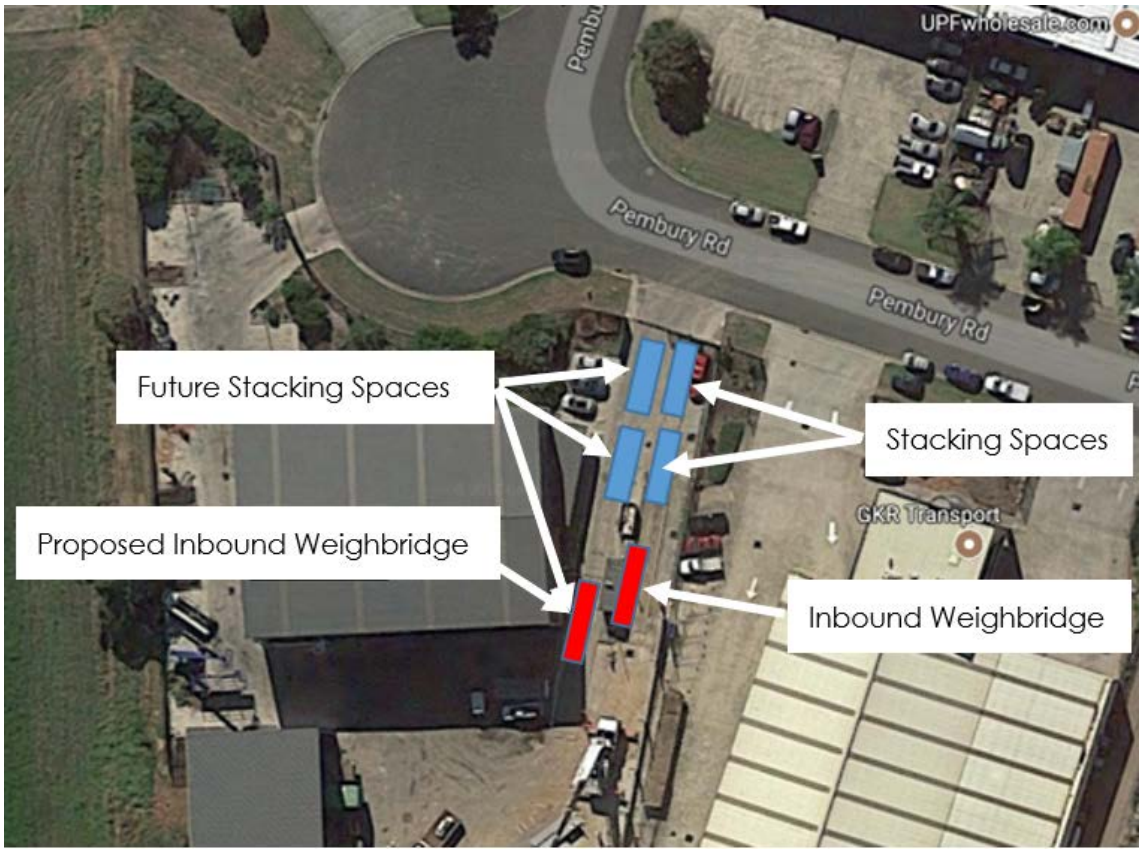
The Amended Proposal would have two inbound weighbridges at the main driveway, and a single outbound weighbridge at the secondary driveway. It is proposed to convert the existing outbound weighbridge at the main entry to accept vehicles upon arrival at the Proposal site.

This would improve operation of the Proposal site as it would increase the Site Operator's ability to accept vehicles, clearing vehicles from the driveway and avoiding the conflict of entering vehicles giving way to exiting vehicles.

All vehicles would enter the Proposal site via the main driveway and circulate in a one-way forward direction through the Proposal site. Vehicles would exit the Proposal site using the outbound weighbridge at the secondary driveway.

Provision of two inbound weighbridges would increase the stacking capacity between Pembury Road and the inbound weighbridges. Currently, two vehicles can stack between Pembury Road and the inbound weighbridge. Provision of two inbound weighbridges would increase stacking capacity here from two stacking spaces to five stacking spaces in total (250% increase), including the additional inbound weighbridge, as shown in Figure 4.1.

Figure 4.1: Future Stacking Capacity on approach to both inbound Weighbridges



TTPP notes that existing short-duration queues on Pembury Road are caused by operational restrictions at the primary access point to 13 Pembury Road and not by queues formed internal to the Proposal site (beyond the weighbridge).

As mentioned in Section 3.6, B-double trucks are currently unable to exit the RRF via the outbound weighbridge due to height restrictions of the outbound weighbridge

infrastructure. The Proposal site's gate controller temporarily stops vehicles in Pembury Road to enable a B-double truck to exit the Proposal site.

The Amended Proposal would modify the layout of Shed A and Shed C and install an outbound weighbridge to enable a B-double vehicle to exit via the western driveway.

Based on a maximum on-street queue length of one vehicle (Section 3.6) during the survey period, provision of an additional three stacking spaces, including the additional weighbridge, would provide sufficient capacity to eliminate queues in Pembury Road.

The proposed stacking operation would eliminate the need for any site-related traffic to park on-street. This would improve visibility to passing vehicles on Pembury Road and surrounding streets, as well as enhance safety for motorists and pedestrians along Pembury Road.

A draft Traffic Management Plan (TMP) has been prepared for the operation of the Amended Proposal which illustrates how controls are to be implemented on-site to manage vehicles, mobile plant and pedestrian movements on-site. The draft TMP is contained in Appendix B of this report.

In the Amended Proposal, waste collection activities are proposed to take place alongside Shed A and Shed C. In Section 4.4 to follow, a swept path assessment has been undertaken which considers a 25m B-double truck loading-up at each shed while a vehicle manoeuvres from the tip floor towards the outbound weighbridge. The analysis indicates that these activities can take place concurrently without impeding traffic movements on-site. The swept path plans that show these traffic movements have been included in Appendix C.

4.4 On-site Vehicle Stacking

A mixture of vehicle sizes has been incorporated in the stacking plan to assess the Proposal site's stacking capacity. The split of stacking spaces for the various vehicles is based on the proportion of vehicles currently accessing the Proposal site. The stacking layout is shown in Figure 4.2 while the split of stacking spaces per vehicle type is summarised in Table 4.2.

A plan of the stacking arrangement is contained in Appendix C.

Figure 4.2: On-site Stacking Spaces

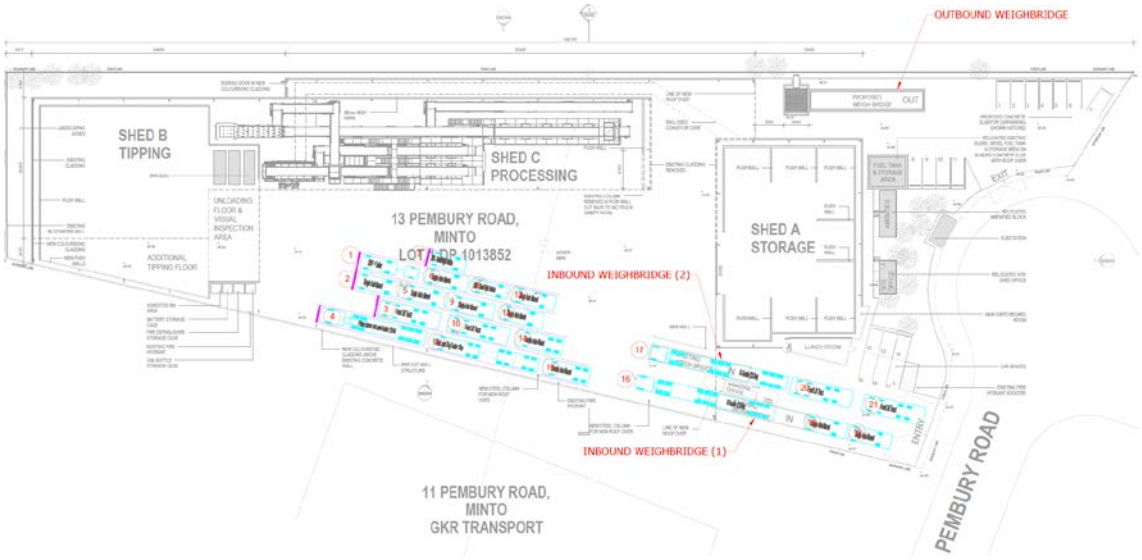


Table 4.2: Breakdown of Vehicle Types and Stacking Spaces

Vehicle Type	Approximate Proportion	Stacking Spaces
Car, van	19%	3
Car with trailer [a]		
4-Tonne Baby Marrel Truck	35%	8
6-Tonne Baby Marrel Truck		
Single Axel Marrel Truck		
Double Axel Marrel Truck	12%	2
Hook Truck	9%	4
Front Lift Truck		
19m Semi-trailer	12%	2
19m Truck and Dog		
25m B-double Truck	13%	2
Total	**100%**	**21**

Future provision of two inbound weighbridges would increase the stacking capacity on-site from 17 stacking spaces to 21 stacking spaces. The additional four stacking spaces are generated by being able to accommodate vehicles on the secondary inbound weighbridge (former outbound weighbridge), as well as beyond and prior to the weighbridge itself.

Based on a duration of 17 minutes, each stacking space could accommodate 3.5 vehicles in one hour (60 minutes / 17 minutes). Therefore, during any hour of operation

across the day, the existing stacking arrangement could accommodate the turn-over of 74 vehicles (3.5 x 21 spaces).

At 220,000 tpa, the Amended Proposal is expected to generate a maximum of 54 two-way vehicle movements (27 vehicles) per hour. In theory, the 27 vehicles expected to arrive during this peak hour could be accommodated across 8 stacking spaces (27 vehicles / 3.5). As a result, with 21 available stacking spaces, there would be 13 vacant stacking spaces remaining as illustrated in Figure 4.3.

The stacking plan for the Proposal site operation, the estimated number of stacking spaces required associated with a throughput of 220,000 tpa and swept paths are provided in Appendix C.

Figure 4.3: Utilisation of Stacking Spaces – Typical Amended Proposal Operation

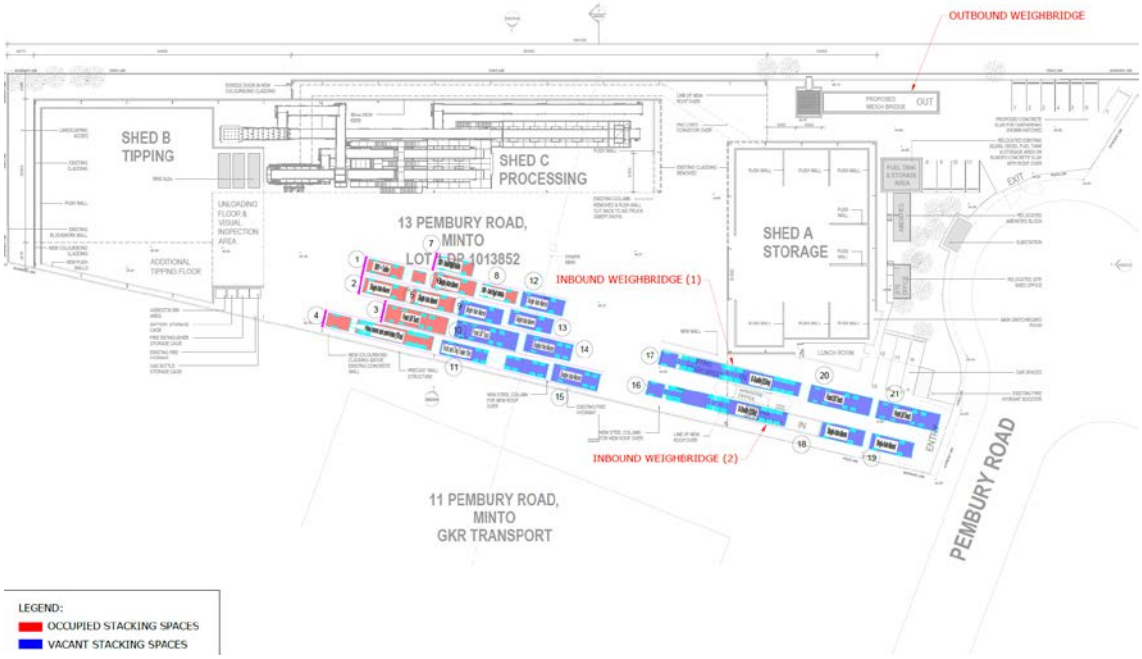
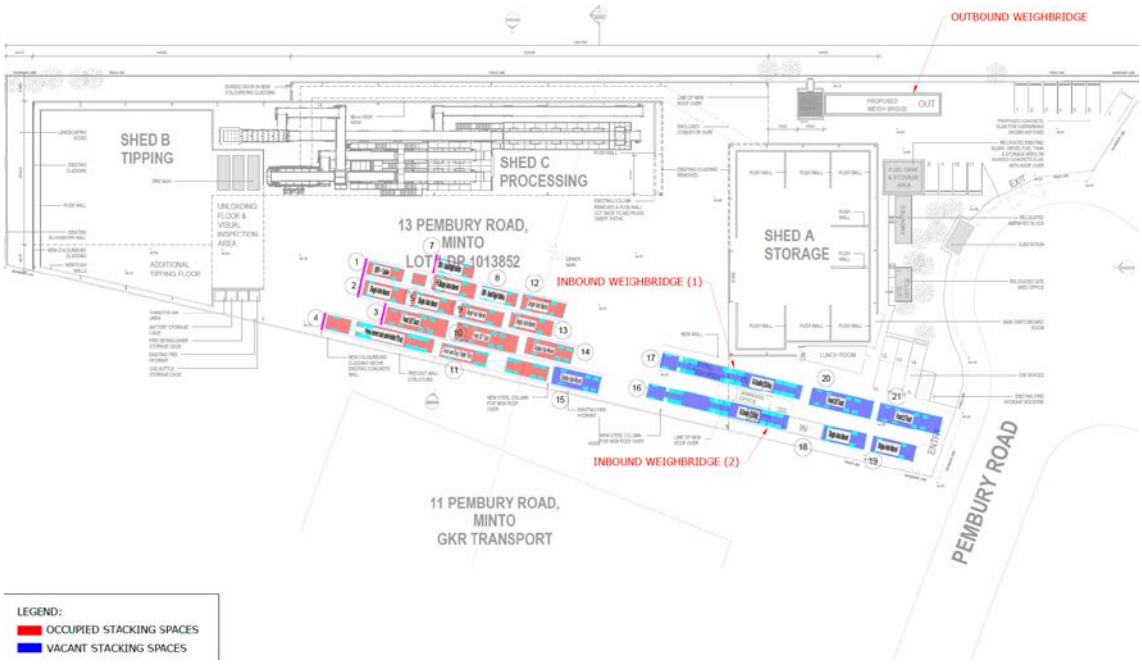


Figure 4.3 demonstrates that the proposed stacking plan would eliminate any potential queuing on Pembury Road based on current conditions.

Notwithstanding the above assessment, TTPP has assessed the following "worst case" scenario. If the average duration of stay on-site increased from 17 minutes to 30 minutes each stacking space could accommodate 2 vehicles in one hour (60 minutes / 30 minutes). Therefore, the forecasted peak hourly volume of 27 vehicles would require 14 stacking spaces as illustrated in Figure 4.4.

Given the supply of 21 stacking spaces on-site, even during the worst-case scenario, queuing of vehicles would be entirely accommodated and managed within the Proposal site and would not cause an impact on Pembury Road.

Figure 4.4: Utilisation of Stacking Spaces – Worst-Case Amended Proposal Site Operation



In both typical and worst-case operations, vehicles generated by the Amended Proposal would be adequately accommodated on-site. Therefore, vehicles would not queue or park on Pembury Road and would not restrict access to surrounding businesses. In fact, as shown in Figure 4.3 and Figure 4.4, vehicles stacked within the Proposal site would not even extend onto the weighbridge. This means that the space between the weighbridge and the roadway would be unoccupied and would allow the Proposal site to readily accept vehicles upon their arrival.

The TIA previously proposed the use of the kerbside road space on Airds Roads as a lay-over area for vehicles on approach to the Proposal site which were not ready to be accepted at the Proposal site. Given that the Proposal site would be able to sufficiently accommodate the projected maximum number of vehicles in the peak hour under typical and worst-case conditions, this operation would no longer be required.

4.5 Roadway Capacity of Two-way Urban Road

As detailed in Section 3.7, RMS' Guide indicates that the operational capacity of Pembury Road is around 900 pcu per hour per lane. Future traffic flows along Pembury Road consider current flows plus anticipated additional future site traffic.

In the busiest hour, the Amended Proposal is estimated to generate a maximum of 20 additional vehicle movements (34 existing to 54 future movements). When added to the peak existing flow on Pembury Road, the number of vehicles per lane per hour in the future continues to remain well below RMS' threshold of 900 pcu per hour per lane.

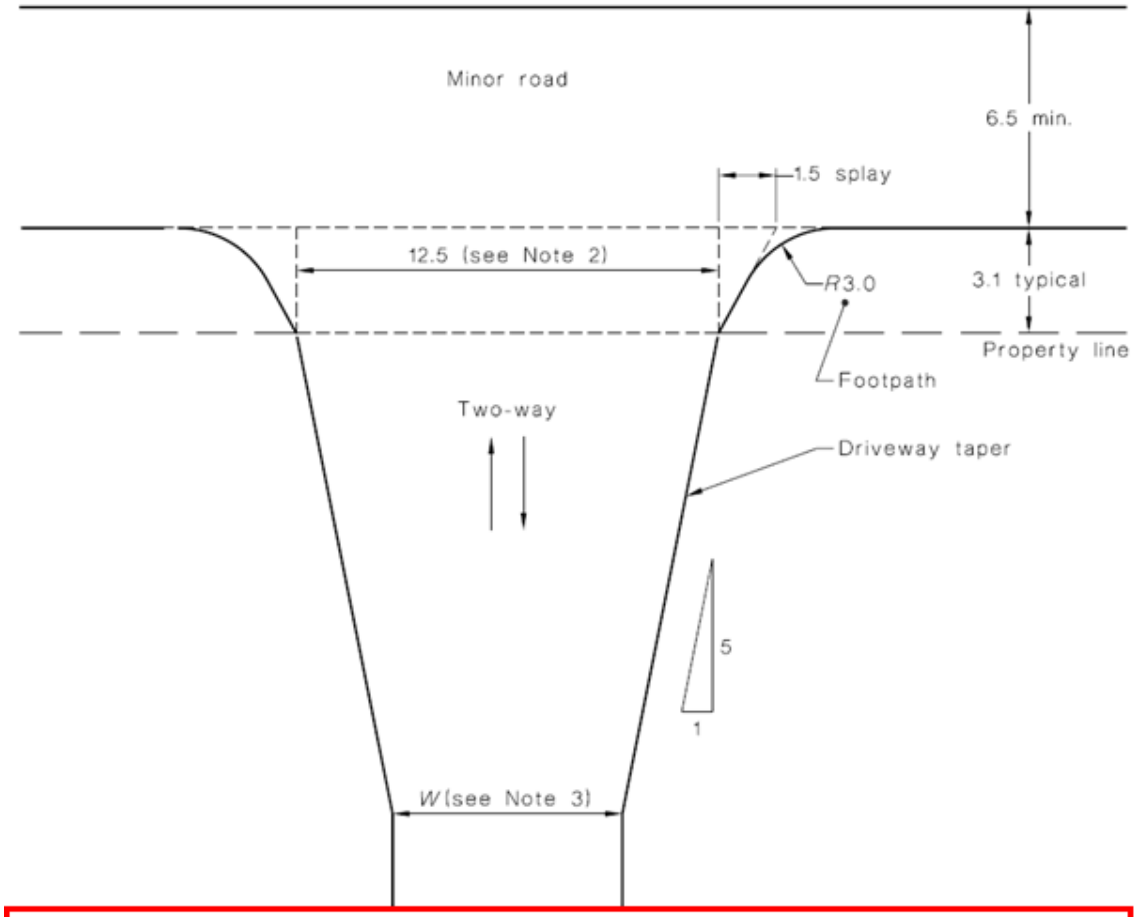
Therefore, the traffic flows along Pembury Road are considered acceptable under the Proposal site's operating conditions. Having regard to the above, the road currently operates with traffic volumes well within its operational capacity threshold set within RMS' Guide.

4.6 Swept Path Analysis

A swept path analysis has been undertaken of heavy vehicle movements at the Proposal site access and internal to the Proposal site based on the Amended Proposal layout. Vehicles that have been assessed include a 19m semi-trailer, 19m truck and dog, and 25m B-double truck. These are the largest size trucks that enter the Proposal site under existing and future operating conditions.

Upon entry to the Proposal site, all vehicles undertake a left-turn from Pembury Road into the primary Proposal site access driveway. Swept paths show that a semi-trailer, truck and dog and B-double truck will be required to cross the centreline in order to adequately turn from Pembury Road. As per Australian Standard *2890.2 Parking facilities Part 2: Off-street commercial vehicle facilities* it is considered acceptable for an articulated vehicle to take up most of the public road width when turning left into/ out of a driveway from a minor road. An excerpt from the Australian Standard is shown in Figure 4.5.

Figure 4.5: AS2890.2-2002 Parking Facilities



NOTES:

1 In the case illustrated the HRV can turn left into the driveway from the left hand side of the public road. The design (19.0 m long) AV will take up most of the public road width when turning left into or out of the driveway, as will the HRV when turning out.

2 Corresponding dimensions for the MRV and SRV are 9 m and 6 m respectively. Larger vehicles may be able to use these narrower driveways depending on the width of public road available for manoeuvring in or out.

3 *W* = width of circulation roadway (see Table 3.1).

DIMENSIONS IN METRES

FIGURE 3.1 MINIMUM DESIGN FOR AN ACCESS DRIVEWAY ON A MINOR ROAD CATERING FOR HRVs AND AVs

Given that Pembury Road is a minor road, having a low speed environment and carries local traffic, heavy vehicles need to take up most of the road when entering and exiting the road. The provision of two inbound weighbridges and one way entry and exit configuration through the Proposal site would improve the operation and safety of all Pembury Road users.

Furthermore, a traffic controller would be located at the Proposal site ingress to supervise turning movements of all vehicles at the driveway.

4.7 Car Parking

The Amended Proposal includes provision of 17 car parking spaces, including one accessible parking space; increased from 10 spaces previously proposed. Of the 17 car parking spaces, seven would be located near the Proposal site ingress (i.e. main access driveway). The remaining 10 parking spaces would be located near the egress (secondary driveway).

The Amended Proposal operations would require 30 full-time staff employed at the Proposal site. Staff would operate in two shifts per day with 13 to 15 workers on-site at any given time, including:

- One weighbridge / office staff
- One yard supervisor
- Eight machine/ plant operators, and
- Three traffic controllers (site ingress, stacking/yard untarping area and tip floor).

Given that the maximum number of personnel on-site at any one time would be 15 people, the provision of 17 car parking spaces is sufficient. No employees would be required to park on Pembury Road.

The work day would be split into two shifts as follows:

- Morning shift: 6:00am to 1:30pm
- Afternoon shift: 2:30pm to 10:00pm.

There would be a change-over period in between the two shifts between 1:30pm and 2:30pm. Operation of the Proposal site would continue with 'skeleton' staff remaining present on-site during this change-over period.

Typically, workers would arrive at the Proposal site before 6:00am to begin the morning shift. Therefore, car movements due to employees arriving at the Proposal site would not conflict with the Proposal site's operational peak hour that occurs between 6:00am and 7:00am.

The exit of staff cars and entry of waste vehicles would be coordinated by the traffic controller located at the Proposal site access to eliminate conflict of movements.

Australian Standard *AS 2890.1:2004 Off-street car parking* requires car parking spaces for employee parking to be provided as Class 1A parking spaces. Class 1A car parking spaces are to have the following minimum dimensions:

- Bay length of 5.4m
- Bay width of 2.4m.

The proposed car parking layout complies with the above minimum requirements. Hence, the proposed car parking layout is satisfactory.

Campbelltown City Council's Development Control Plan (DCP) specifies that industrial developments are to comply with the Building Code of Australia (BCA), Clause D3.5. The Amended Proposal is classified as a Class 5, 6, 7b, 8 and 9a (ie. factory) building and has a disabled car parking provision of one space for every 100 car parking spaces or part thereof.

Applying BCA's accessible parking rate generates a requirement to provide 0.16 accessible parking spaces, or at least one parking space, for the Amended Proposal. An accessible space would be located between the ingress driveway and site office.

Australian Standard *AS 2890.6:2009 Part 6: Off-street parking for people with disabilities* requires accessible car parking spaces to be provided which have the following minimum dimensions:

- Bay length of 5.4m
- Bay width of 2.4m, plus
- A marked shared area of the same dimensions adjacent to the parking space.

The provision and layout for accessible parking within the Amended Proposal complies with the requirements as set out by the Building Code of Australia and Australian Standard.

4.8 Haul Routes

Based on the current and future split of vehicles accessing the Proposal site, 19m semi-trailers, 19m truck and dogs and 25m B-doubles collectively comprise 25% of all vehicles arriving at the site (Table 4.2). Therefore, up to a quarter of site-generated traffic would need to use the alternate route.

It is estimated that the Proposal site would generate 331 two-way movements in a single day (Table 4.1). A quarter of these movements equates to approximately 83 two-way movements in one day. On average, this equates to five heavy vehicle movements per hour on Pembroke Road across a 16-hour operational day. As with the estimation in Section 3.8, this calculation conservatively considers all semi-trailers, truck and dogs and B-double trucks travelling via the alternate route.

In comparison to the existing 20,000 daily vehicle movements on Pembroke Road, an estimated 83 heavy vehicle movements which would utilise the detour would still contribute to less than 1% of all traffic along this route. This is a minor portion of traffic along the road network, and would not be expected to have an impact on Pembroke Road.

Furthermore, on an hourly basis, the Proposal site's operation would be expected to generate one additional heavy vehicle movement per hour in comparison with current operation (4 to 5 movements). An increase of one heavy vehicle movement would not cause an adverse impact on Pembroke Road given that five movements per hour, or one movement every 12 minutes, is considered to be minor and is not expected to cause interruptions to existing traffic flow.

In relation to RMS' acceptable levels of operational capacity, the current 904 vehicle movements per lane per direction in the peak hour would increase by one movement in the future (ie. 905 pcu). The maximum flows remain below RMS' operational capacity threshold of 1,000 pcu for flows on a two-way divided urban road.

Overall, the proposed alternate haul route via Pembroke Road for heavy vehicles accessing the Proposal site has been assessed as being acceptable.

5 Traffic Impact Assessment

Based on recent survey data, the Proposal site currently generates a maximum of 34 two-way vehicle movements per hour (Table 3.2). The future maximum number of two-way movements has been estimated to be 54 per hour (Table 4.1).

In the peak hour of operation at the Proposal site, it is anticipated that there would be an additional 20 two-way movements compared to existing operations. This is equivalent to an additional 10 vehicles travelling to the Proposal site.

The number of additional vehicle movements between existing and future vehicle movements are summarised in Table 5.1.

Table 5.1: Comparison of Existing and Future Vehicle Movements

Starting Hour	Existing	Future	Additional
6:00 [a]	34	54	20
7:00	19	28	9
8:00	16	24	8
9:00	18	25	7
10:00	25	34	9
11:00	7	10	3
12:00	21	30	9
13:00	21	30	9
14:00	20	28	8
15:00	10	16	6
16:00	9	12	3
17:00	5	10	5
18:00	6	10	4
19:00	*Site closed*	8	8
20:00		6	6
21:00		6	6
Total	**211**	**331**	**120**

Notes:
a Site operation peak hour

5.1 Surrounding Road Network

The Amended Proposal would result in an additional eight two-way vehicle movements (4 vehicles) during the morning road network period and five two-way vehicle movements (3 vehicles) during the afternoon road network period.

TTPP have assessed the traffic impacts of the additional traffic generated by the Amended Proposal scenario using SIDRA modelling software during the morning and afternoon peak periods under existing and future traffic conditions. The results of the SIDRA analysis are presented in Table 5.2.

Table 5.2: Existing and Future Intersection Performance Analysis

Intersection with Campbelltown Road	AM peak hour		PM peak hour	
	Average delay (s)	Level of Service (LoS)	Average delay (s)	Level of Service (LoS)
Existing Conditions				
Ben Lomond Road	51	D	38	C
Rose Payten Drive	25	B	24	B
Future Conditions				
Ben Lomond Road	52	D	38	C
Rose Payten Drive	25	B	24	B

Note: Roads and Maritime uses level of service as a performance measure to indicate the operating efficiency of a given intersection. The level of service ranges from A to F. Levels of service between A and D indicate the intersection is operating within capacity with LoS A providing exceptionally good performance to LoS D indicating satisfactory performance. LoS E and F indicate the intersection is operating at or near capacity and would require intersection improvement works to maintain reasonable performance.

The results indicate that the two major nearby intersections operate satisfactorily under existing and future conditions, having similar performance levels. At Campbelltown Road/ Ben Lomond Road, the average delay is increased by one second in the AM peak.

Overall, nearby key intersections operate at an acceptable level of service D or better under existing and future operating conditions. Therefore, the surrounding road network is expected to adequately accommodate the additional movements generated by the Amended Proposal without causing any noticeable impact.

5.2 Construction Traffic Impacts

As mentioned in Section 1.2.1, the construction period of the Proposal would be approximately four months, and is anticipated to commence in early 2018.

Operation of resource recovery activities would cease during the construction period. As such, traffic and parking impacts during the construction period would not adversely impact the local road network.

Notwithstanding this, a Construction Traffic Management Plan (CTMP) would be prepared as part of the Construction Certificate submission documentation.

The CTMP would ensure that the Project maintains appropriate controls to manage traffic in and around the project during the construction works period.

The CTMP would set out the following primary objectives:

- ensure the safety of road users and construction traffic
- ensure there is a safe interface between construction traffic and local traffic
- eliminate the risk of injury to local traffic users and construction personnel
- ensure that access to adjoining properties is maintained during construction
- minimise traffic delays and traffic issues;
- meet regulatory requirements;
- respond to any emergency repair or maintenance requirements.

The CTMP would identify the following, but not limited to:

- description of construction activities
- construction traffic generation
- construction access routes
- construction site access points
- construction staff parking
- truck access routes
- construction hours
- traffic control plan
- traffic management mitigation measures, if required.

6 Comparison of Original Proposal and Amended Proposal

TTPP prepared the Transport Impact Assessment to support the EIS (dated May 2017) for the proposed expansion of the waste transfer recycling facility located at 13 Pembury Road. The Transport Impact Assessment was based on traffic survey data recorded at the Proposal site access and nearby intersections in March 2016.

Since the submission of the EIS, the Proposal has been amended to include the following design changes pertinent to traffic and parking:

- Modification of Shed C to permit B-double trucks to exit via the western driveway,
- Two inbound weighbridges at the eastern driveway,
- Additional off-street car parking spaces, and
- Additional onsite stacking spaces for waste delivery vehicles.

A summary of the changes in future traffic, parking and stacking provisions since the EIS dated May 2017 and this Addendum Transport Impact Assessment is in Table 6.1.

Table 6.1: Comparison of Proposals in June 2016 and September 2017

Proposal site (ie. 220,000 tpa)	June 2016 (Original Proposal)	September 2017 (Amended Proposal)
Future peak hourly site-generated traffic	61 two-way movements	54 two-way movements
Proposed off-street car parking spaces	10	17
Proposed available stacking spaces	17	8
No. of required stacking spaces during peak operation	11	8
No, of vacant stacking spaces during peak operation	6	13
Access arrangement for waste delivery vehicles	Two separate two-way driveways	Single ingress driveway (eastern) and single egress driveway (western)
No. of stacking spaces between inbound weighbridge/s and Pembury Road	2	5 (including additional inbound weighbridge)

Table 6.1 shows that the operation of the Proposal site has changed since the submission of the EIS in May 2017.

The number of two-way vehicle movements associated with the Proposal site processing 220,00 tpa has reduced from 61 to 54 movements. Given the reduction in traffic movements and on-site duration (20 to 17 minutes in Table 2.1), the required number of stacking spaces has reduced from 11 stacking spaces to 8 stacking spaces.

Furthermore, provision of two inbound weighbridges would increase stacking capacity between Pembury Road and the inbound weighbridges from two stacking spaces to five stacking spaces in total (250% increase in total), including the additional inbound weighbridge.

The proposed number of on-site car spaces has increased from 10 spaces to 17 spaces. Provision of 17 car spaces is more than sufficient to accommodate all staff parking requirements on-site.

A comparison of the existing and future intersection operating conditions shows that the impact of traffic generated by the development would not result in a significant change to the existing intersection Level of Service for the intersections of Campbelltown Road with Ben Lomond Road and Rose Payten Drive.

In summary, the analysis presented within this Addendum TIA shows the Amended Proposal would operate better than originally forecasted based on traffic data collected at the Proposal site in September 2017 and with the proposed improvements in site layout, including two inbound weighbridges.

7 Summary and Conclusion

In June 2016, The Transport Planning Partnership (TTPP) prepared a Traffic Impact Assessment (TIA) for the resource recovery facility at 13 Pembury Road, Minto as part of an Environmental Impact Statement (EIS) submission to Department of Planning and Environment in May 2017. The proposal sought to raise the annual throughput of waste processed at the RRF from 30,000 tonnes to 220,000 tonnes and amend the hours of operation on Monday to Saturday between 6:00am – 10:00pm.

The findings of the original TIA concluded that the Proposal site could accommodate a waste throughput of 220,000 tpa.

TTPP has carried out a revised analysis, namely, this Addendum TIA report, which assesses the Amended Proposal. The proposal seeks to raise the current annual waste throughput of 140,000 tonnes to 220,000 tonnes and amend the hours of operation on Monday to Saturday between 6:00am – 10:00pm.

Based on the information and analysis presented in this Addendum TIA, it is concluded:

- Based on a throughput of 220,000 per annum of waste, the maximum hourly two-way traffic volume is estimated to increase from 34 movements per hour to 54 movements (27 vehicles) per hour between 6:00am and 7:00am.
- On 8 occasions in total throughout the week-long survey period, short-duration queues formed on approach to 13 Pembury Road comprising 1 vehicle only. The majority of queues (87.5%) lasted less than thirty seconds.
- Short-duration queues on Pembury Road are currently caused by operational restrictions at the primary access point to 13 Pembury Road and not by queues formed internally within the Proposal site. B-double trucks are currently not able to exit the waste transfer facility via the outbound weighbridge due to height restrictions of the outbound weighbridge infrastructure. Thus, the Proposal site's gate controller temporarily stops vehicles in Pembury Road to enable a B-double truck to exit the site.
- The Amended Proposal includes two inbound weighbridges at the eastern driveway and one outbound weighbridge at the western driveway. Provision of two inbound weighbridges would increase stacking capacity between Pembury Road and the inbound weighbridges from two stacking spaces to five stacking spaces in total including the additional inbound weighbridge. Based upon a maximum on-street queue length of one vehicle on Pembury Road during the survey period, these measures would provide sufficient capacity to eliminate queues in Pembury Road.
- Provision of two inbound weighbridges would increase the stacking capacity of the Proposal site from 17 stacking spaces to 21 stacking spaces. Based on a duration of 17 minutes, each stacking space could accommodate 3.5 vehicles

in one hour (60 minutes/ 17 minutes). Therefore, during any hour of operation across the day, the existing stacking arrangement could accommodate the turn-over of 74 vehicles.

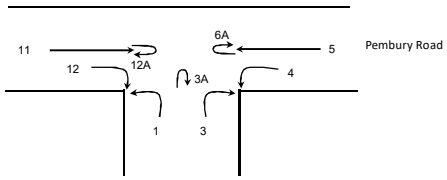
- The 27 vehicles expected to arrive during the Proposal site's peak hour could be accommodated across 8 spaces (27 vehicles/ 3.5). As a result, with 21 available stacking spaces in total, there would be 13 vacant spaces remaining. This means that queuing on Pembury Road is not anticipated.
- Pembury Road currently operates with a maximum traffic volume of 93 vehicles per hour in the westbound direction and 79 vehicles per hour in the eastbound direction. Pembury Road would continue to operate well within its operational capacity threshold set in RMS' Guidelines of 900 passenger car units (pcu) per hour, per lane with an additional 20 two-way vehicles movements.
- A comparison of the existing and future intersection operating conditions shows that the impact of traffic generated by the Proposal site would not result in a significant change to the existing Level of Services for the intersections of Campbelltown Road with Ben Lomond Road and Rose Payten Drive.
- On the proviso, the Site Operator would provide two inbound weighbridges and one outbound weighbridge, and modify the internal layout to better accommodate B-double trucks, the Amended Proposal, with an annual waste throughput of 220,000 tonnes would not adversely impact traffic in Pembury Road and the local area.

Appendix A

Traffic Survey Data – September 2017

Location: Gate 1 and 13 Pembury Road
Date: Tuesday, 19 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



Gate 1

	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	0	0	0	3	3	0	0	0	0	3	3	5	2	7	0	0	0	6	0	6	0	0	0	0	0	0	6:00 - 7:00	50
06:15	0	0	0	0	2	2	0	0	0	0	4	4	2	1	3	0	0	0	3	0	3	0	0	0	0	0	0	6:15 - 7:15	37
06:30	0	0	0	0	5	5	0	0	0	0	0	0	4	1	5	0	0	0	3	0	3	0	0	0	0	0	0	6:30 - 7:30	34
06:45	0	0	0	0	1	1	0	0	0	1	1	2	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	6:45 - 7:45	27
07:00	0	0	0	0	1	1	0	0	0	0	2	2	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7:00 - 8:00	26
07:15	0	0	0	1	1	2	0	0	0	0	1	1	3	1	4	0	0	0	2	0	2	0	0	0	0	0	0	7:15 - 8:15	26
07:30	0	0	0	1	1	2	0	0	0	0	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7:30 - 8:30	24
07:45	0	0	0	0	3	3	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	7:45 - 8:45	30
08:00	0	0	0	0	0	0	0	0	0	1	1	2	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	8:00 - 9:00	27
08:15	0	0	0	0	1	1	0	0	0	0	2	2	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	8:15 - 9:15	35
08:30	0	0	0	0	4	4	0	0	0	0	5	5	2	0	2	0	0	0	1	0	1	0	0	0	0	0	0	8:30 - 9:30	34
08:45	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8:45 - 9:45	29
09:00	0	1	1	0	3	3	0	0	0	1	3	4	2	1	3	0	0	0	2	1	3	0	0	0	0	0	0	9:00 - 10:00	34
09:15	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	0	0	0	2	1	3	0	0	0	0	0	0	9:15 - 10:15	25
09:30	0	0	0	0	1	1	0	0	0	2	1	3	1	1	2	0	0	0	1	0	1	0	0	0	0	0	0	9:30 - 10:30	24
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10:15	0	0	0	2	0	2	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2	0	0	0	0	0	0	10:15 - 11:15	11
10:30	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10:30 - 11:30	11
10:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	10:45 - 11:45	12
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13:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00 - 14:00	20
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13:30	0	0	0	0	0	0	0	0	0	1	5	6	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	13:30 - 14:30	22
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15:00	0	0	0	1	3	4	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00 - 16:00	24
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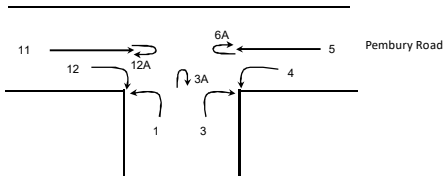
15:45	0	0	0	0	5	5	0	0	0	0	3	3	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	15:45 - 16:45	24
16:00	0	0	0	0	3	3	0	0	0	1	0	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	16:00 - 17:00	22
16:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	1	0	1	0	0	0	0	0	0	16:15 - 17:15	19
16:30	0	0	0	2	0	2	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	16:30 - 17:30	20
16:45	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	3	1	4	0	0	0	0	0	0	16:45 - 17:45	17
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	17:00 - 18:00	10
17:15	0	0	0	1	1	2	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	17:15 - 18:15	10
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	17:30 - 18:30	6
17:45	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	17:45 - 18:45	5
18:00	0	0	0	1	0	1	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	18:00 - 19:00	5
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0		
TOTAL	0	3	3	14	63	77	0	0	0	16	66	82	47	27	74	0	0	0	37	11	48	0	0	0	0	0	0		

Location: Gate 1 and 13 Pembury Road
Date: Wednesday, 20 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



Gate 1

	1			3			3A			4			5			6A			11			12			12A					
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour			Total
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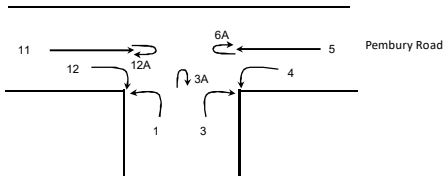
06:15	0	0	**0**	0	4	**4**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	06:15	-	07:15	17
06:30	0	0	**0**	0	4	**4**	0	0	**0**	0	3	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	06:30	-	07:30	20
06:45	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	06:45	-	07:45	18
07:00	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	07:00	-	08:00	18
07:15	0	0	**0**	0	3	**3**	0	0	**0**	1	1	**2**	1	1	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	07:15	-	08:15	20
07:30	0	0	**0**	0	2	**2**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	07:30	-	08:30	22
07:45	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	07:45	-	08:45	20
08:00	0	0	**0**	0	2	**2**	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	08:00	-	09:00	26
08:15	0	0	**0**	0	3	**3**	0	0	**0**	0	3	**3**	1	3	**4**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	08:15	-	09:15	32
08:30	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	08:30	-	09:30	30
08:45	0	0	**0**	0	0	**0**	0	0	**0**	0	9	**9**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	08:45	-	09:45	33
09:00	0	1	**1**	0	2	**2**	0	0	**0**	1	3	**4**	0	1	**1**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	09:00	-	10:00	33
09:15	0	0	**0**	0	3	**3**	0	0	**0**	1	2	**3**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	09:15	-	10:15	26
09:30	0	0	**0**	1	3	**4**	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	09:30	-	10:30	21
09:45	0	0	**0**	0	6	**6**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	09:45	-	10:45	15
10:00	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:00	-	11:00	9
10:15	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:15	-	11:15	6
10:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:30	-	11:30	9
10:45	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:45	-	11:45	15
11:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	11:00	-	12:00	16
11:15	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	1	1	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	11:15	-	12:15	21
11:30	0	0	**0**	1	3	**4**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	11:30	-	12:30	20
11:45	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	11:45	-	12:45	20
12:00	0	1	**1**	0	1	**1**	0	0	**0**	0	1	**1**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	12:00	-	13:00	18
12:15	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	12:15	-	13:15	21
12:30	0	0	**0**	0	2	**2**	0	0	**0**	0	3	**3**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	12:30	-	13:30	26
12:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	12:45	-	13:45	29
13:00	0	2	**2**	0	3	**3**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:00	-	14:00	31
13:15	0	2	**2**	0	3	**3**	0	0	**0**	0	1	**1**	4	0	**4**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:15	-	14:15	27
13:30	0	0	**0**	0	2	**2**	0	0	**0**	1	4	**5**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	13:30	-	14:30	20
13:45	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:45	-	14:45	19
14:00	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	14:00	-	15:00	23
14:15	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	14:15	-	15:15	20
14:30	0	0	**0**	0	2	**2**	0	0	**0**	1	1	**2**	2	1	**3**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	14:30	-	15:30	17
14:45	0	0	**0**	0	2	**2**	0	0	**0**	1	0	**1**	2	1	**3**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	14:45	-	15:45	11
15:00	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:00	-	16:00	9
15:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:15	-	16:15	14
15:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:30	-	16:30	17
15:45	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	2	1	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:45	-	16:45	18
16:00	0	0	**0**	0	1	**1**	0	0	**0**	1	2	**3**	1	0	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	16:00	-	17:00	15
16:15	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	16:15	-	17:15	15
16:30	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	16:30	-	17:30	15
16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	16:45	-	17:45	12
17:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	17:00	-	18:00	11
17:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	17:15	-	18:15	7
17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	17:30	-	18:30	5
17:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	17:45	-	18:45	5
18:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	18:00	-	19:00	4
18:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**				
18:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**				
18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**				
TOTAL	**0**	**7**	**7**	**4**	**75**	**79**	**0**	**0**	**0**	**10**	**60**	**70**	**34**	**35**	**69**	**0**	**0**	**0**	**10**	**4**	**14**	**0**	**0**	**0**	**0**	**0**	**0**				

Location: Gate 1 and 13 Pembury Road
Date: Thursday, 21 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

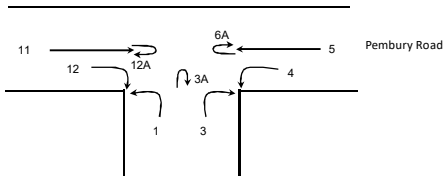


Gate 1

	1			3			3A			4			5			6A			11			12			12A					
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour			Total
06:00	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6:00	-	7:00	24
06:15	0	1	**1**	0	4	**4**	0	0	**0**	0	0	**0**	1	3	**4**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6:15	-	7:15	25
06:30	0	0	**0**	0	3	**3**	0	0	**0**	0	2	**2**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6:30	-	7:30	30
06:45	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	6:45	-	7:45	27
07:00	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	7:00	-	8:00	34
07:15	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	6	1	**7**	0	0	**0**	2	3	**5**	0	0	**0**	0	0	**0**	7:15	-	8:15	43
07:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7:30	-	8:30	38
07:45	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	6	1	**7**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	7:45	-	8:45	60
08:00	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	4	4	**8**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	8:00	-	9:00	65
08:15	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	3	1	**4**	0	0	**0**	0	3	**3**	0	0	**0**	0	0	**0**	8:15	-	9:15	67
08:30	0	0	**0**	0	3	**3**	0	0	**0**	0	2	**2**	11	2	**13**	0	0	**0**	5	2	**7**	0	0	**0**	0	0	**0**	8:30	-	9:30	78
08:45	0	0	**0**	1	1	**2**	0	0	**0**	1	1	**2**	7	2	**9**	0	0	**0**	2	2	**4**	0	0	**0**	0	0	**0**	8:45	-	9:45	68
09:00	0	0	**0**	0	3	**3**	0	0	**0**	0	4	**4**	5	3	**8**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	9:00	-	10:00	65
09:15	0	0	**0**	0	3	**3**	0	0	**0**	0	5	**5**	5	2	**7**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	9:15	-	10:15	62
09:30	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	3	0	**3**	0	0	**0**	4	4	**8**	0	0	**0**	0	0	**0**	9:30	-	10:30	62
09:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	7	1	**8**	0	0	**0**	3	2	**5**	0	0	**0**	0	0	**0**	9:45	-	10:45	64
10:00	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	4	1	**5**	0	0	**0**	5	1	**6**	0	0	**0**	0	0	**0**	10:00	-	11:00	65
10:15	0	0	**0**	0	5	**5**	0	0	**0**	0	1	**1**	7	1	**8**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	10:15	-	11:15	71
10:30	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	4	5	**9**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	10:30	-	11:30	64
10:45	0	0	**0**	0	2	**2**	0	0	**0**	0	6	**6**	1	0	**1**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	10:45	-	11:45	62
11:00	0	0	**0**	0	4	**4**	0	0	**0**	0	2	**2**	3	3	**6**	0	0	**0**	3	4	**7**	0	0	**0**	0	0	**0**	11:00	-	12:00	68
11:15	0	1	**1**	1	1	**2**	0	0	**0**	1	2	**3**	2	2	**4**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	11:15	-	12:15	65
11:30	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	6	1	**7**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	11:30	-	12:30	73
11:45	0	1	**1**	0	2	**2**	0	0	**0**	1	2	**3**	5	2	**7**	0	0	**0**	6	2	**8**	0	0	**0**	0	0	**0**	11:45	-	12:45	75
12:00	0	0	**0**	0	3	**3**	0	0	**0**	0	1	**1**	4	1	**5**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	12:00	-	13:00	73
12:15	0	0	**0**	0	2	**2**	0	0	**0**	0	2	**2**	7	1	**8**	0	0	**0**	6	3	**9**	0	0	**0**	0	0	**0**	12:15	-	13:15	72
12:30	1	0	**1**	0	1	**1**	0	0	**0**	0	1	**1**	6	0	**6**	0	0	**0**	8	0	**8**	0	0	**0**	0	0	**0**	12:30	-	13:30	67
12:45	0	0	**0**	0	2	**2**	0	0	**0**	0	4	**4**	2	3	**5**	0	0	**0**	7	1	**8**	0	0	**0**	0	0	**0**	12:45	-	13:45	71
13:00	1	0	**1**	0	0	**0**	0	0	**0**	0	2	**2**	5	2	**7**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	13:00	-	14:00	72
13:15	0	0	**0**	0	2	**2**	0	0	**0**	1	2	**3**	4	2	**6**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	13:15	-	14:15	89
13:30	0	0	**0**	0	5	**5**	0	0	**0**	0	2	**2**	7	2	**9**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	13:30	-	14:30	87
13:45	0	0	**0**	0	2	**2**	0	0	**0**	1	0	**1**	7	6	**13**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	13:45	-	14:45	85
14:00	0	0	**0**	0	2	**2**	0	0	**0**	0	3	**3**	4	1	**5**	0	0	**0**	21	1	**22**	0	0	**0**	0	0	**0**	14:00	-	15:00	91
14:15	0	1	**1**	0	0	**0**	0	0	**0**	0	2	**2**	1	4	**5**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	14:15	-	15:15	79
14:30	0	0	**0**	0	3	**3**	0	0	**0**	0	1	**1**	2	1	**3**	0	0	**0**	11	1	**12**	0	0	**0**	0	0	**0**	14:30	-	15:30	79
14:45	0	0	**0**	1	3	**4**	0	0	**0**	1	3	**4**	9	0	**9**	0	0	**0**	9	0	**9**	0	0	**0**	0	0	**0**	14:45	-	15:45	78
15:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	1	**7**	0	0	**0**	12	1	**13**	0	0	**0**	0	0	**0**	15:00	-	16:00	66
15:15	0	0	**0**	0	3	**3**	0	0	**0**	0	2	**2**	2	2	**4**	0	0	**0**	5	0	**5**	0	0	**0**	0	0	**0**	15:15	-	16:15	64
15:30	0	0	**0**	0	2	**2**	0	0	**0**	1	0	**1**	3	1	**4**	0	0	**0**	11	0	**11**	0	0	**0**	0	0	**0**	15:30	-	16:30	64
15:45	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	1	**3**	0	0	**0**	8	1	**9**	0	0	**0**	0	0	**0**	15:45	-	16:45	61
16:00	0	0	**0**	0	2	**2**	0	0	**0**	1	0	**1**	4	6	**10**	0	0	**0**	5	0	**5**	0	0	**0**	0	0	**0**	16:00	-	17:00	59
16:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	1	**4**	0	0	**0**	8	1	**9**	0	0	**0**	0	0	**0**	16:15	-	17:15	68
16:30	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	10	2	**12**	0	0	**0**	0	0	**0**	16:30	-	17:30	59
16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	2	**5**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	16:45	-	17:45	51
17:00	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	21	0	**21**	0	0	**0**	0	0	**0**	17:00	-	18:00	47
17:15	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	1	0	**1**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	17:15	-	18:15	26
17:30	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	17:30	-	18:30	25
17:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	2	2	**4**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	17:45	-	18:45	23
18:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	18:00	-	19:00	16
18:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**				
18:30	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**				
18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**				
TOTAL	**2**	**4**	**6**	**5**	**77**	**82**	**0**	**0**	**0**	**11**	**70**	**81**	**188**	**85**	**273**	**0**	**0**	**0**	**247**	**56**	**303**	**0**	**0**	**0**	**0**	**0**	**0**				

Location: Gate 1 and 13 Pembury Road
Date: Friday, 22 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

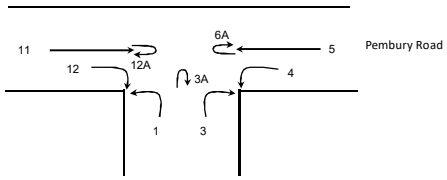


Gate 1

	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	2	2	0	0	0	0	0	0	0	2	2	8	2	10	0	0	0	3	0	3	0	0	0	0	0	0	6:00 - 7:00	69
06:15	0	0	0	0	2	2	0	0	0	0	1	1	3	2	5	0	0	0	3	5	8	0	0	0	0	0	0	6:15 - 7:15	62
06:30	0	0	0	0	0	0	0	0	0	1	0	1	2	1	3	0	0	0	1	10	11	0	0	0	0	0	0	6:30 - 7:30	65
06:45	0	0	0	0	3	3	0	0	0	0	4	4	7	2	9	0	0	0	2	3	5	0	0	0	0	0	0	6:45 - 7:45	57
07:00	0	1	1	0	1	1	0	0	0	0	2	2	1	0	1	0	0	0	2	3	5	0	0	0	0	0	0	7:00 - 8:00	46
07:15	0	0	0	0	4	4	0	0	0	0	3	3	6	2	8	0	0	0	4	0	4	0	0	0	0	0	0	7:15 - 8:15	49
07:30	0	0	0	0	2	2	0	0	0	0	0	0	2	1	3	0	0	0	0	2	2	0	0	0	0	0	0	7:30 - 8:30	41
07:45	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0	2	1	3	0	0	0	0	0	0	7:45 - 8:45	57
08:00	0	0	0	0	0	0	0	0	0	0	2	2	6	0	6	0	0	0	4	1	5	0	0	0	0	0	0	8:00 - 9:00	62
08:15	0	0	0	0	2	2	0	0	0	0	1	1	5	1	6	0	0	0	2	0	2	0	0	0	0	0	0	8:15 - 9:15	65
08:30	0	0	0	0	0	0	0	0	0	1	2	3	11	2	13	0	0	0	4	3	7	0	0	0	0	0	0	8:30 - 9:30	67
08:45	0	1	1	0	1	1	0	0	0	1	0	1	6	2	8	0	0	0	3	1	4	0	0	0	0	0	0	8:45 - 9:45	72
09:00	0	0	0	2	1	3	0	0	0	0	1	1	7	2	9	0	0	0	3	0	3	0	0	0	0	0	0	9:00 - 10:00	77
09:15	0	1	1	0	1	1	0	0	0	0	1	1	2	4	6	0	0	0	2	2	4	0	0	0	0	0	0	9:15 - 10:15	79
09:30	0	0	0	0	1	1	0	0	0	0	1	1	7	6	13	0	0	0	6	7	13	0	0	0	0	0	0	9:30 - 10:30	76
09:45	0	0	0	0	2	2	0	0	0	0	1	1	10	2	12	0	0	0	4	1	5	0	0	0	0	0	0	9:45 - 10:45	69
10:00	0	0	0	0	2	2	0	0	0	1	2	3	3	3	6	0	0	0	2	5	7	0	0	0	0	0	0	10:00 - 11:00	67
10:15	0	1	1	0	1	1	0	0	0	1	1	2	0	2	2	0	0	0	4	0	4	0	0	0	0	0	0	10:15 - 11:15	55
10:30	0	0	0	0	2	2	0	0	0	0	0	0	5	3	8	0	0	0	7	4	11	0	0	0	0	0	0	10:30 - 11:30	58
10:45	0	0	0	1	0	1	0	0	0	0	1	1	6	0	6	0	0	0	6	4	10	0	0	0	0	0	0	10:45 - 11:45	53
11:00	0	0	0	0	1	1	0	0	0	0	1	1	1	2	3	0	0	0	0	1	1	0	0	0	0	0	0	11:00 - 12:00	61
11:15	0	0	0	0	2	2	0	0	0	0	1	1	2	4	6	0	0	0	3	1	4	0	0	0	0	0	0	11:15 - 12:15	79
11:30	0	0	0	0	2	2	0	0	0	0	2	2	2	2	4	0	0	0	7	1	8	0	0	0	0	0	0	11:30 - 12:30	78
11:45	0	0	0	0	1	1	0	0	0	0	1	1	4	7	11	0	0	0	7	6	13	0	0	0	0	0	0	11:45 - 12:45	75
12:00	0	0	0	0	1	1	0	0	0	0	1	1	10	1	11	0	0	0	10	1	11	0	0	0	0	0	0	12:00 - 13:00	59
12:15	0	0	0	0	3	3	0	0	0	0	1	1	4	1	5	0	0	0	3	0	3	0	0	0	0	0	0	12:15 - 13:15	52
12:30	0	0	0	0	2	2	0	0	0	1	0	1	2	2	4	0	0	0	4	2	6	0	0	0	0	0	0	12:30 - 13:30	55
12:45	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0	12:45 - 13:45	67
13:00	0	1	1	1	2	3	0	0	0	2	3	5	3	4	7	0	0	0	1	0	1	0	0	0	0	0	0	13:00 - 14:00	75
13:15	0	0	0	0	0	0	0	0	0	0	2	2	2	2	4	0	0	0	6	3	9	0	0	0	0	0	0	13:15 - 14:15	91
13:30	0	0	0	0	2	2	0	0	0	1	2	3	6	2	8	0	0	0	10	2	12	0	0	0	0	0	0	13:30 - 14:30	88
13:45	0	1	1	0	1	1	0	0	0	0	0	0	8	3	11	0	0	0	4	1	5	0	0	0	0	0	0	13:45 - 14:45	82
14:00	0	0	0	0	1	1	0	0	0	0	0	0	4	2	6	0	0	0	24	2	26	0	0	0	0	0	0	14:00 - 15:00	81
14:15	0	0	0	0	0	0	0	0	0	0	2	2	4	1	5	0	0	0	5	0	5	0	0	0	0	0	0	14:15 - 15:15	69
14:30	0	0	0	0	2	2	0	0	0	0	1	1	4	2	6	0	0	0	9	1	10	0	0	0	0	0	0	14:30 - 15:30	76
14:45	0	0	0	0	0	0	0	0	0	0	2	2	5	2	7	0	0	0	8	0	8	0	0	0	0	0	0	14:45 - 15:45	73
15:00	0	0	0	0	1	1	0	0	0	0	4	4	4	1	5	0	0	0	10	1	11	0	0	0	0	0	0	15:00 - 16:00	71
15:15	0	0	0	0	1	1	0	0	0	0	2	2	6	2	8	0	0	0	6	2	8	0	0	0	0	0	0	15:15 - 16:15	62
15:30	0	0	0	0	5	5	0	0	0	0	2	2	1	0	1	0	0	0	8	0	8	0	0	0	0	0	0	15:30 - 16:30	55
15:45	0	0	0	0	3	3	0	0	0	0	1	1	3	2	5	0	0	0	5	1	6	0	0	0	0	0	0	15:45 - 16:45	55
16:00	0	0	0	0	0	0	0	0	0	1	0	1	2	2	4	0	0	0	6	1	7	0	0	0	0	0	0	16:00 - 17:00	48
16:15	0	0	0	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0	8	1	9	0	0	0	0	0	0	16:15 - 17:15	52
16:30	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0	0	0	13	0	13	0	0	0	0	0	0	16:30 - 17:30	49
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	7	0	7	0	0	0	0	0	0	16:45 - 17:45	46
17:00	0	0	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	9	1	10	0	0	0	0	0	0	17:00 - 18:00	44
17:15	0	0	0	0	0	0	0	0	0	1	0	1	2	5	7	0	0	0	1	0	1	0	0	0	0	0	0	17:15 - 18:15	41
17:30	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	5	0	5	0	0	0	0	0	0	17:30 - 18:30	36
17:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	4	0	4	0	0	0	0	0	0	17:45 - 18:45	24
18:00	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	9	1	10	0	0	0	0	0	0	18:00 - 19:00	23
18:15	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0		
18:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0		
18:45	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	3	0	3	0	0	0	0	0	0		
TOTAL	0	8	8	4	58	62	0	0	0	12	53	65	200	96	296	0	0	0	270	82	352	0	0	0	0	0	0		

Location: Gate 1 and 13 Pembury Road
Date: Saturday, 23 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

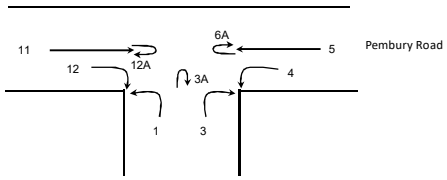


Gate 1

	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0	0	0	1	0	1	0	0	0	0	0	0	6:00 - 7:00	35
06:15	0	0	0	3	1	4	0	0	0	2	0	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6:15 - 7:15	38
06:30	0	0	0	1	0	1	0	0	0	3	1	4	0	4	4	0	0	0	0	1	1	0	0	0	0	0	0	6:30 - 7:30	38
06:45	0	0	0	1	1	2	0	0	0	0	4	4	1	3	4	0	0	0	1	2	3	0	0	0	0	0	0	6:45 - 7:45	37
07:00	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0	0	0	0	4	4	0	0	0	0	0	0	7:00 - 8:00	29
07:15	0	0	0	1	3	4	0	0	0	0	1	1	1	1	2	0	0	0	0	1	1	0	0	0	0	0	0	7:15 - 8:15	31
07:30	0	1	1	0	3	3	0	0	0	0	0	0	0	1	1	0	0	0	2	2	4	0	0	0	0	0	0	7:30 - 8:30	26
07:45	0	0	0	0	1	1	0	0	0	0	1	1	1	1	2	0	0	0	0	1	1	0	0	0	0	0	0	7:45 - 8:45	20
08:00	0	1	1	2	2	4	0	0	0	1	1	2	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	8:00 - 9:00	22
08:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	8:15 - 9:15	19
08:30	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	8:30 - 9:30	27
08:45	0	0	0	1	4	5	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	8:45 - 9:45	31
09:00	0	1	1	1	0	1	0	0	0	0	3	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	9:00 - 10:00	34
09:15	0	0	0	1	0	1	0	0	0	0	1	1	5	0	5	0	0	0	3	1	4	0	0	0	0	0	0	9:15 - 10:15	35
09:30	0	0	0	3	1	4	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	9:30 - 10:30	32
09:45	0	0	0	1	0	1	0	0	0	1	3	4	3	0	3	0	0	0	2	0	2	0	0	0	0	0	0	9:45 - 10:45	29
10:00	0	0	0	1	1	2	0	0	0	0	0	0	2	0	2	0	0	0	2	1	3	0	0	0	0	0	0	10:00 - 11:00	24
10:15	0	0	0	2	0	2	0	0	0	0	1	1	1	1	2	0	0	0	2	1	3	0	0	0	0	0	0	10:15 - 11:15	34
10:30	0	0	0	0	0	0	0	0	0	1	2	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	10:30 - 11:30	38
10:45	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	10:45 - 11:45	47
11:00	0	0	0	0	3	3	0	0	0	0	1	1	5	0	5	0	0	0	8	0	8	0	0	0	0	0	0	11:00 - 12:00	53
11:15	0	0	0	2	2	4	0	0	0	3	0	3	1	0	1	0	0	0	3	1	4	0	0	0	0	0	0	11:15 - 12:15	55
11:30	1	0	1	1	1	2	0	0	0	2	0	2	4	0	4	0	0	0	3	1	4	0	0	0	0	0	0	11:30 - 12:30	52
11:45	0	0	0	3	1	4	0	0	0	1	3	4	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	11:45 - 12:45	44
12:00	1	0	1	1	4	5	0	0	0	0	1	1	3	0	3	0	0	0	8	1	9	0	0	0	0	0	0	12:00 - 13:00	40
12:15	0	0	0	3	0	3	0	0	0	0	2	2	0	2	2	0	0	0	2	0	2	0	0	0	0	0	0	12:15 - 13:15	27
12:30	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	12:30 - 13:30	28
12:45	0	0	0	0	0	0	0	0	0	1	2	3	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	12:45 - 13:45	33
13:00	0	0	0	2	1	3	0	0	0	0	1	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	13:00 - 14:00	34
13:15	0	0	0	1	0	1	0	0	0	1	1	2	2	1	3	0	0	0	3	1	4	0	0	0	0	0	0	13:15 - 14:15	32
13:30	0	0	0	0	0	0	0	0	0	1	0	1	3	0	3	0	0	0	5	1	6	0	0	0	0	0	0	13:30 - 14:30	27
13:45	0	0	0	0	0	0	0	0	0	2	2	4	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	13:45 - 14:45	24
14:00	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	14:00 - 15:00	19
14:15	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	14:15 - 15:15	21
14:30	0	0	0	0	0	0	0	0	0	1	2	3	3	0	3	0	0	0	1	0	1	0	0	0	0	0	0	14:30 - 15:30	21
14:45	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	14:45 - 15:45	15
15:00	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	15:00 - 16:00	16
15:15	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	15:15 - 16:15	12
15:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30 - 16:30	10
15:45	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	15:45 - 16:45	10
16:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	16:00 - 17:00	6
16:15	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:15 - 17:15	7
16:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:30 - 17:30	5
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:45 - 17:45	10
17:00	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	17:00 - 18:00	10
17:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:15 - 18:15	8
17:30	0	0	0	2	0	2	0	0	0	0	1	1	0	2	2	0	0	0	1	0	1	0	0	0	0	0	0	17:30 - 18:30	11
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:45 - 18:45	6
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	18:00 - 19:00	6
18:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0		
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0		
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	2	3	5	33	29	62	0	0	0	31	47	78	57	22	79	0	0	0	78	26	104	0	0	0	0	0	0		

Location: Gate 1 and 13 Pembury Road
Date: Monday, 25 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

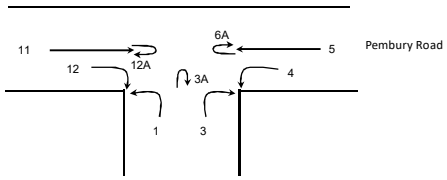


Gate 1

	1			3			3A			4			5			6A			11			12			12A					
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour			Total
06:00	0	0	**0**	0	2	**2**	0	0	**0**	1	5	**6**	6	2	**8**	0	0	**0**	1	3	**4**	0	1	**1**	0	0	**0**	6:00	-	7:00	71
06:15	0	0	**0**	0	3	**3**	0	0	**0**	2	3	**5**	2	1	**3**	0	0	**0**	0	4	**4**	0	0	**0**	0	0	**0**	6:15	-	7:15	66
06:30	0	1	**1**	0	4	**4**	0	0	**0**	0	2	**2**	1	2	**3**	0	0	**0**	3	4	**7**	0	0	**0**	0	0	**0**	6:30	-	7:30	63
06:45	0	1	**1**	0	3	**3**	0	0	**0**	0	1	**1**	4	1	**5**	0	0	**0**	1	7	**8**	0	0	**0**	0	0	**0**	6:45	-	7:45	61
07:00	0	0	**0**	0	0	**0**	0	0	**0**	2	3	**5**	5	1	**6**	0	0	**0**	2	3	**5**	0	1	**0**	0	0	**0**	7:00	-	8:00	58
07:15	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	3	1	**4**	0	0	**0**	0	5	**5**	0	0	**0**	0	0	**0**	7:15	-	8:15	51
07:30	0	1	**1**	0	2	**2**	0	0	**0**	0	1	**1**	1	2	**3**	0	0	**0**	4	4	**8**	0	0	**0**	0	0	**0**	7:30	-	8:30	51
07:45	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	4	1	**5**	0	0	**0**	2	6	**8**	0	0	**0**	0	0	**0**	7:45	-	8:45	47
08:00	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	2	3	**5**	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	8:00	-	9:00	45
08:15	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	6	2	**8**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	8:15	-	9:15	55
08:30	0	0	**0**	1	2	**3**	0	0	**0**	1	1	**2**	3	0	**3**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	8:30	-	9:30	60
08:45	0	0	**0**	0	1	**1**	0	0	**0**	2	1	**3**	7	0	**7**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	8:45	-	9:45	69
09:00	0	0	**0**	1	3	**4**	0	0	**0**	1	1	**2**	8	1	**9**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	9:00	-	10:00	80
09:15	0	0	**0**	2	2	**4**	0	0	**0**	0	1	**1**	4	1	**5**	0	0	**0**	2	5	**7**	0	0	**0**	0	0	**0**	9:15	-	10:15	81
09:30	0	0	**0**	0	1	**1**	0	0	**0**	2	0	**2**	6	4	**10**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	9:30	-	10:30	75
09:45	0	0	**0**	0	1	**1**	0	0	**0**	1	2	**3**	9	3	**12**	0	0	**0**	4	4	**8**	0	0	**0**	0	0	**0**	9:45	-	10:45	69
10:00	0	0	**0**	1	2	**3**	0	0	**0**	0	1	**1**	6	4	**10**	0	0	**0**	2	4	**6**	0	0	**0**	0	0	**0**	10:00	-	11:00	60
10:15	0	0	**0**	0	2	**2**	0	0	**0**	2	2	**4**	2	1	**3**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	10:15	-	11:15	53
10:30	0	0	**0**	0	1	**1**	0	0	**0**	1	2	**3**	7	0	**7**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	10:30	-	11:30	53
10:45	0	0	**0**	2	1	**3**	0	0	**0**	0	1	**1**	4	0	**4**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	10:45	-	11:45	54
11:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	3	**6**	0	0	**0**	2	5	**7**	0	0	**0**	0	0	**0**	11:00	-	12:00	60
11:15	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	2	4	**6**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	11:15	-	12:15	59
11:30	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	3	3	**6**	0	0	**0**	3	4	**7**	0	0	**0**	0	0	**0**	11:30	-	12:30	67
11:45	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	6	2	**8**	0	0	**0**	8	3	**11**	0	0	**0**	0	0	**0**	11:45	-	12:45	69
12:00	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	2	2	**4**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	12:00	-	13:00	61
12:15	0	0	**0**	0	1	**1**	0	0	**0**	3	0	**3**	5	3	**8**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	12:15	-	13:15	65
12:30	0	0	**0**	1	1	**2**	0	0	**0**	3	3	**6**	1	4	**5**	0	0	**0**	2	2	**4**	0	0	**0**	0	0	**0**	12:30	-	13:30	71
12:45	0	0	**0**	1	2	**3**	0	0	**0**	0	1	**1**	1	2	**3**	0	0	**0**	5	1	**6**	0	0	**0**	0	0	**0**	12:45	-	13:45	65
13:00	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	4	3	**7**	0	0	**0**	5	2	**7**	0	0	**0**	0	0	**0**	13:00	-	14:00	71
13:15	0	1	**1**	2	1	**3**	0	0	**0**	4	0	**4**	4	3	**7**	0	0	**0**	5	5	**10**	0	0	**0**	0	0	**0**	13:15	-	14:15	72
13:30	0	1	**1**	1	1	**2**	0	0	**0**	0	1	**1**	2	1	**3**	0	0	**0**	1	3	**4**	0	0	**0**	0	0	**0**	13:30	-	14:30	57
13:45	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	2	2	**4**	0	0	**0**	9	2	**11**	0	0	**0**	0	0	**0**	13:45	-	14:45	69
14:00	0	1	**1**	0	0	**0**	0	0	**0**	1	1	**2**	5	4	**9**	0	0	**0**	3	2	**5**	0	0	**0**	0	0	**0**	14:00	-	15:00	71
14:15	0	0	**0**	1	1	**2**	0	0	**0**	0	2	**2**	2	2	**4**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	14:15	-	15:15	79
14:30	0	1	**1**	2	1	**3**	0	0	**0**	3	1	**4**	7	2	**9**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	14:30	-	15:30	87
14:45	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	7	4	**11**	0	0	**0**	6	2	**8**	0	0	**0**	0	0	**0**	14:45	-	15:45	75
15:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	1	**5**	0	0	**0**	19	0	**19**	0	0	**0**	0	0	**0**	15:00	-	16:00	70
15:15	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	3	3	**6**	0	0	**0**	10	0	**10**	0	0	**0**	0	0	**0**	15:15	-	16:15	61
15:30	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	2	3	**5**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	15:30	-	16:30	53
15:45	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	5	3	**8**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	15:45	-	16:45	54
16:00	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	3	1	**4**	0	0	**0**	9	1	**10**	0	0	**0**	0	0	**0**	16:00	-	17:00	50
16:15	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	3	2	**5**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	16:15	-	17:15	53
16:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	2	**3**	0	0	**0**	6	2	**8**	0	0	**0**	0	0	**0**	16:30	-	17:30	56
16:45	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	1	3	**4**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	16:45	-	17:45	60
17:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	1	**7**	0	0	**0**	11	1	**12**	0	0	**0**	0	0	**0**	17:00	-	18:00	61
17:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	3	3	**6**	0	0	**0**	5	1	**6**	0	0	**0**	0	0	**0**	17:15	-	18:15	60
17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	0	0	**0**	12	0	**12**	0	0	**0**	0	0	**0**	17:30	-	18:30	64
17:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	1	**3**	0	0	**0**	9	0	**9**	0	0	**0**	0	0	**0**	17:45	-	18:45	56
18:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	15	0	**15**	0	0	**0**	0	0	**0**	18:00	-	19:00	49
18:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	4	1	**5**	0	0	**0**	11	0	**11**	0	0	**0**	0	0	**0**				
18:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	3	1	**4**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**				
18:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	2	**3**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**				
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**				

Location: Gate 1 and 13 Pembury Road
Date: Tuesday, 19 September 2017
Survey Period : 6am - 7pm
Client: TPP

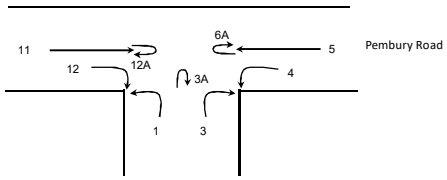
Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	5	0	**5**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	6:00 - 7:00	**30**
06:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	6:15 - 7:15	**20**
06:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	6:30 - 7:30	**20**
06:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	6:45 - 7:45	**13**
07:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7:00 - 8:00	**12**
07:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	1	**4**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	7:15 - 8:15	**15**
07:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7:30 - 8:30	**13**
07:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	7:45 - 8:45	**15**
08:00	0	0	**0**	1	0	**1**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	8:00 - 9:00	**14**
08:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	8:15 - 9:15	**14**
08:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	8:30 - 9:30	**14**
08:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	8:45 - 9:45	**14**
09:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	9:00 - 10:00	**14**
09:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	9:15 - 10:15	**9**
09:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	9:30 - 10:30	**8**
09:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	9:45 - 10:45	**5**
10:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:00 - 11:00	**5**
10:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	10:15 - 11:15	**4**
10:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:30 - 11:30	**3**
10:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10:45 - 11:45	**5**
11:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	11:00 - 12:00	**5**
11:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	11:15 - 12:15	**8**
11:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	11:30 - 12:30	**8**
11:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	11:45 - 12:45	**7**
12:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	12:00 - 13:00	**6**
12:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	12:15 - 13:15	**3**
12:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	12:30 - 13:30	**1**
12:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	12:45 - 13:45	**2**
13:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:00 - 14:00	**3**
13:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:15 - 14:15	**3**
13:30	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:30 - 14:30	**5**
13:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	13:45 - 14:45	**5**
14:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	14:00 - 15:00	**5**
14:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	14:15 - 15:15	**5**
14:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	14:30 - 15:30	**3**
14:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	14:45 - 15:45	**2**
15:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:00 - 16:00	**6**
15:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:15 - 16:15	**8**
15:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15:30 - 16:30	**11**
15:45	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	1	1	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	15:45 - 16:45	**12**
16:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	16:00 - 17:00	**16**
16:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	16:15 - 17:15	**17**
16:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	16:30 - 17:30	**16**
16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	16:45 - 17:45	**15**
17:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	17:00 - 18:00	**7**
17:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	17:15 - 18:15	**5**
17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	17:30 - 18:30	**3**
17:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	17:45 - 18:45	**2**
18:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	18:00 - 19:00	**3**
18:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
18:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**		
TOTAL	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**6**	**15**	**21**	**41**	**12**	**53**	**0**	**0**	**0**	**39**	**11**	**50**	**0**	**0**	**0**	**0**	**0**	**0**		

Location: Gate 1 and 13 Pembury Road
Date: Wednesday, 20 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

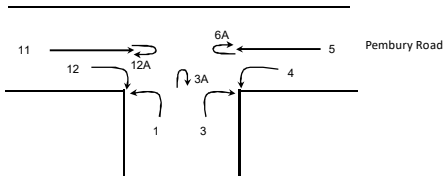


Gate 2

	1			3			3A			4			5			6A			11			12			12A				
TIME START	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Hour**	**Total**
06:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**6:00 - 7:00**	**5**
06:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**6:15 - 7:15**	**1**
06:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**6:30 - 7:30**	**3**
06:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**6:45 - 7:45**	**4**
07:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**7:00 - 8:00**	**5**
07:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**7:15 - 8:15**	**5**
07:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**7:30 - 8:30**	**6**
07:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**7:45 - 8:45**	**6**
08:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**8:00 - 9:00**	**5**
08:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**8:15 - 9:15**	**8**
08:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**8:30 - 9:30**	**8**
08:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**8:45 - 9:45**	**7**
09:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**9:00 - 10:00**	**9**
09:15	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**9:15 - 10:15**	**7**
09:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**9:30 - 10:30**	**6**
09:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	**9:45 - 10:45**	**6**
10:00	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**10:00 - 11:00**	**4**
10:15	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**10:15 - 11:15**	**3**
10:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**10:30 - 11:30**	**3**
10:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**10:45 - 11:45**	**4**
11:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**11:00 - 12:00**	**5**
11:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**11:15 - 12:15**	**7**
11:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	**11:30 - 12:30**	**6**
11:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**11:45 - 12:45**	**6**
12:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**12:00 - 13:00**	**6**
12:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**12:15 - 13:15**	**7**
12:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**12:30 - 13:30**	**15**
12:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**12:45 - 13:45**	**16**
13:00	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**13:00 - 14:00**	**16**
13:15	0	0	**0**	3	0	**3**	0	0	**0**	4	0	**4**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	**13:15 - 14:15**	**15**
13:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**13:30 - 14:30**	**7**
13:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**13:45 - 14:45**	**9**
14:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**14:00 - 15:00**	**13**
14:15	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**14:15 - 15:15**	**13**
14:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**14:30 - 15:30**	**11**
14:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**14:45 - 15:45**	**8**
15:00	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	**15:00 - 16:00**	**6**
15:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**15:15 - 16:15**	**6**
15:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**15:30 - 16:30**	**7**
15:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**15:45 - 16:45**	**8**
16:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	**16:00 - 17:00**	**8**
16:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**16:15 - 17:15**	**12**
16:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**16:30 - 17:30**	**14**
16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**16:45 - 17:45**	**12**
17:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**17:00 - 18:00**	**11**
17:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**17:15 - 18:15**	**7**
17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**17:30 - 18:30**	**5**
17:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**17:45 - 18:45**	**5**
18:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	**18:00 - 19:00**	**4**
18:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
18:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
TOTAL	**0**	**0**	**0**	**5**	**2**	**7**	**0**	**0**	**0**	**7**	**15**	**22**	**27**	**20**	**47**	**0**	**0**	**0**	**15**	**6**	**21**	**0**	**0**	**0**	**0**	**0**	**0**		

Location: Gate 1 and 13 Pembury Road
Date: Thursday, 21 September 2017
Survey Period : 6am - 7pm
Client: TPP

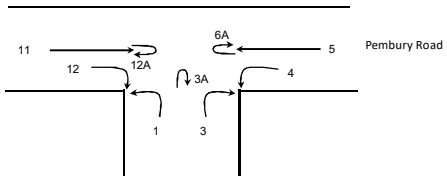
Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6:00 - 7:00	**11**
06:15	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6:15 - 7:15	**12**
06:30	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	6:30 - 7:30	**26**
06:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	6:45 - 7:45	**25**
07:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	7:00 - 8:00	**33**
07:15	0	0	**0**	3	0	**3**	0	0	**0**	2	0	**2**	4	1	**5**	0	0	**0**	5	3	**8**	0	0	**0**	0	0	**0**	7:15 - 8:15	**41**
07:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7:30 - 8:30	**30**
07:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	1	**7**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	7:45 - 8:45	**48**
08:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	4	**8**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	8:00 - 9:00	**51**
08:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	0	**3**	0	0	**0**	0	3	**3**	0	0	**0**	0	0	**0**	8:15 - 9:15	**49**
08:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	10	2	**12**	0	0	**0**	5	2	**7**	0	0	**0**	0	0	**0**	8:30 - 9:30	**54**
08:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	2	**9**	0	0	**0**	2	2	**4**	0	0	**0**	0	0	**0**	8:45 - 9:45	**47**
09:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	3	**8**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	9:00 - 10:00	**49**
09:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	2	**7**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	9:15 - 10:15	**53**
09:30	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	5	4	**9**	0	0	**0**	0	0	**0**	9:30 - 10:30	**57**
09:45	0	0	**0**	0	1	**1**	0	0	**0**	2	0	**2**	5	1	**6**	0	0	**0**	3	3	**6**	0	0	**0**	0	0	**0**	9:45 - 10:45	**60**
10:00	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	10:00 - 11:00	**52**
10:15	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	7	1	**8**	0	0	**0**	5	2	**7**	0	0	**0**	0	0	**0**	10:15 - 11:15	**52**
10:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	4	**8**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	10:30 - 11:30	**43**
10:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	10:45 - 11:45	**40**
11:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	2	**5**	0	0	**0**	3	4	**7**	0	0	**0**	0	0	**0**	11:00 - 12:00	**48**
11:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	1	**3**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	11:15 - 12:15	**47**
11:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	1	**7**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	11:30 - 12:30	**59**
11:45	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	5	0	**5**	0	0	**0**	6	2	**8**	0	0	**0**	0	0	**0**	11:45 - 12:45	**60**
12:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	12:00 - 13:00	**58**
12:15	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	6	1	**7**	0	0	**0**	7	3	**10**	0	0	**0**	0	0	**0**	12:15 - 13:15	**58**
12:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	5	0	**5**	0	0	**0**	8	0	**8**	0	0	**0**	0	0	**0**	12:30 - 13:30	**50**
12:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	3	**5**	0	0	**0**	7	1	**8**	0	0	**0**	0	0	**0**	12:45 - 13:45	**50**
13:00	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	5	0	**5**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	13:00 - 14:00	**54**
13:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	2	**6**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	13:15 - 14:15	**69**
13:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	2	**9**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	13:30 - 14:30	**69**
13:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	6	**13**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	13:45 - 14:45	**74**
14:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	21	1	**22**	0	0	**0**	0	0	**0**	14:00 - 15:00	**75**
14:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	3	**4**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	14:15 - 15:15	**70**
14:30	0	0	**0**	2	0	**2**	0	0	**0**	1	0	**1**	1	1	**2**	0	0	**0**	13	1	**14**	0	0	**0**	0	0	**0**	14:30 - 15:30	**68**
14:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	9	0	**9**	0	0	**0**	9	0	**9**	0	0	**0**	0	0	**0**	14:45 - 15:45	**64**
15:00	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	5	1	**6**	0	0	**0**	13	1	**14**	0	0	**0**	0	0	**0**	15:00 - 16:00	**58**
15:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	0	0	**0**	5	0	**5**	0	0	**0**	0	0	**0**	15:15 - 16:15	**51**
15:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	1	**4**	0	0	**0**	11	0	**11**	0	0	**0**	0	0	**0**	15:30 - 16:30	**55**
15:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	8	1	**9**	0	0	**0**	0	0	**0**	15:45 - 16:45	**54**
16:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	6	**10**	0	0	**0**	5	0	**5**	0	0	**0**	0	0	**0**	16:00 - 17:00	**54**
16:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	1	**4**	0	0	**0**	8	1	**9**	0	0	**0**	0	0	**0**	16:15 - 17:15	**65**
16:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	10	2	**12**	0	0	**0**	0	0	**0**	16:30 - 17:30	**55**
16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	2	**5**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	16:45 - 17:45	**47**
17:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	21	0	**21**	0	0	**0**	0	0	**0**	17:00 - 18:00	**42**
17:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	17:15 - 18:15	**22**
17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	17:30 - 18:30	**23**
17:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	17:45 - 18:45	**21**
18:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	4	1	**5**	0	0	**0**	0	0	**0**	18:00 - 19:00	**15**
18:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**		
18:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**		
18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
TOTAL	**0**	**0**	**0**	**10**	**2**	**12**	**0**	**0**	**0**	**11**	**16**	**27**	**177**	**69**	**246**	**0**	**0**	**0**	**257**	**58**	**315**	**0**	**0**	**0**	**0**	**0**	**0**		

Location: Gate 1 and 13 Pembury Road
Date: Friday, 22 September 2017
Survey Period : 6am - 7pm
Client: TPP

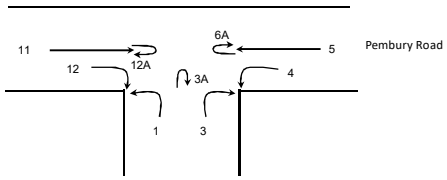
Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	0	0	0	0	0	0	0	0	0	2	2	8	0	8	0	0	0	3	0	3	0	0	0	0	0	0	6:00 - 7:00	54
06:15	0	0	0	0	0	0	0	0	0	0	1	1	3	1	4	0	0	0	3	5	8	0	0	0	0	0	0	6:15 - 7:15	48
06:30	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	1	10	11	0	0	0	0	0	0	6:30 - 7:30	47
06:45	0	0	0	0	0	0	0	0	0	1	2	3	6	0	6	0	0	0	2	3	5	0	0	0	0	0	0	6:45 - 7:45	38
07:00	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	2	3	5	0	0	0	0	0	0	7:00 - 8:00	34
07:15	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	4	0	4	0	0	0	0	0	0	7:15 - 8:15	38
07:30	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	2	2	0	0	0	0	0	0	7:30 - 8:30	34
07:45	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0	2	1	3	0	0	0	0	0	0	7:45 - 8:45	49
08:00	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	4	1	5	0	0	0	0	0	0	8:00 - 9:00	51
08:15	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	2	0	2	0	0	0	0	0	0	8:15 - 9:15	52
08:30	0	0	0	0	0	0	0	0	0	0	0	0	11	2	13	0	0	0	4	3	7	0	0	0	0	0	0	8:30 - 9:30	56
08:45	0	0	0	0	0	0	0	0	0	1	2	3	5	0	5	0	0	0	3	1	4	0	0	0	0	0	0	8:45 - 9:45	62
09:00	0	0	0	0	0	0	0	0	0	1	0	1	6	2	8	0	0	0	3	0	3	0	0	0	0	0	0	9:00 - 10:00	69
09:15	0	0	0	1	0	1	0	0	0	0	2	2	2	2	4	0	0	0	3	2	5	0	0	0	0	0	0	9:15 - 10:15	70
09:30	0	0	0	0	0	0	0	0	0	0	0	0	7	6	13	0	0	0	6	7	13	0	0	0	0	0	0	9:30 - 10:30	65
09:45	0	0	0	1	0	1	0	0	0	1	1	2	9	1	10	0	0	0	5	1	6	0	0	0	0	0	0	9:45 - 10:45	58
10:00	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6	0	0	0	2	5	7	0	0	0	0	0	0	10:00 - 11:00	56
10:15	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2	0	0	0	4	0	4	0	0	0	0	0	0	10:15 - 11:15	47
10:30	0	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	7	4	11	0	0	0	0	0	0	10:30 - 11:30	50
10:45	0	0	0	0	0	0	0	0	0	0	1	1	6	0	6	0	0	0	6	4	10	0	0	0	0	0	0	10:45 - 11:45	43
11:00	0	0	0	0	0	0	0	0	0	1	1	2	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	11:00 - 12:00	50
11:15	0	0	0	0	0	0	0	0	0	0	1	1	2	3	5	0	0	0	3	1	4	0	0	0	0	0	0	11:15 - 12:15	68
11:30	0	0	0	0	0	0	0	0	0	1	0	1	1	2	3	0	0	0	7	1	8	0	0	0	0	0	0	11:30 - 12:30	66
11:45	0	0	0	0	0	0	0	0	0	0	2	2	4	5	9	0	0	0	7	6	13	0	0	0	0	0	0	11:45 - 12:45	64
12:00	0	0	0	0	0	0	0	0	0	0	0	0	10	1	11	0	0	0	10	1	11	0	0	0	0	0	0	12:00 - 13:00	49
12:15	0	0	0	0	0	0	0	0	0	0	1	1	4	0	4	0	0	0	3	0	3	0	0	0	0	0	0	12:15 - 13:15	35
12:30	0	0	0	0	0	0	0	0	0	0	1	1	2	1	3	0	0	0	4	2	6	0	0	0	0	0	0	12:30 - 13:30	42
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0	12:45 - 13:45	54
13:00	0	0	0	0	0	0	0	0	0	1	2	3	2	2	4	0	0	0	1	0	1	0	0	0	0	0	0	13:00 - 14:00	61
13:15	0	0	0	0	1	1	0	0	0	0	0	0	2	2	4	0	0	0	6	4	10	0	0	0	0	0	0	13:15 - 14:15	85
13:30	0	0	0	0	1	1	0	0	0	0	1	1	6	1	7	0	0	0	10	3	13	0	0	0	0	0	0	13:30 - 14:30	80
13:45	0	0	0	0	0	0	0	0	0	1	1	2	7	2	9	0	0	0	4	1	5	0	0	0	0	0	0	13:45 - 14:45	74
14:00	0	0	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	24	2	26	0	0	0	0	0	0	14:00 - 15:00	73
14:15	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	5	0	5	0	0	0	0	0	0	14:15 - 15:15	57
14:30	0	0	0	0	0	0	0	0	0	0	1	1	4	1	5	0	0	0	9	1	10	0	0	0	0	0	0	14:30 - 15:30	63
14:45	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0	8	0	8	0	0	0	0	0	0	14:45 - 15:45	58
15:00	0	0	0	0	0	0	0	0	0	0	1	1	4	0	4	0	0	0	10	1	11	0	0	0	0	0	0	15:00 - 16:00	54
15:15	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	6	2	8	0	0	0	0	0	0	15:15 - 16:15	49
15:30	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	9	0	9	0	0	0	0	0	0	15:30 - 16:30	46
15:45	0	0	0	0	0	0	0	0	0	0	1	1	3	1	4	0	0	0	5	1	6	0	0	0	0	0	0	15:45 - 16:45	52
16:00	0	0	0	0	0	0	0	0	0	1	0	1	1	2	3	0	0	0	6	1	7	0	0	0	0	0	0	16:00 - 17:00	49
16:15	0	0	0	1	0	1	0	0	0	0	0	0	2	0	2	0	0	0	9	1	10	0	0	0	0	0	0	16:15 - 17:15	54
16:30	0	0	0	1	0	1	0	0	0	0	1	1	0	1	1	0	0	0	14	0	14	0	0	0	0	0	0	16:30 - 17:30	49
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	7	0	7	0	0	0	0	0	0	16:45 - 17:45	45
17:00	0	0	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	9	1	10	0	0	0	0	0	0	17:00 - 18:00	43
17:15	0	0	0	0	0	0	0	0	0	2	1	3	0	4	4	0	0	0	1	0	1	0	0	0	0	0	0	17:15 - 18:15	42
17:30	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	5	0	5	0	0	0	0	0	0	17:30 - 18:30	37
17:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	4	0	4	0	0	0	0	0	0	17:45 - 18:45	25
18:00	0	0	0	1	0	1	0	0	0	0	1	1	2	0	2	0	0	0	10	1	11	0	0	0	0	0	0	18:00 - 19:00	26
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0		
18:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0		
18:45	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2	0	0	0	3	1	4	0	0	0	0	0	0		
TOTAL	0	0	0	6	3	9	0	0	0	12	28	40	189	70	259	0	0	0	276	85	361	0	0	0	0	0	0		

Location: Gate 1 and 13 Pembury Road
Date: Saturday, 23 September 2017
Survey Period : 6am - 7pm
Client: TPP

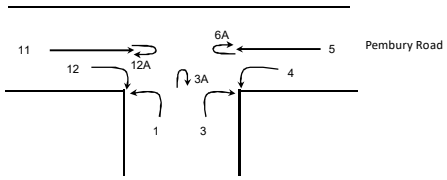
Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



	1			3			3A			4			5			6A			11			12			12A				
TIME START	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Hour	Total
06:00	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	6:00 - 7:00	19
06:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6:15 - 7:15	22
06:30	0	0	0	0	0	0	0	0	0	0	1	1	0	3	3	0	0	0	0	1	1	0	0	0	0	0	0	6:30 - 7:30	23
06:45	0	0	0	1	0	1	0	0	0	1	1	2	0	2	2	0	0	0	2	2	4	0	0	0	0	0	0	6:45 - 7:45	23
07:00	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	4	4	0	0	0	0	0	0	7:00 - 8:00	17
07:15	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	7:15 - 8:15	13
07:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	7:30 - 8:30	13
07:45	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	0	0	0	0	0	0	7:45 - 8:45	11
08:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	8:00 - 9:00	10
08:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	8:15 - 9:15	9
08:30	0	0	0	0	0	0	0	0	0	0	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8:30 - 9:30	15
08:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	8:45 - 9:45	14
09:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9:00 - 10:00	17
09:15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	3	1	4	0	0	0	0	0	0	9:15 - 10:15	21
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	9:30 - 10:30	16
09:45	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	2	0	2	0	0	0	0	0	0	9:45 - 10:45	15
10:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	1	3	0	0	0	0	0	0	10:00 - 11:00	14
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	1	3	0	0	0	0	0	0	10:15 - 11:15	24
10:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10:30 - 11:30	29
10:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	10:45 - 11:45	36
11:00	0	0	0	1	0	1	0	0	0	1	0	1	4	0	4	0	0	0	9	0	9	0	0	0	0	0	0	11:00 - 12:00	37
11:15	0	0	0	2	0	2	0	0	0	1	0	1	0	0	0	0	0	0	5	1	6	0	0	0	0	0	0	11:15 - 12:15	36
11:30	0	0	0	0	0	0	0	0	0	1	0	1	3	0	3	0	0	0	3	1	4	0	0	0	0	0	0	11:30 - 12:30	31
11:45	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	11:45 - 12:45	27
12:00	0	0	0	1	0	1	0	0	0	2	0	2	1	0	1	0	0	0	9	1	10	0	0	0	0	0	0	12:00 - 13:00	26
12:15	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	12:15 - 13:15	14
12:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	12:30 - 13:30	17
12:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	12:45 - 13:45	22
13:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	13:00 - 14:00	22
13:15	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	3	1	4	0	0	0	0	0	0	13:15 - 14:15	22
13:30	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	5	1	6	0	0	0	0	0	0	13:30 - 14:30	19
13:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	13:45 - 14:45	14
14:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	14:00 - 15:00	11
14:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	14:15 - 15:15	15
14:30	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	1	0	1	0	0	0	0	0	0	14:30 - 15:30	14
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	14:45 - 15:45	10
15:00	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	3	1	4	0	0	0	0	0	0	15:00 - 16:00	11
15:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	15:15 - 16:15	7
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30 - 16:30	4
15:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	15:45 - 16:45	4
16:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	16:00 - 17:00	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:15 - 17:15	2
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:30 - 17:30	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:45 - 17:45	5
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	17:00 - 18:00	5
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:15 - 18:15	6
17:30	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	17:30 - 18:30	13
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:45 - 18:45	11
18:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	18:00 - 19:00	11
18:15	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0		
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0		
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	0	0	0	6	4	10	0	0	0	9	14	23	47	8	55	0	0	0	84	30	114	0	0	0	0	0	0		

Location: Gate 1 and 13 Pembury Road
Date: Monday, 25 September 2017
Survey Period : 6am - 7pm
Client: TPP

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS



Gate 2

	1			3			3A			4			5			6A			11			12			12A				
TIME START	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Light**	**Heavy**	**Total**	**Hour**	**Total**
06:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	1	**6**	0	0	**0**	2	3	**5**	0	0	**0**	0	0	**0**	**6:00 - 7:00**	**46**
06:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	0	**3**	0	0	**0**	0	5	**5**	0	0	**0**	0	0	**0**	**6:15 - 7:15**	**43**
06:30	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**	0	0	**0**	4	4	**8**	0	0	**0**	0	0	**0**	**6:30 - 7:30**	**46**
06:45	0	0	**0**	1	0	**1**	0	0	**0**	0	1	**1**	4	0	**4**	0	0	**0**	3	6	**9**	0	0	**0**	0	0	**0**	**6:45 - 7:45**	**41**
07:00	0	0	**0**	1	0	**1**	0	0	**0**	0	2	**2**	2	0	**2**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	**7:00 - 8:00**	**35**
07:15	0	0	**0**	1	0	**1**	0	0	**0**	0	1	**1**	6	1	**7**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	**7:15 - 8:15**	**40**
07:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	1	2	**3**	0	0	**0**	0	0	**0**	**7:30 - 8:30**	**40**
07:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	0	**7**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**7:45 - 8:45**	**51**
08:00	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	7	1	**8**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	**8:00 - 9:00**	**62**
08:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	2	5	**7**	0	0	**0**	0	0	**0**	**8:15 - 9:15**	**65**
08:30	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	6	2	**8**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	**8:30 - 9:30**	**58**
08:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	9	3	**12**	0	0	**0**	4	4	**8**	0	0	**0**	0	0	**0**	**8:45 - 9:45**	**51**
09:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	4	**10**	0	0	**0**	2	4	**6**	0	0	**0**	0	0	**0**	**9:00 - 10:00**	**42**
09:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**9:15 - 10:15**	**39**
09:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	0	**7**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	**9:30 - 10:30**	**40**
09:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	0	**4**	0	0	**0**	6	1	**7**	0	0	**0**	0	0	**0**	**9:45 - 10:45**	**45**
10:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	2	**5**	0	0	**0**	2	5	**7**	0	0	**0**	0	0	**0**	**10:00 - 11:00**	**57**
10:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	3	**3**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**10:15 - 11:15**	**54**
10:30	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	3	3	**6**	0	0	**0**	4	4	**8**	0	0	**0**	0	0	**0**	**10:30 - 11:30**	**63**
10:45	0	0	**0**	2	0	**2**	0	0	**0**	0	2	**2**	6	0	**6**	0	0	**0**	10	3	**13**	0	0	**0**	0	0	**0**	**10:45 - 11:45**	**57**
11:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	**11:00 - 12:00**	**43**
11:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	3	**8**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	**11:15 - 12:15**	**47**
11:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	4	**5**	0	0	**0**	2	2	**4**	0	0	**0**	0	0	**0**	**11:30 - 12:30**	**49**
11:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	5	1	**6**	0	0	**0**	0	0	**0**	**11:45 - 12:45**	**47**
12:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	3	**7**	0	0	**0**	5	2	**7**	0	0	**0**	0	0	**0**	**12:00 - 13:00**	**53**
12:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	2	**6**	0	0	**0**	5	5	**10**	0	0	**0**	0	0	**0**	**12:15 - 13:15**	**53**
12:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**	0	0	**0**	1	3	**4**	0	0	**0**	0	0	**0**	**12:30 - 13:30**	**42**
12:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	2	**3**	0	0	**0**	9	2	**11**	0	0	**0**	0	0	**0**	**12:45 - 13:45**	**50**
13:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	5	3	**8**	0	0	**0**	3	2	**5**	0	0	**0**	0	0	**0**	**13:00 - 14:00**	**54**
13:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**13:15 - 14:15**	**64**
13:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	7	1	**8**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**	**13:30 - 14:30**	**74**
13:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	7	3	**10**	0	0	**0**	6	2	**8**	0	0	**0**	0	0	**0**	**13:45 - 14:45**	**68**
14:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**	0	0	**0**	19	0	**19**	0	0	**0**	0	0	**0**	**14:00 - 15:00**	**63**
14:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	3	**6**	0	0	**0**	10	0	**10**	0	0	**0**	0	0	**0**	**14:15 - 15:15**	**55**
14:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	2	**4**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	**14:30 - 15:30**	**49**
14:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	5	2	**7**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	**14:45 - 15:45**	**51**
15:00	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	3	1	**4**	0	0	**0**	9	2	**11**	0	0	**0**	0	0	**0**	**15:00 - 16:00**	**47**
15:15	0	0	**0**	1	0	**1**	0	0	**0**	0	1	**1**	3	1	**4**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	**15:15 - 16:15**	**50**
15:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	6	2	**8**	0	0	**0**	0	0	**0**	**15:30 - 16:30**	**52**
15:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	**15:45 - 16:45**	**57**
16:00	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	5	1	**6**	0	0	**0**	11	1	**12**	0	0	**0**	0	0	**0**	**16:00 - 17:00**	**59**
16:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	3	**6**	0	0	**0**	5	1	**6**	0	0	**0**	0	0	**0**	**16:15 - 17:15**	**60**
16:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	1	**3**	0	0	**0**	12	0	**12**	0	0	**0**	0	0	**0**	**16:30 - 17:30**	**64**
16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	9	0	**9**	0	0	**0**	0	0	**0**	**16:45 - 17:45**	**55**
17:00	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	16	0	**16**	0	0	**0**	0	0	**0**	**17:00 - 18:00**	**48**
17:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	11	0	**11**	0	0	**0**	0	0	**0**	**17:15 - 18:15**	**32**
17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	0	**3**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	**17:30 - 18:30**	**26**
17:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	1	**2**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	**17:45 - 18:45**	**22**
18:00	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	0	0	**0**	**18:00 - 19:00**	**18**
18:15	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	4	2	**6**	0	0	**0**	0	0	**0**		
18:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**		
18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**		
TOTAL	**0**	**0**	**0**	**8**	**4**	**12**	**0**	**0**	**0**	**3**	**25**	**28**	**175**	**73**	**248**	**0**	**0**	**0**	**245**	**94**	**339**	**0**	**0**	**0**	**0**	**0**	**0**		

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

Location: On-Street queuing on approach to the site at 13 Pembury Road
Date: Tuesday, 19 September 2017
Survey Period : 10am - 3pm
Client: TPP

				Austroads Classification												
Serial No.	**Start of Queue**	**End of Queue**	**Duration**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Meters**
1	11:07:33	11:07:39	00:00:06	0	0	0	0	1	0	0	0	0	0	0	0	12
2	12:31:21	12:31:23	00:00:02	0	0	0	1	0	0	0	0	0	0	0	0	10
3	13:39:18	13:39:35	00:00:17	0	0	1	0	0	0	0	0	0	0	0	0	8

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

Location: On-Street queuing on approach to the site at 13 Pembury Road
Date: Wednesday, 20 September 2017
Survey Period : 10am - 3pm
Client: TPP

				Austroads Classification											
Serial No.	**Start of Queue**	**End of Queue**	**Duration**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Meters**

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

Location: On-Street queuing on approach to the site at 13 Pembury Road
Date: Thursday, 21 September 2017
Survey Period : 10am - 3pm
Client: TPP

				Austroads Classification											
Serial No.	**Start of Queue**	**End of Queue**	**Duration**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Meters**
1	10:53:19	10:53:28	00:00:09	0	0	0	0	1	0	0	0	0	0	0	0	12

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

Location: On-Street queuing on approach to the site at 13 Pembury Road
Date: Friday, 22 September 2017
Survey Period : 10am - 3pm
Client: TPP

				Austroads Classification											
Serial No.	**Start of Queue**	**End of Queue**	**Duration**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Meters**
1	13:04:36	13:04:45	00:00:09	0	0	0	1	0	0	0	0	0	0	0	0	10

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

Location: On-Street queuing on approach to the site at 13 Pembury Road
Date: Saturday, 23 September 2017
Survey Period : 10am - 3pm
Client: TPP

				Austroads Classification												
Serial No.	**Start of Queue**	**End of Queue**	**Duration**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Meters**
1	12:04:38	12:04:58	00:00:20	0	0	0	0	1	0	0	0	0	0	0	0	12
2	12:12:12	12:12:19	00:00:07	0	0	0	1	0	0	0	0	0	0	0	0	10
3	12:12:28	12:12:29	00:00:01	0	0	1	0	0	0	0	0	0	0	0	0	8
4	13:05:10	13:05:35	00:00:25	0	0	0	0	0	0	0	0	1	0	0	0	22

Data Audit Systems
FOR INFORMED DECISION MAKING
TRAFFIC SURVEYS

Location: On-Street queuing on approach to the site at 13 Pembury Road
Date: Monday, 25 September 2017
Survey Period : 10am - 3pm
Client: TPP

				Austroads Classification											
Serial No.	**Start of Queue**	**End of Queue**	**Duration**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Meters**
1	12:35:20	12:37:30	00:02:10	0	0	0	0	0	0	0	0	1	0	0	0	22
2	13:50:19	13:50:52	00:00:33	0	0	0	0	0	0	0	0	0	1	0	0	27
3	14:50:05	14:50:24	00:00:19	0	0	1	0	0	0	0	0	0	0	0	0	8

Volume Summary

Street	Pembroke Road		
Suburb	Minto		
Location	South of Westmoreland Road		
Count No.	1		
Start Date	Tuesday	19-Sep-17	Speed Limit 60 km/h
Direction	Northbound		

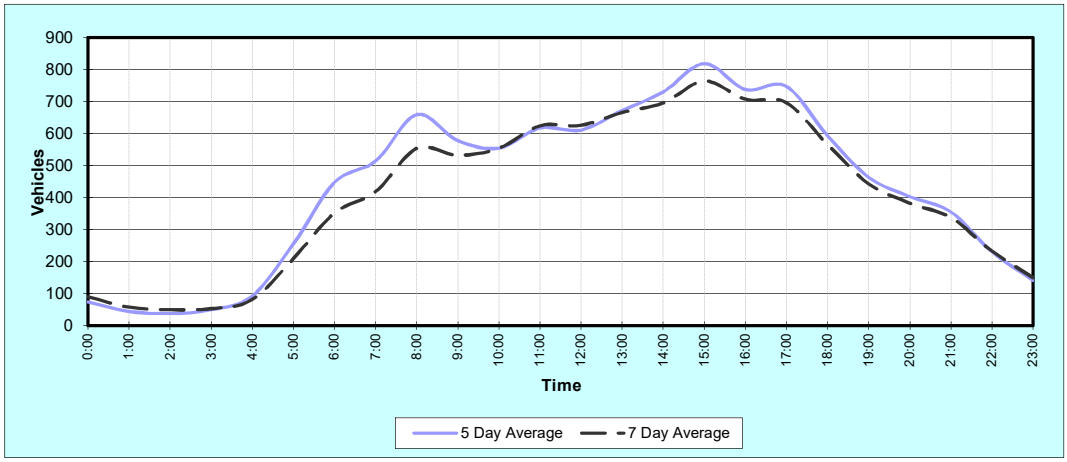
5 Day Average	10426
7 Day Average	9842
5 Day Heavy (Class 3 to 12)	5.3%
7 Day Heavy (Class 3 to 12)	4.4%

Choose Direction

Northbound

Back to Menu

	Day of Week - Class 1 to 12							5 Day Average	7 Day Average
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Time	25-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep		
AM Peak	602	740	720	726	653	698	587		
PM Peak	740	782	863	836	870	723	625		
0:00	60	64	78	74	94	116	143	74	90
1:00	32	23	36	62	71	89	88	45	57
2:00	26	32	46	38	46	75	85	38	50
3:00	39	52	36	58	64	62	60	50	53
4:00	74	84	110	93	102	62	45	93	81
5:00	253	255	251	255	261	105	85	255	209
6:00	423	448	456	460	451	143	82	448	352
7:00	429	566	545	567	464	222	139	514	419
8:00	456	740	720	726	653	340	240	659	554
9:00	508	599	593	578	611	488	346	578	532
10:00	522	568	575	531	576	617	490	554	554
11:00	602	603	579	662	641	698	587	617	625
12:00	588	608	581	603	674	723	603	611	626
13:00	676	651	646	700	686	700	601	672	666
14:00	658	706	728	774	784	646	575	730	696
15:00	740	782	863	836	870	662	597	818	764
16:00	734	698	730	775	751	637	625	738	707
17:00	709	735	749	770	773	587	551	747	696
18:00	554	529	630	641	608	537	458	592	565
19:00	394	384	443	600	496	400	385	463	443
20:00	337	345	387	524	422	341	322	403	383
21:00	275	287	345	507	363	311	277	355	338
22:00	198	195	205	253	302	304	173	231	233
23:00	101	98	126	171	211	234	107	141	150
Total	9388	10052	10458	11258	10974	9099	7664	10426	9842
Heavy %	5.6%	6.1%	5.0%	4.8%	5.3%	1.7%	1.5%	5.3%	4.4%



Data Audit Systems
TRAFFIC SURVEYS

Volume Summary

Street	Pembroke Road		
Suburb	Minto		
Location	South of Westmoreland Road		
Count No.	1		
Start Date	Tuesday	19-Sep-17	Speed Limit 60 km/h
Direction	Southbound		

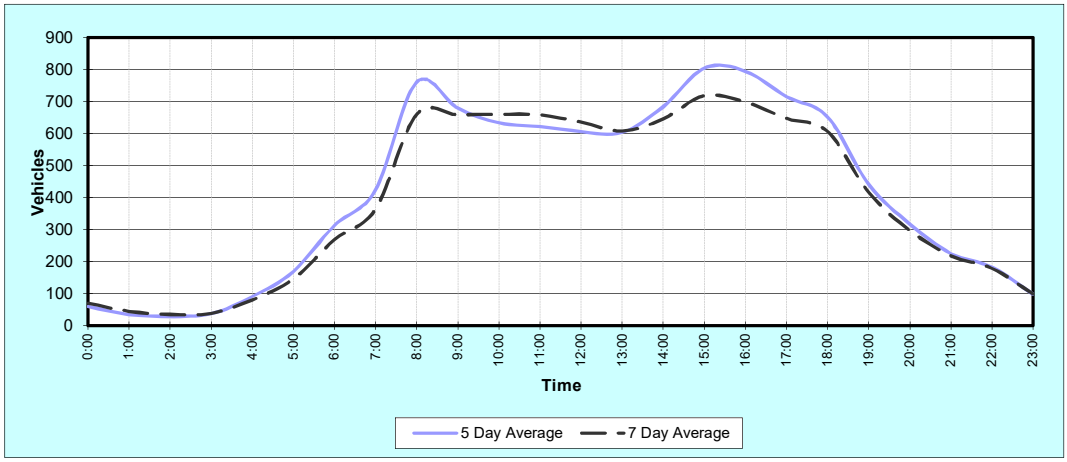
5 Day Average	9978
7 Day Average	9456
5 Day Heavy (Class 3 to 12)	6.0%
7 Day Heavy (Class 3 to 12)	5.1%

Choose Direction

Southbound

Back to Menu

	Day of Week - Class 1 to 12							5 Day	7 Day
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	Average
Time	25-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep		
AM Peak	629	811	805	790	796	815	687		
PM Peak	719	817	835	904	842	788	631		
0:00	37	63	67	60	72	93	98	60	70
1:00	29	18	31	47	47	72	69	34	45
2:00	16	22	31	31	46	39	60	29	35
3:00	28	32	36	42	48	46	37	37	38
4:00	74	85	96	100	99	61	48	91	80
5:00	164	162	171	172	178	106	71	169	146
6:00	288	303	330	334	312	201	114	313	269
7:00	377	445	435	440	423	261	171	424	365
8:00	601	811	805	790	796	504	313	761	660
9:00	613	675	702	724	684	653	560	680	659
10:00	629	623	634	627	653	768	687	633	660
11:00	609	583	587	664	669	815	682	622	658
12:00	571	634	608	566	653	788	631	606	636
13:00	579	560	608	605	664	652	589	603	608
14:00	590	711	664	700	755	570	530	684	646
15:00	719	817	819	826	842	538	469	805	719
16:00	692	794	835	904	748	469	446	795	698
17:00	590	695	657	890	745	531	424	715	647
18:00	582	526	629	845	676	554	431	652	606
19:00	384	385	411	533	492	402	306	441	416
20:00	280	249	346	338	375	269	224	318	297
21:00	174	202	233	237	281	238	164	225	218
22:00	151	169	144	183	265	219	122	182	179
23:00	66	74	97	107	147	140	64	98	99
Total	8843	9638	9976	10765	10670	8989	7310	9978	9456
Heavy %	5.8%	6.8%	5.8%	5.6%	6.0%	2.2%	2.4%	6.0%	5.1%



Data Audit Systems
TRAFFIC SURVEYS

Volume Summary

Street	Pembroke Road		
Suburb	Minto		
Location	South of Westmoreland Road		
Count No.	1		
Start Date	Tuesday	19-Sep-17	Speed Limit 60 km/h
Direction	Bidirectional		

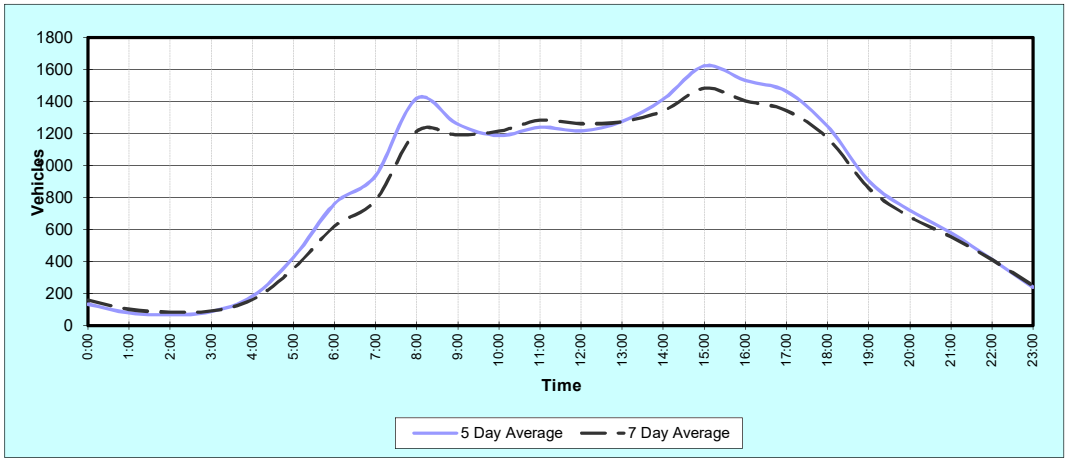
5 Day Average	20404
7 Day Average	19298
5 Day Heavy (Class 3 to 12)	5.7%
7 Day Heavy (Class 3 to 12)	4.8%

Choose Direction

Bidirectional

Back to Menu

	Day of Week - Class 1 to 12							5 Day	7 Day
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Time	25-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	Average	Average
AM Peak	1211	1551	1525	1516	1449	1513	1269		
PM Peak	1459	1599	1682	1679	1712	1511	1234		
0:00	97	127	145	134	166	209	241	134	160
1:00	61	41	67	109	118	161	157	79	102
2:00	42	54	77	69	92	114	145	67	85
3:00	67	84	72	100	112	108	97	87	91
4:00	148	169	206	193	201	123	93	183	162
5:00	417	417	422	427	439	211	156	424	356
6:00	711	751	786	794	763	344	196	761	621
7:00	806	1011	980	1007	887	483	310	938	783
8:00	1057	1551	1525	1516	1449	844	553	1420	1214
9:00	1121	1274	1295	1302	1295	1141	906	1257	1191
10:00	1151	1191	1209	1158	1229	1385	1177	1188	1214
11:00	1211	1186	1166	1326	1310	1513	1269	1240	1283
12:00	1159	1242	1189	1169	1327	1511	1234	1217	1262
13:00	1255	1211	1254	1305	1350	1352	1190	1275	1274
14:00	1248	1417	1392	1474	1539	1216	1105	1414	1342
15:00	1459	1599	1682	1662	1712	1200	1066	1623	1483
16:00	1426	1492	1565	1679	1499	1106	1071	1532	1405
17:00	1299	1430	1406	1660	1518	1118	975	1463	1344
18:00	1136	1055	1259	1486	1284	1091	889	1244	1171
19:00	778	769	854	1133	988	802	691	904	859
20:00	617	594	733	862	797	610	546	721	680
21:00	449	489	578	744	644	549	441	581	556
22:00	349	364	349	436	567	523	295	413	412
23:00	167	172	223	278	358	374	171	240	249
Total	18231	19690	20434	22023	21644	18088	14974	20404	19298
Heavy %	5.7%	6.4%	5.4%	5.2%	5.6%	2.0%	2.0%	5.7%	4.8%



Appendix B

Draft Traffic Management Plan

13 Pembury Road, Minto

Draft Traffic Management Plan

Prepared for:

Skylife Properties

30/11/2017

The Transport Planning Partnership

ACN: 607 079 005

13 Pembury Road, Minto

Draft Traffic Management Plan

Client: Skylife Properties

Version: Draft 02

Date: 30/11/2017

TTPP Reference: 15016

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
DR_01	21/11/17	S.Botross	W.Johnson	W.Johnson	
DR_02	30/11/17	S.Botross	W.Johnson	W.Johnson	

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APPENDICES

1 Introduction

1.1 Background

The Transport Planning Partnership (TTPP) have prepared this draft Traffic Management Plan (TMP) on behalf of Skylife Properties for the Bingo waste transfer facility located at 13 Pembury Road, Minto.

Department of Planning and Environment requested a draft Traffic Management Plan be prepared as a submission to the EIS in their submission dated 22nd August 2017.

1.2 Objectives

The objective of this draft TMP is to provide traffic management procedures to form part of the Bingo Minto site facility operation.

Furthermore, this TMP describes the processes, measures and procedures to ensure that:

- Truck drivers abide by the haulage route road restrictions
- Provide protection to staff and visitors to the site from traffic hazards
- To minimise adverse impacts on users of the surrounding road network and adjacent properties
- Drivers adhere to Bingo's truck driver code of conduct
- Recommended management strategies for any identified issues during operation.

2 Existing Conditions

2.1 Site Location

The subject site is located at 13 Pembury Road, Minto within the industrial district of the Campbelltown local government area. The site and immediate surrounding area are zoned General Industrial Zone (IN1) under Campbelltown City Council Local Environmental Plan (LEP) 2015. The site is located on Lot 1 DP 1013852 which has a total area of approximately 8,957m^2.

The site is currently occupied by Minto Recycling Pty Ltd. There are three buildings on the site, namely, Shed A, Shed B and Shed C. Waste from inbound trucks is tipped into Shed B; waste sorting and processing is undertaken in Shed C; and waste is stockpiled in Shed A.

The location of the subject site and its surrounding environs is shown in Figure 1.

Figure 1: Site Location and Surrounding Locality

Basemap source: Google Maps 2017

2.2 Vehicle Access and Circulation

The site has two driveway accesses off Pembury Road; the eastern and western driveways have respective widths of 11.5m and 6m. The eastern driveway is the main access to the site.

A site office is located at the site entry. Two separate in-ground weighbridges for inbound vehicles will be provided at the eastern driveway and one outbound weighbridge will be provided at the western driveway.

The main access driveway will be configured as one-way inbound and the western driveway will be configured as one-way outbound. All vehicle movements to/from and within the site are in a forward direction.

3 Site Operation

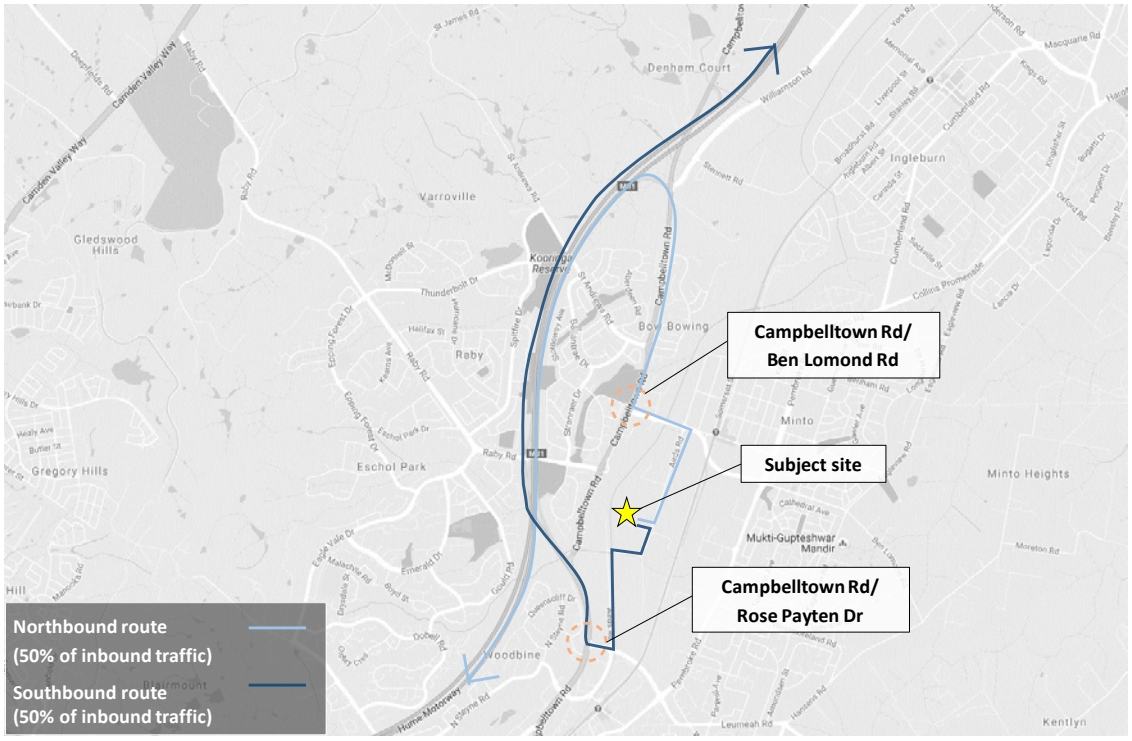
3.1 Truck Haul Routes

The Minto facility is well positioned within the established Minto industrial precinct to service housing and infrastructure projects in the region. The facility would be capable of receiving and processing waste products to enable resource recovery and subsequent reuse elsewhere with residual waste transported to licensed disposal facilities.

The main haul routes to/from the site would be via Hume Highway and Campbelltown Road. These routes are illustrated in Figure 2 and Figure 3, respectively.

Figure 2: Inbound Haul Routes and Traffic Distribution

Figure 3: Outbound Haul Routes and Traffic Distribution



Recent bridge load limits have been imposed by Campbelltown Council at two locations along the haul routes identified in Figure 2 and Figure 3. Campbelltown Council has jurisdiction over the use of local roads, including Pembury Road. The load limits restrict the movement of trucks greater than 40 tonnes on the Ben Lomond Road bridge and trucks greater than 32 tonnes on the Airds Road bridge over the Bow Bowing Channel.

When loaded with material, waste collection trucks departing the site can be in excess of 60 tonnes (gross weight). These trucks would be diverted via Pembroke Road to avoid the bridges on Ben Lomond Road and Airds Road. These trucks would travel to the site via the regular haul routes (as shown in Figure 2 and Figure 3) and travel away from the site using the Pembroke Road alternate haul route which is shown in Figure 4.

Figure 4: Alternate Outbound Haul Route for Trucks

Basemap source: Roads and Maritime Services NSW Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) Interactive Map (site accessed 18/04/2017)

The alternate route comprises sections of Airds Road, Pembroke Road and Ben Lomond Road. According to Roads and Maritime Services' (Roads and Maritime) NSW Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) interactive map, 25m B-double trucks and 19m B-double trucks are permitted to travel along these roads. This route is also approved for use by trucks as per the National Heavy Vehicles Regulator (NHVR) online interactive map. The alternate outbound haul route links trucks from the site to Campbelltown Road, whereby drivers would be able to access Hume Highway.

Roads and Maritime and NHVR have jurisdiction over state roads. In the area surrounding the site, these roads include Airds Road, Pembroke Road and Campbelltown Road.

Overall, the designated alternate route is in line with heavy vehicle access permission granted by Roads and Maritime, NHVR, and Campbelltown Council. Therefore, this route is deemed acceptable for haulage of waste collection trucks travelling away from the site.

3.2 Operational Hours

The Bingo Minto waste transfer recycling facility is set to operate from 6:00am to 10:00pm Monday to Saturday.

3.3 Operation Vehicle Types

The types of waste delivery and collection vehicles that currently access the site range in size from a car/ van to a 25m B-double truck. Delivery of waste to the site is undertaken by vehicles ranging in size between a car/van to 19m semi-trailer and 19m truck and dog. Collection of residual waste is undertaken by 19m semi-trailer, 19m truck and dog and 25m B-double trucks.

The latter vehicles are greater than 15 tonne each, and due to their large carrying capacity, are required to remove waste in order to efficiently clear the site of material. For this waste transfer facility, it is inefficient to utilise small to medium size trucks to remove waste off site. Therefore, the removal of waste is limited to trucks which are 19m in length or larger.

Details on these vehicles are summarised Table 2.1.

Table 2.1: Vehicle Classifications

Waste Delivery of Collection Vehicle	Vehicle Classification	Type	Photo Example
Waste delivery	Small Rigid Vehicle (up to 6.4m)	Car, van	-
	Medium Rigid Vehicle (6.4m to 8.8m)	Car with trailer [a]	-
		4-Tonne Baby Marrel Truck (W2.5 x H2.5 x L5.9)	
		6-Tonne Baby Marrel Truck (W2.5 x H2.8 x L6.3)	

		Single Axel Marrel Truck (W2.7 x H3.0 x L7.6)	
		Double Axel Marrel Truck (W3.0 x H3.0 x L8.3)	
		Hook Truck (W2.7 x H3.3 x L8.6)	
	Heavy Rigid Vehicle (8.8m to 12.5m)	Front Lift Truck (W3.1 x H4.1 x L11.0)	
Waste delivery and collection	Articulated Vehicles	19m Semi-trailer	
		19m Truck and Dog	
Waste collection		25m B-double truck	-

Notes:

a A car and trailer combination has an articulation point, however, is classified as a medium rigid vehicle based on the length of the combination.

3.4 Car Parking

Seventeen car parking spaces, including one accessible parking space will be provided on-site. Of the 17 car parking spaces, seven will be located near the site ingress (i.e. main access driveway). The remaining 10 parking spaces will be located near the egress (secondary driveway).

There will be 30 full-time staff employed at the site. Staff will operate in two shifts per day with 13 to 15 workers on site at any given time, including:

- One weighbridge / office staff
- One yard supervisor
- Eight machine/ plant operators, and
- Three traffic controllers (site ingress, stacking/yard untarping area and tip floor).

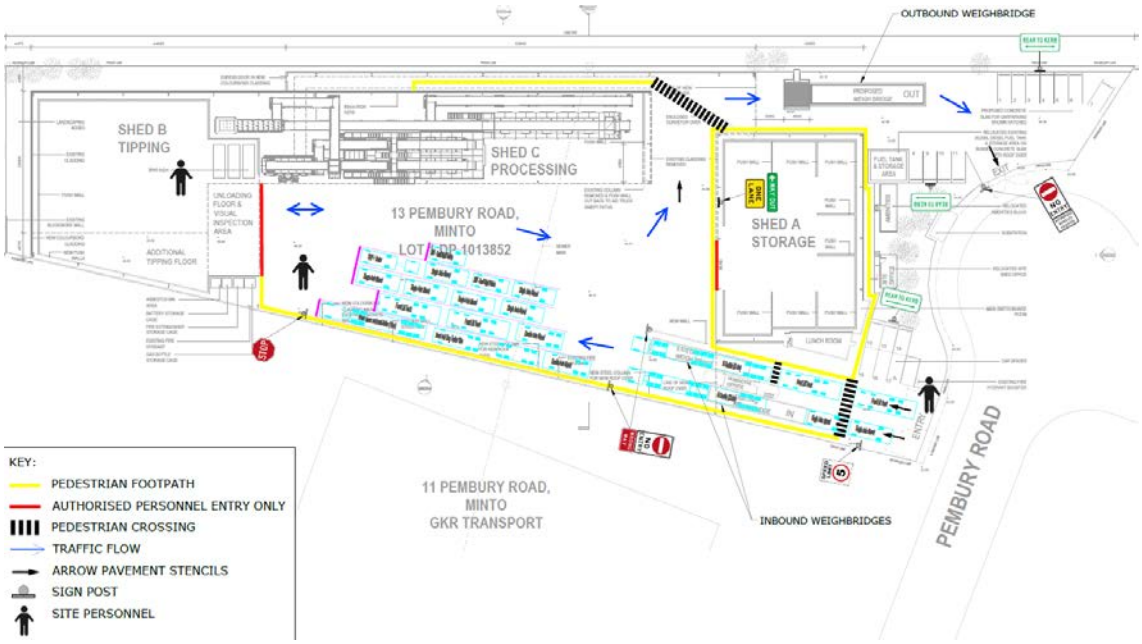
4 Traffic Management Plan

4.1 Internal Traffic Flow Diagram

As mentioned above, there are two access driveways to 13 Pembury Road, Minto.

Trucks will enter the site via the eastern driveway and exit the site via the western driveway. The 'one way' traffic route through the site, shown in Figure 5, has been designed to minimise risk of collisions and accidents occurring within the site.

Figure 5: Internal Traffic Flow Diagram



4.2 Entering the Site

4.2.1 Bingo Employees and Regular contractors and visitors

On entering the site, a driver will unsheet the cover of the truck and trailer unit within the site's property boundary. The truck driver communicates with the weighbridge staff and exchanges documentation without leaving the vehicle.

Weighbridge staff inspect the waste and record the following information:

- Origin of the waste
- The type of material
- Weight of material

Site personnel conducting this inspection would stand on a platform above the weighbridge office which is elevated above the height of a truck stationed on the weighbridge itself. The waste material is inspected for any unauthorised waste, such as asbestos, on the surface of the load.

Barriers and line marked pedestrian pathways are located around the site and are separated from vehicular movements to provide for the safe movement of pedestrians between the weighbridge office and the site office/ site amenities.

Bingo Minto Management are able to control and advise Bingo truck drivers and regular contractors and visitors to the site of changes to the site operation or any breaches in traffic rules.

4.2.2 Casual or Irregular visitors

Sub-contractors and non-routine customers or visitors are inducted into the site by the site manager. Weighbridge staff will induct new drivers to the site, this information includes:

- Site rules and their duty to comply with them
- Personal Protective Equipment appropriate to the site
- Directions to queuing area and exit point
- Being made aware of any unusual activities on site which may affect them

4.3 Tipping Area

Traffic movements to and from the tipping area will be controlled by a traffic controller/ site personnel.

All turning areas within the site are kept clear of any obstacles at all times.

The trained and accredited traffic controller/ site personnel will be:

- Located away from the tipping area
- Wear high-visibility clothing
- In full view of the driver at all times when motorists undertake reversing manoeuvres
- A safe distance from the vehicle when reversing.

All drivers entering the tipping area will be made aware of:

- The role of the traffic controller/ site personnel
- Their duty to obey the traffic controller's instructions
- What signals will be used and what they mean, if required.

Drivers should only be permitted outside their cab when they absolutely need to be and then only when:

- They are wearing high-visibility clothing and appropriate footwear with protective/ steel toe-caps
- They keep in close proximity to their vehicles
- There is sufficient distance between themselves and moving vehicles.

If, at any time the traffic controller cannot be seen – the driver should stop.

4.4 Exiting the site

The driver of the vehicle should check the vehicle to ensure:

- Trailer doors are secure and the truck and trailer unit is sheeted before exiting the site
- Lifting arms on skip vehicles and containers lowered
- There is no debris on the tyre treads or truck which may end up on the road

4.5 Pedestrian Infrastructure

All sheds can be categorised as high-risk areas with potential for vehicle to vehicle or vehicle to pedestrian collisions.

One potential conflict point is at the shed access points. As can be seen in Figure 6, Bingo Minto comprises pedestrian only walkways with a barrier to ensure pedestrians assess vehicle movements into and out of sheds and to deter pedestrians from walking directly into vehicle movement areas.

Figure 6: Pedestrian Walkways

Linemarked pedestrian pathways are located around the site and are separated from vehicular movements.

Bingo are considering the installation of convex mirrors and safe warning systems at the shed entry/ exit points to improve safety further.

5 Traffic Management Measures and Site Policies

5.1 Traffic Management Measures

A site-specific transport management plan has been prepared for the Bingo Minto site. The Transport Management Plan indicates measures to protect the safety of all site users as well the site employees. These measures include:

- Warning signage for vehicles and pedestrians at the site access
- The site comprises a posted speed limit of 5km/hr
- Qualified site personnel/ traffic controllers to manage pedestrian movements and vehicular movements at the site entry point.
- All truck movements when reversing into the tipper area will be under the duress of site personnel/ traffic control
- Site personnel/ traffic control will be present to control interaction between vehicles and pedestrians
- All signage will be clean, clearly visible and not obscured.

The draft transport management plan is provided in Appendix A.

5.2 Emergency Plant Breakdown Operation

In the event that the Bingo Minto site experiences equipment failure and congestion the site has sufficient capacity to accept and remove waste whilst repairs are undertaken which would not burden the operation. Notwithstanding this, the following action plan has been developed to manage potential incidents:

- Bingo Minto Site Operations Manager/ Weighbridge Operator notifies Bingo Head Office immediately.
- A mechanic is on stand-by to cover any equipment failures
- Bingo Head Office directs Bingo trucks to other nearby Bingo waste transfer facilities
- The status of the Minto site on the Bingo website will be converted from 'Open' to 'Closed' when there is an emergency plant breakdown.
- Bingo Head Office contacts waste transporters of primary contracts at the time advising them to cease further deliveries to the site until the problem has been resolved.

The above measures will satisfactorily alleviate traffic impacts in Pembury Road during an emergency plant breakdown.

5.3 Bingo Truck Driver Code of Conduct

All Bingo truck drivers and street sweeper must maintain a high level of professional conduct, as a minimum:

- Adhere to posted speed limits and road signs
- Use of horn only as a warning device
- All vehicles to be wholly contained on site i.e. vehicles should not stop in Pembury Road
- All loads are to be covered when leaving the site
- All loads are to be loaded and unloaded only on site
- Respect and be mindful for pedestrians within the site and on the local road network.

Lastly, while the use of the street sweeper would be minimised with the construction of the inground exit wheel wash, the Bingo site street sweeper should be mindful of all traffic and pedestrian movements within the site and along Pembury Road. The street sweeper should give priority to Pembury Road users, where possible.

5.4 Workplace Safety Policy

Bingo has the responsibility to ensure that everything reasonably practicable is carried out to reduce the potential risk of injury and environmental harm, to employees, contractors, subcontractors and visitors. All employees, contractors and visitors have a duty to act in a responsible manner and to carry out works in such a way as to prevent injury to themselves and others. All accidents and incidents must be reported as soon as practicably possible.

5.5 Drug and Alcohol Policy

It is the responsibility of each employee, contractor and visitor to the site, to ensure that they are not, by consumption of alcohol and or drugs, in such a state as to endanger their own safety at work or the safety of any other person at work.

6 Traffic Monitoring Program

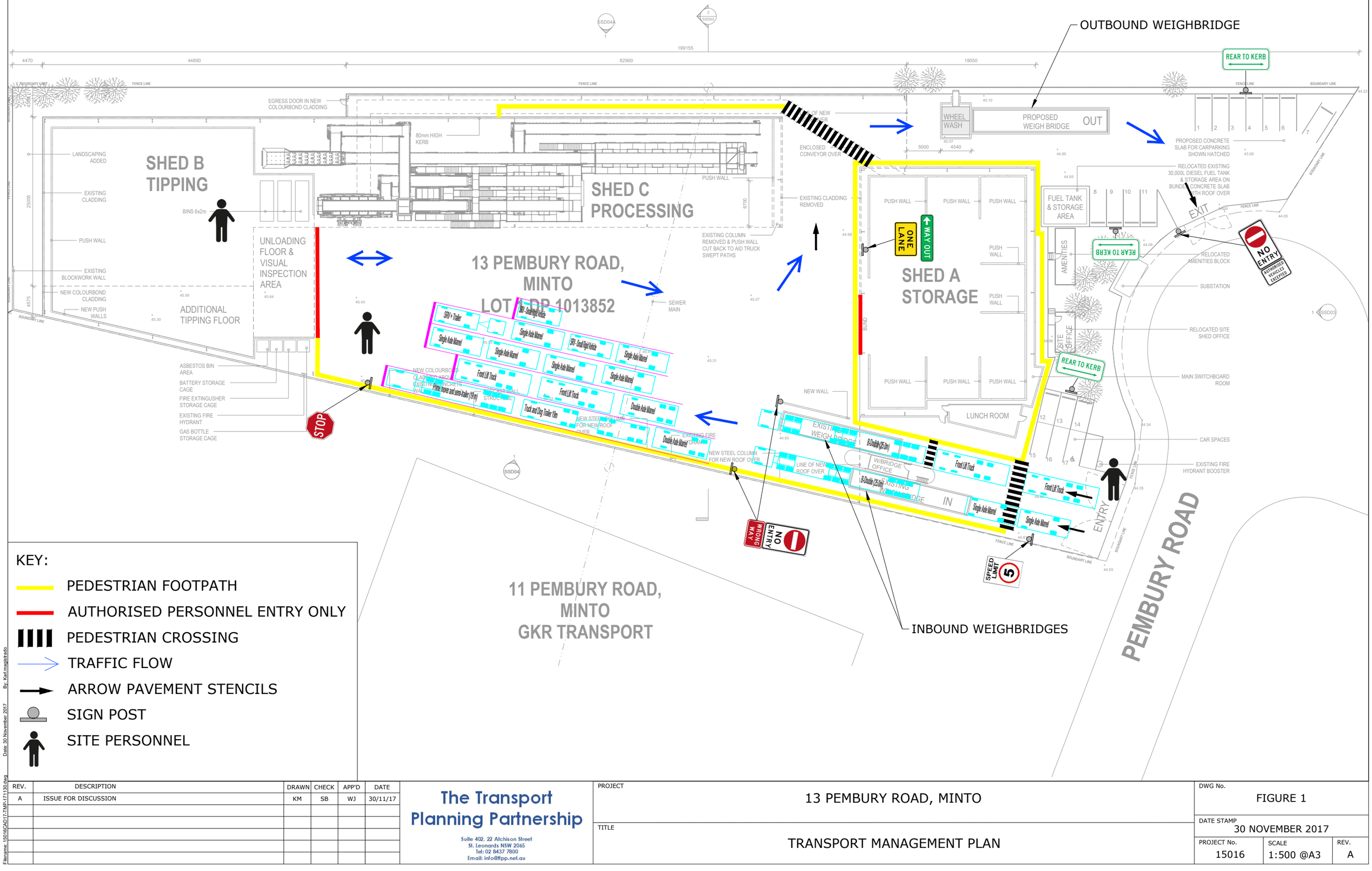
Bingo Minto's Site Operation Manager/ Weighbridge Operator should:

- inspect and monitor the site operation on a daily basis.
- record any non-compliances or concerns observed during the daily inspection.
- record any complaints received.
- record the corrective action undertaken to address any issues or complaints received from relevant authorities, neighbouring properties etc

Bingo Minto's Site Operation Manager should review this TMP annually to ensure it is adequate for the site's needs.

Appendix A

Draft Transport Management Plan



KEY:

- PEDESTRIAN FOOTPATH
- AUTHORISED PERSONNEL ENTRY ONLY
- PEDESTRIAN CROSSING
- TRAFFIC FLOW
- ARROW PAVEMENT STENCILS
- SIGN POST
- SITE PERSONNEL

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

The Transport Planning Partnership
Suite 402, 22 Atchison Street
St. Leonards NSW 2065
Tel: 02 8437 7800
Email: info@ttpp.net.au

PROJECT: 13 PEMBURY ROAD, MINTO

TITLE: TRANSPORT MANAGEMENT PLAN

DWG No.: FIGURE 1

DATE STAMP: 30 NOVEMBER 2017

PROJECT No.: 15016 | SCALE: 1:500 @A3 | REV.: A

Filename: 15016CAD17-TMP-171130.dwg Date: 30 November 2017 By: Kait magiera.edo

The Transport Planning Partnership
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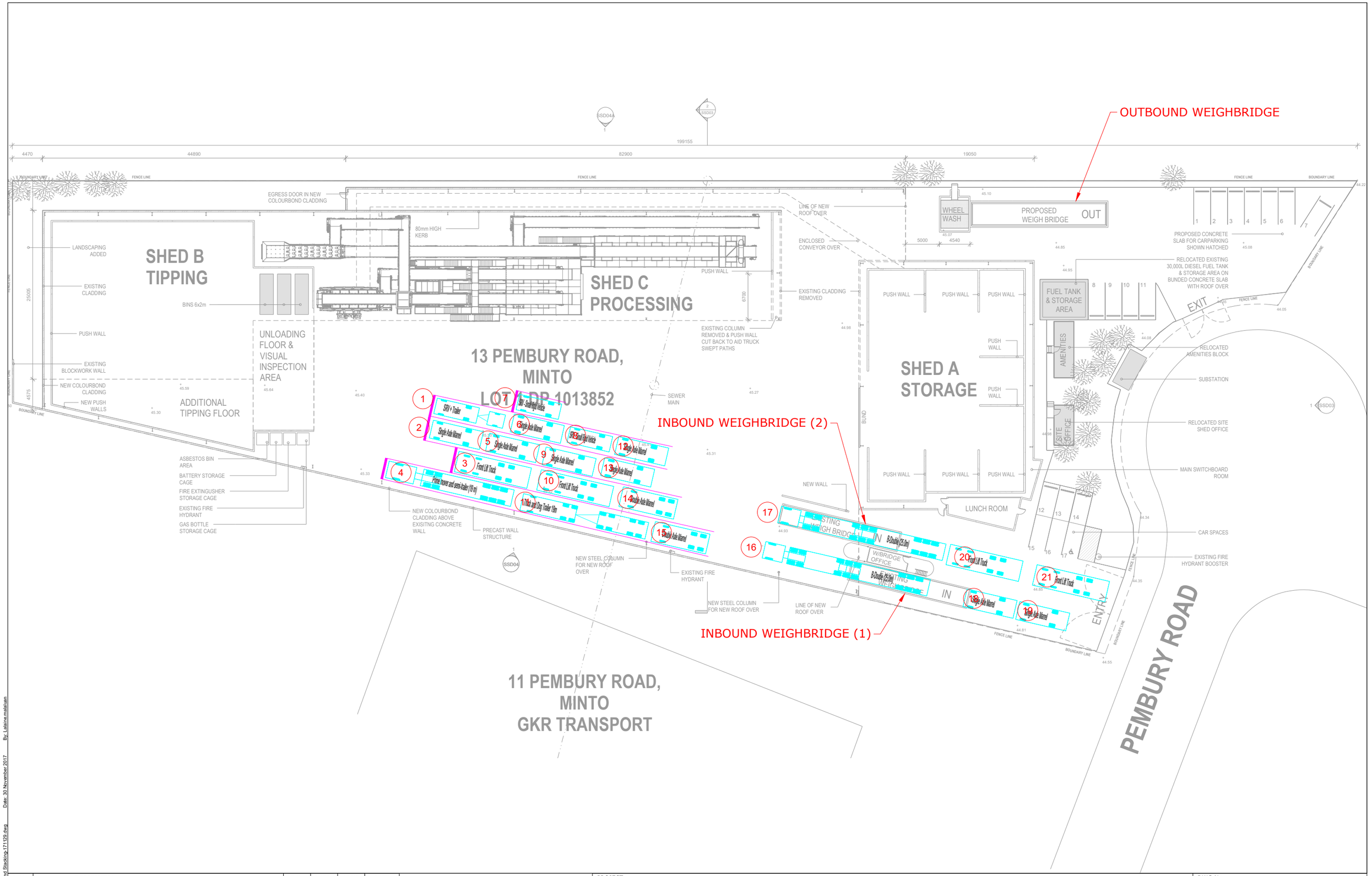
Appendix C

Swept Path Analysis and On-site Vehicle Stacking Plan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

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PROJECT: 13 PEMBURY ROAD, MINTO

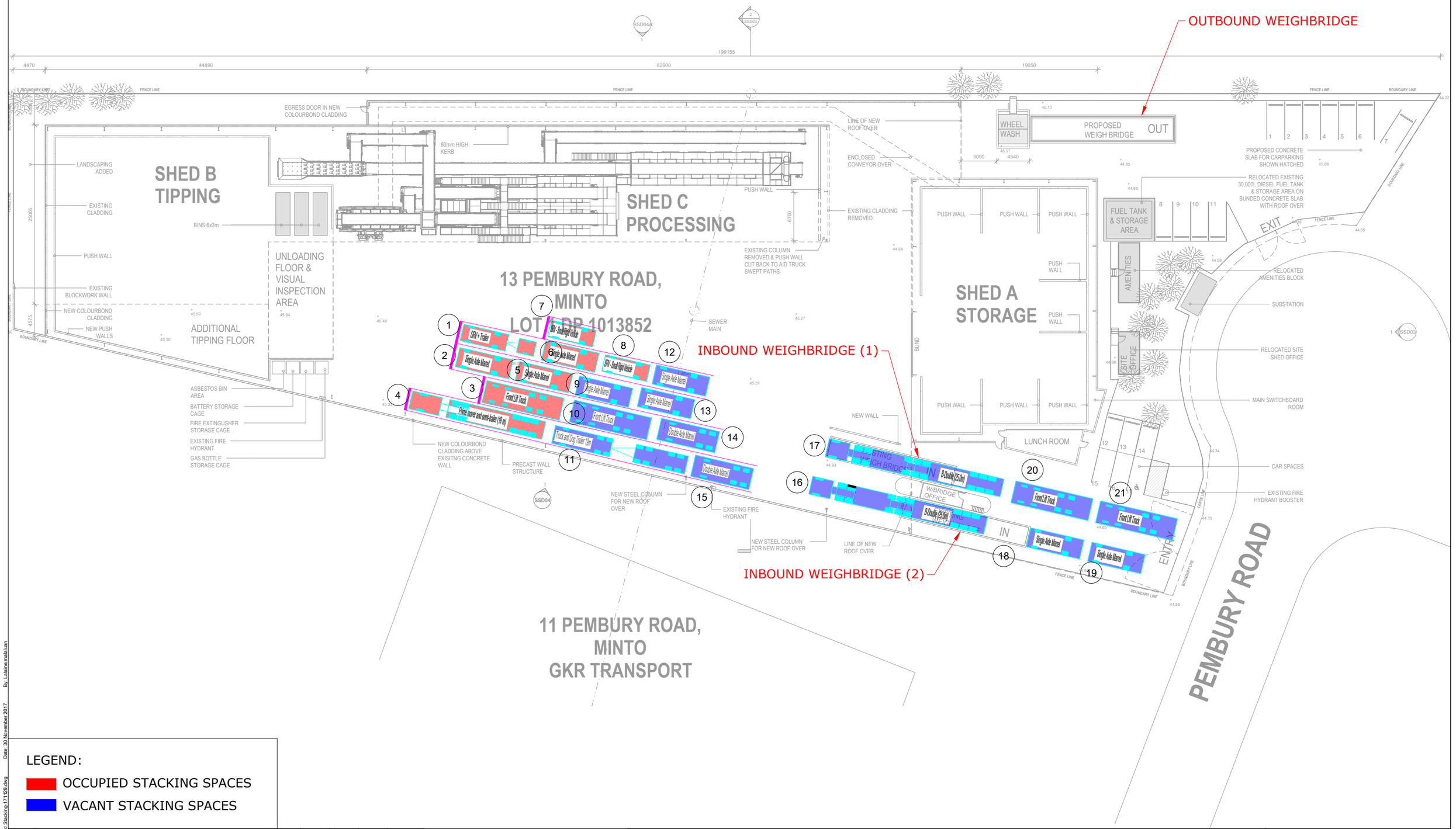
TITLE: PROPOSAL SITE VEHICLE STACKING PLAN

DWG No.: FIGURE 1

DATE STAMP: 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD\6-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.maliluan



LEGEND:

- OCCUPIED STACKING SPACES
- VACANT STACKING SPACES

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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PROJECT: 13 PEMBURY ROAD, MINTO

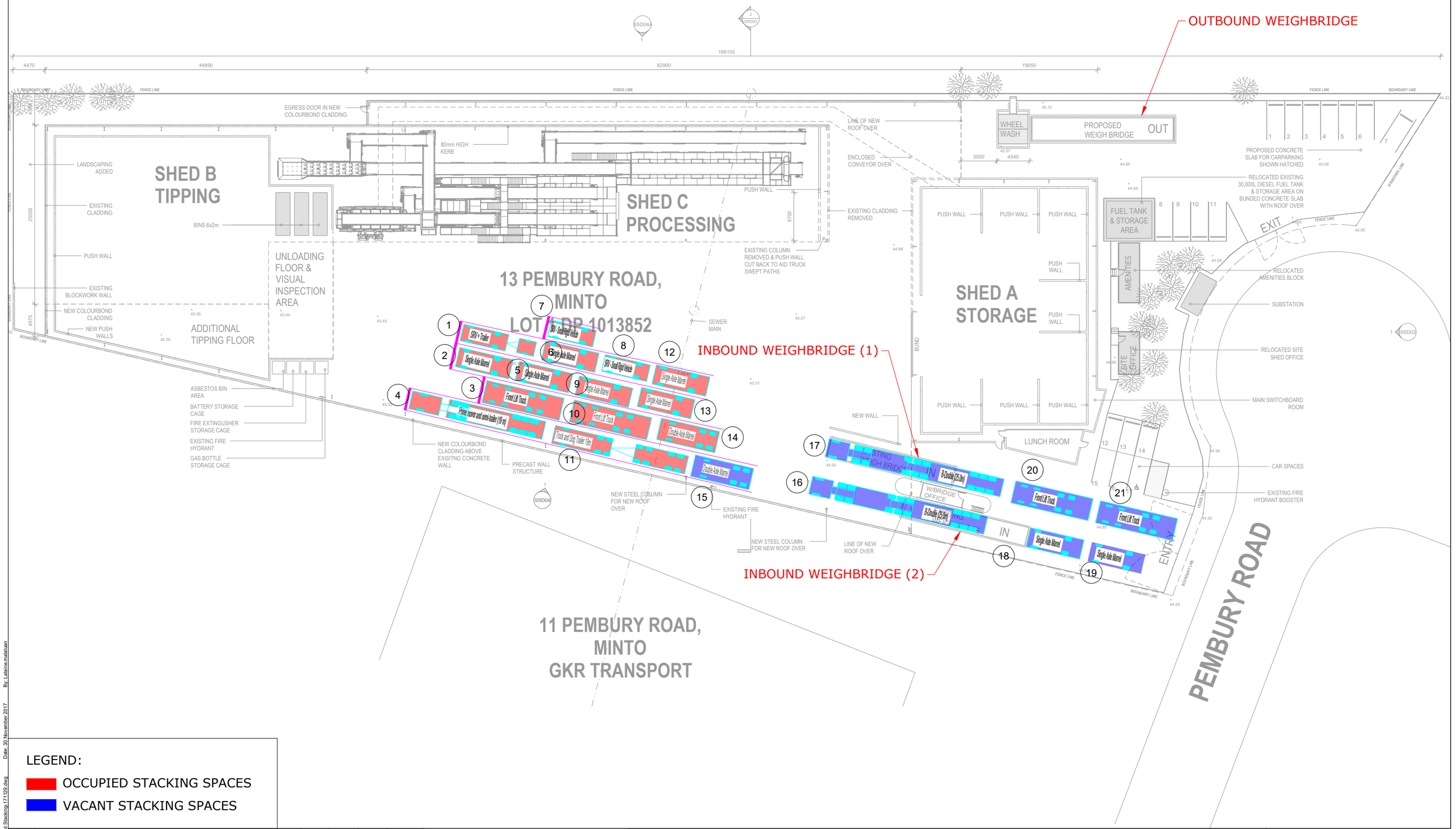
TITLE: UTILISATION OF STACKING SPACES @ 220,000 TPA
TYPICAL SITE OPERATION (17 MINUTES DURATION)

DWG No.: FIGURE 2

DATE STAMP: 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



LEGEND:

- OCCUPIED STACKING SPACES
- VACANT STACKING SPACES

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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PROJECT: 13 PEMBURY ROAD, MINTO

TITLE: UTILISATION OF STACKING SPACES @ 220,000 TPA
WORST CASE SCENARIO (30 MINUTES DURATION)

DWG No.: FIGURE 3

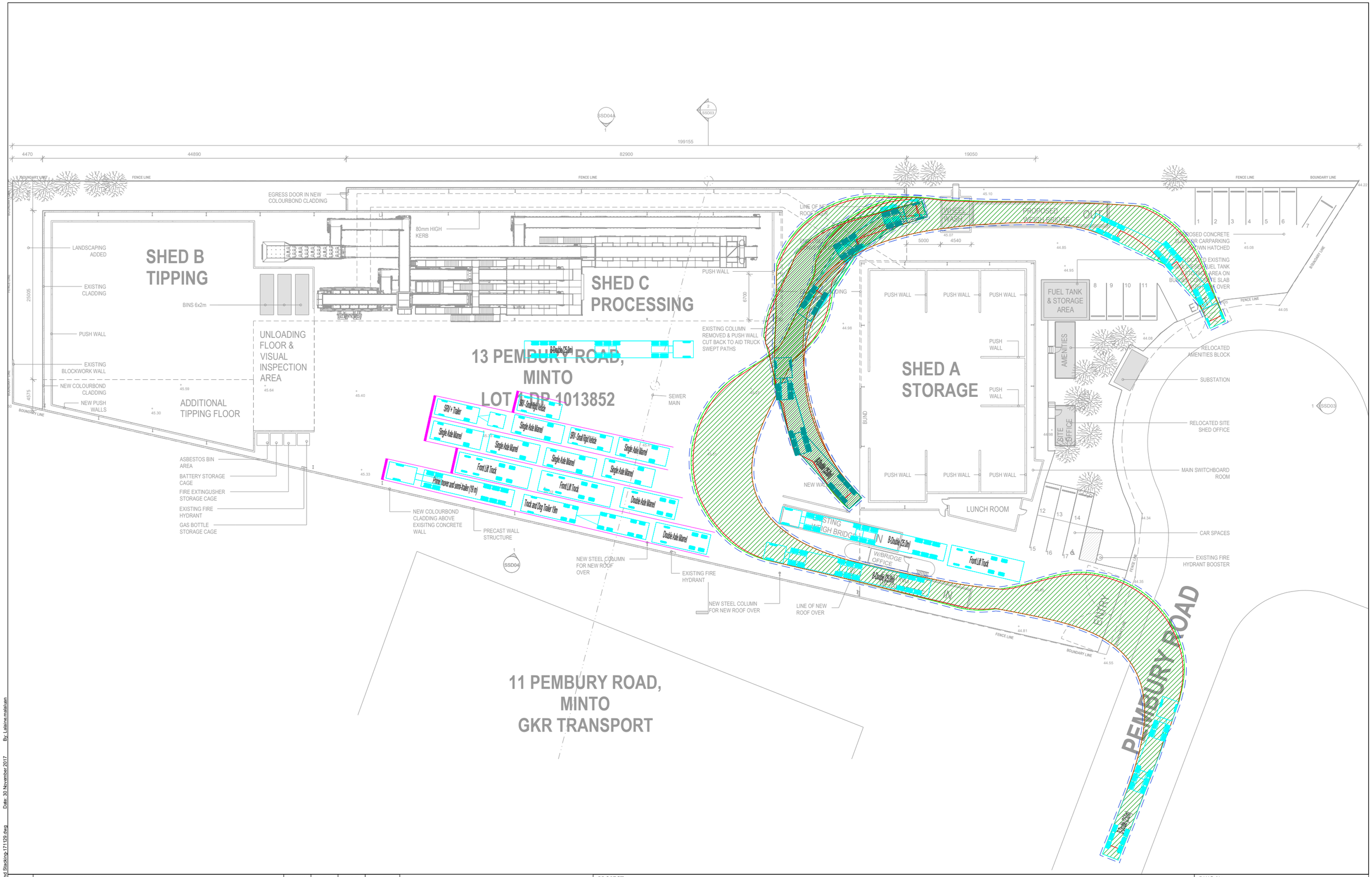
DATE STAMP: 30 NOVEMBER 2017

PROJECT No.: 15016

SCALE: 1:500 @A3

REV.: A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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PROJECT: 13 PEMBURY ROAD, MINTO

TITLE: WASTE COLLECTION
25m B-DOUBLE SWEPT PATH VIA INBOUND WEIGHBRIDGE (1)

DWG No. FIGURE 4

DATE STAMP 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
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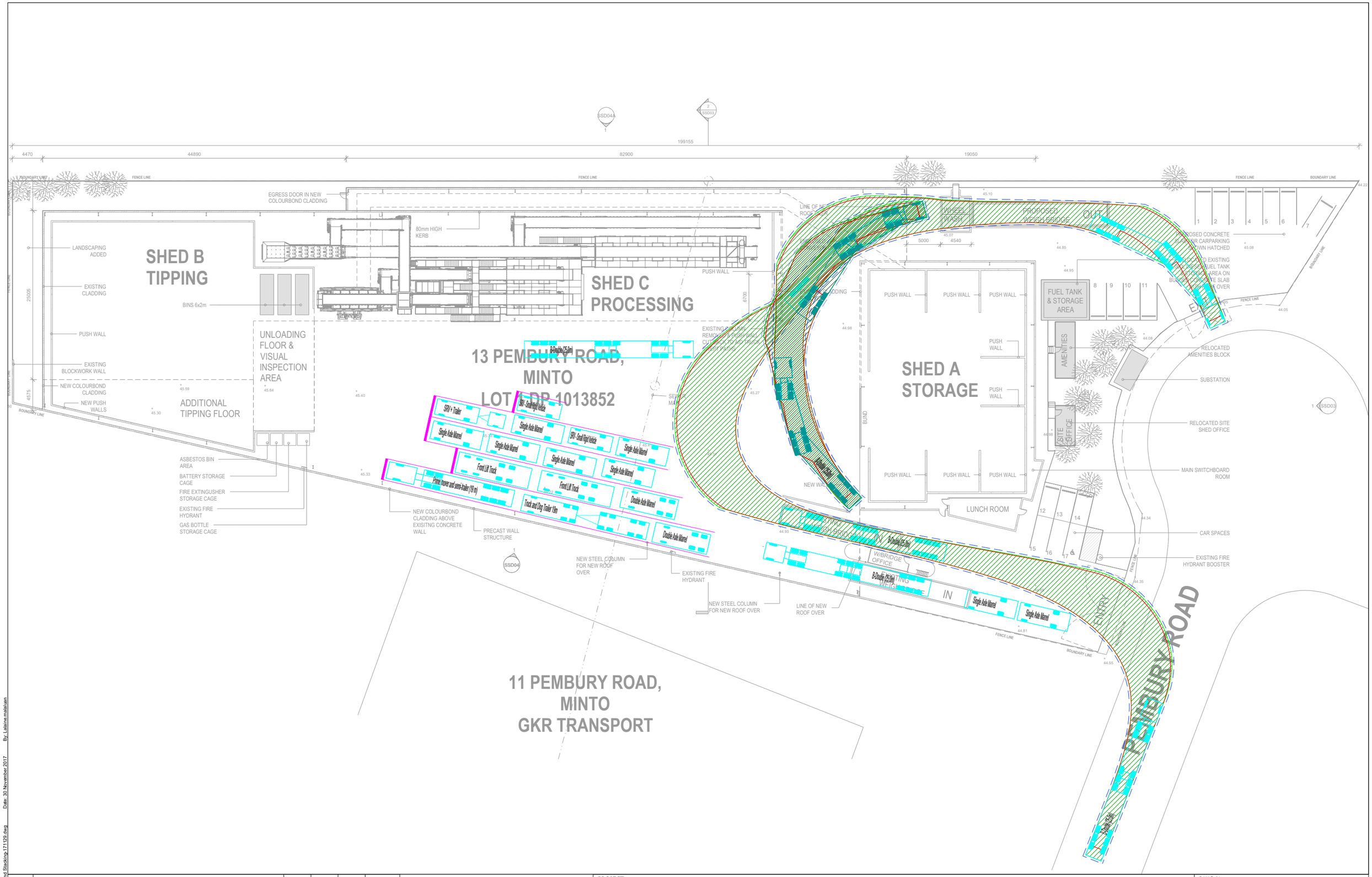
Filename: 15016CAD\6-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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Email: info@ttpp.net.au

PROJECT: 13 PEMBURY ROAD, MINTO

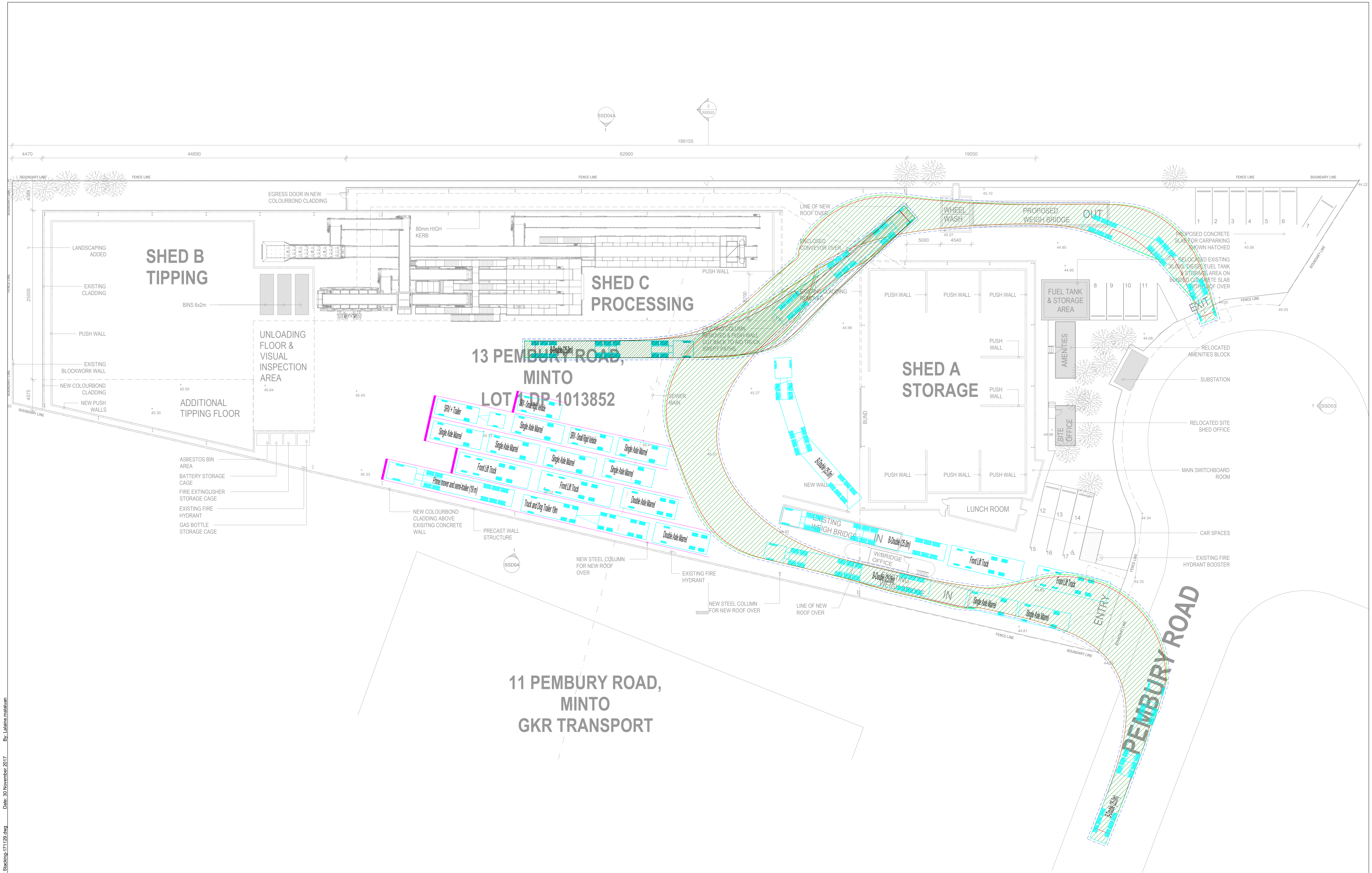
TITLE: WASTE COLLECTION
25m B-DOUBLE SWEPT PATH VIA INBOUND WEIGHBRIDGE (2)

DWG No. FIGURE 5

DATE STAMP 30 NOVEMBER 2017

PROJECT No. 15016 | SCALE 1:500 @A3 | REV. A

Filename: 15016CAD15-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.maliluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

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PROJECT: 13 PEMBURY ROAD, MINTO

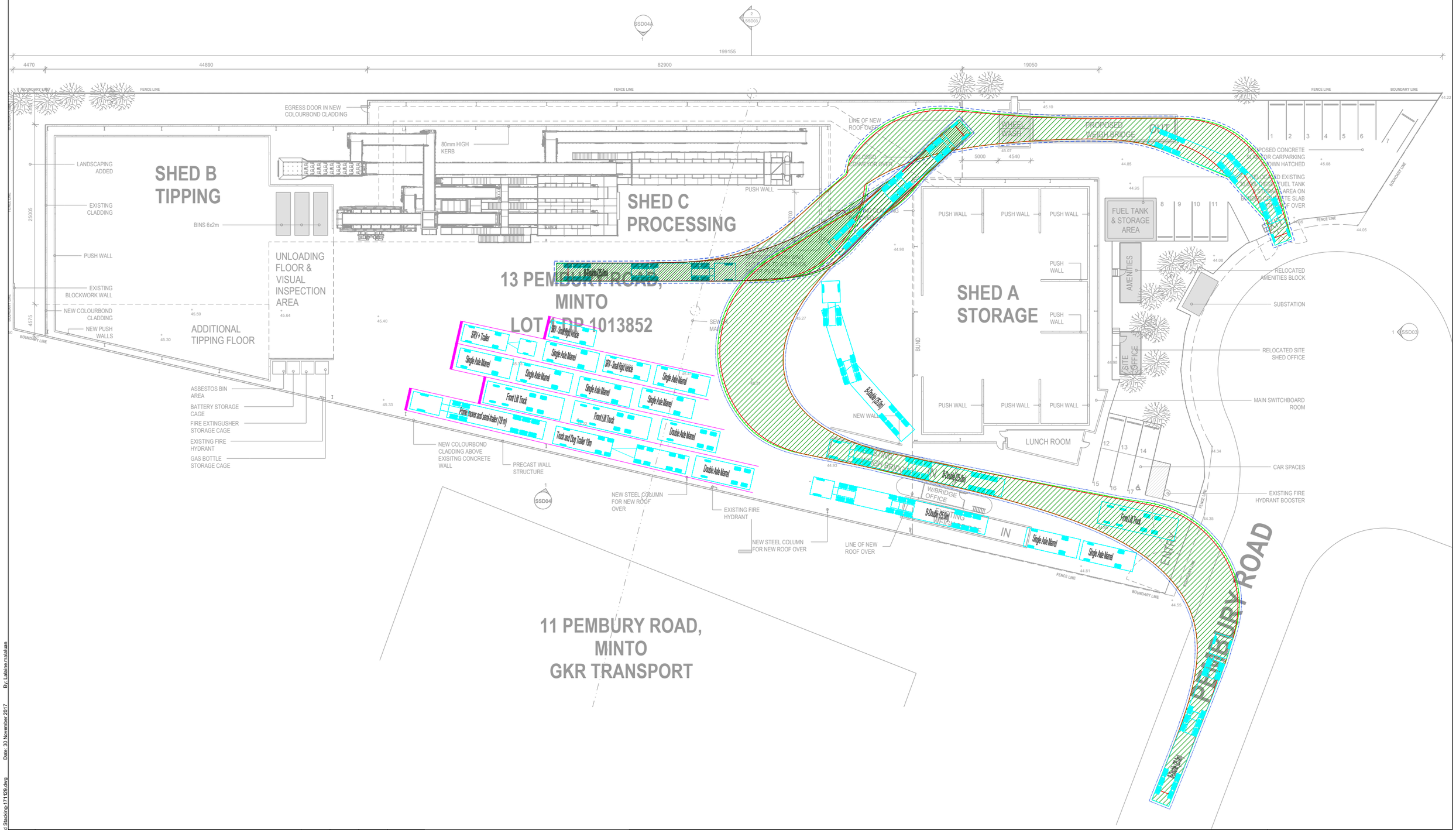
TITLE: WASTE COLLECTION
25m B-DOUBLE SWEPT PATH VIA INBOUND WEIGHBRIDGE (1)

DWG No.: FIGURE 6

DATE STAMP: 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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PROJECT: 13 PEMBURY ROAD, MINTO

TITLE: WASTE COLLECTION
25m B-DOUBLE SWEPT PATH VIA INBOUND WEIGHBRIDGE (2)

DWG No.: FIGURE 7

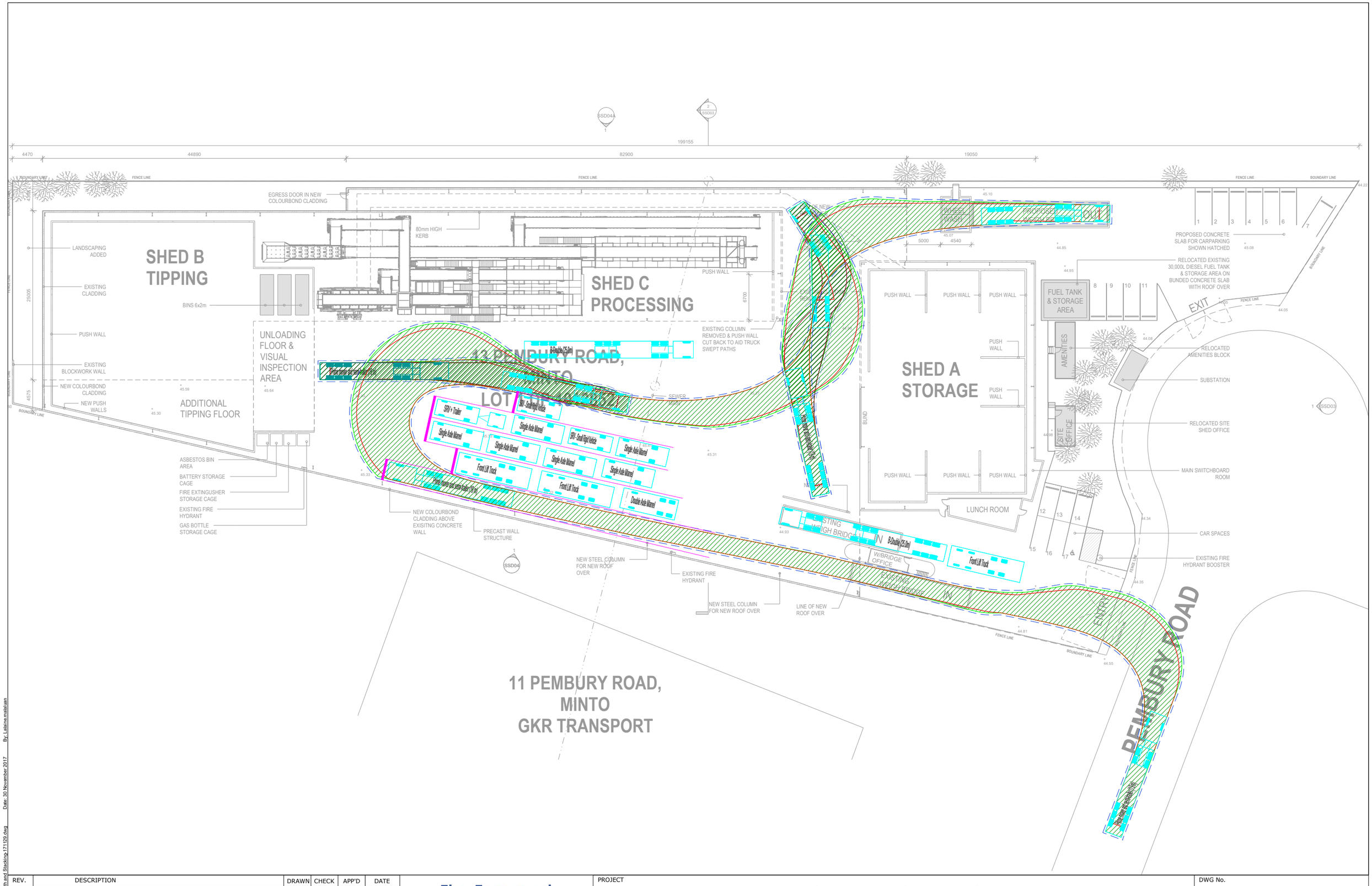
DATE STAMP: 30 NOVEMBER 2017

PROJECT No.: 15016

SCALE: 1:500 @A3

REV.: A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

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PROJECT: 13 PEMBURY ROAD, MINTO

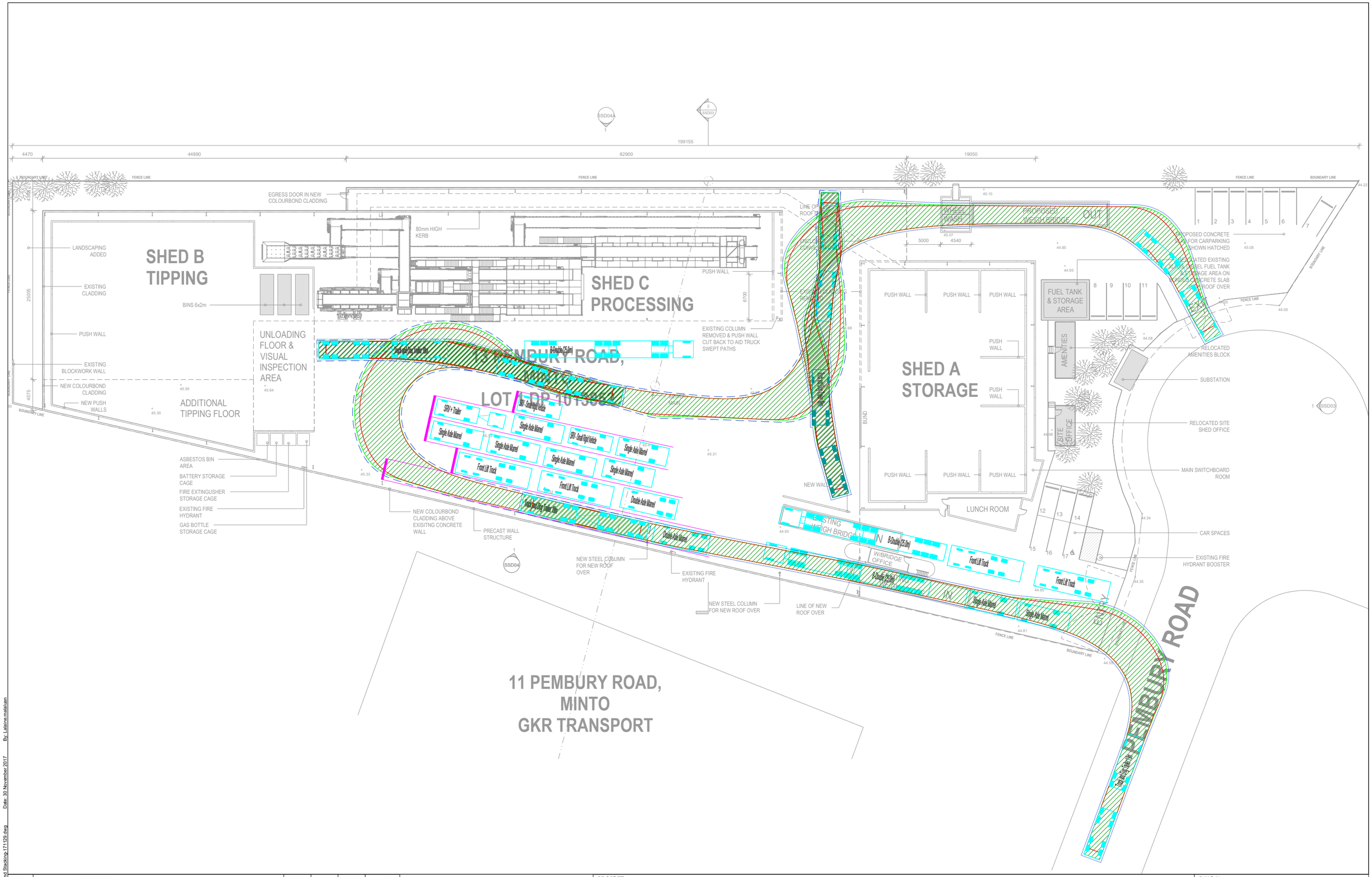
TITLE: WASTE DEPOSIT & COLLECTION
19m SEMI-TRAILER SWEPT PATH VIA INBOUND WEIGHBRIDGE (1)

DWG No. FIGURE 8

DATE STAMP 30 NOVEMBER 2017

PROJECT No. 15016 | SCALE 1:500 @A3 | REV. A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malalaan



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PROJECT: 13 PEMBURY ROAD, MINTO

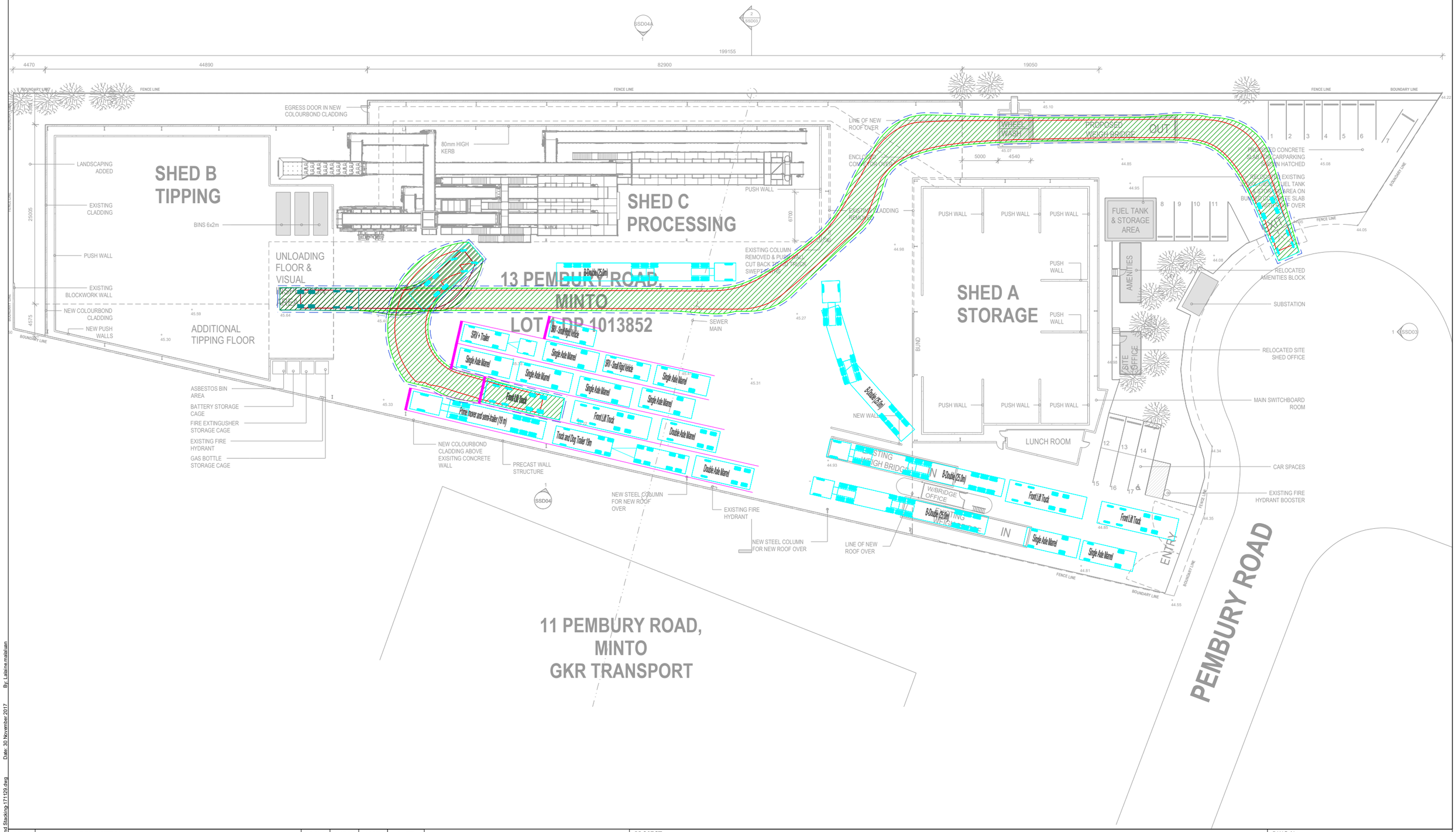
TITLE: WASTE DISPOSAL & COLLECTION
19m TRUCK-AND-DOG SWEPT PATH VIA INBOUND WEIGHBRIDGE (1)

DWG No. FIGURE 9

DATE STAMP 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

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PROJECT: 13 PEMBURY ROAD, MINTO

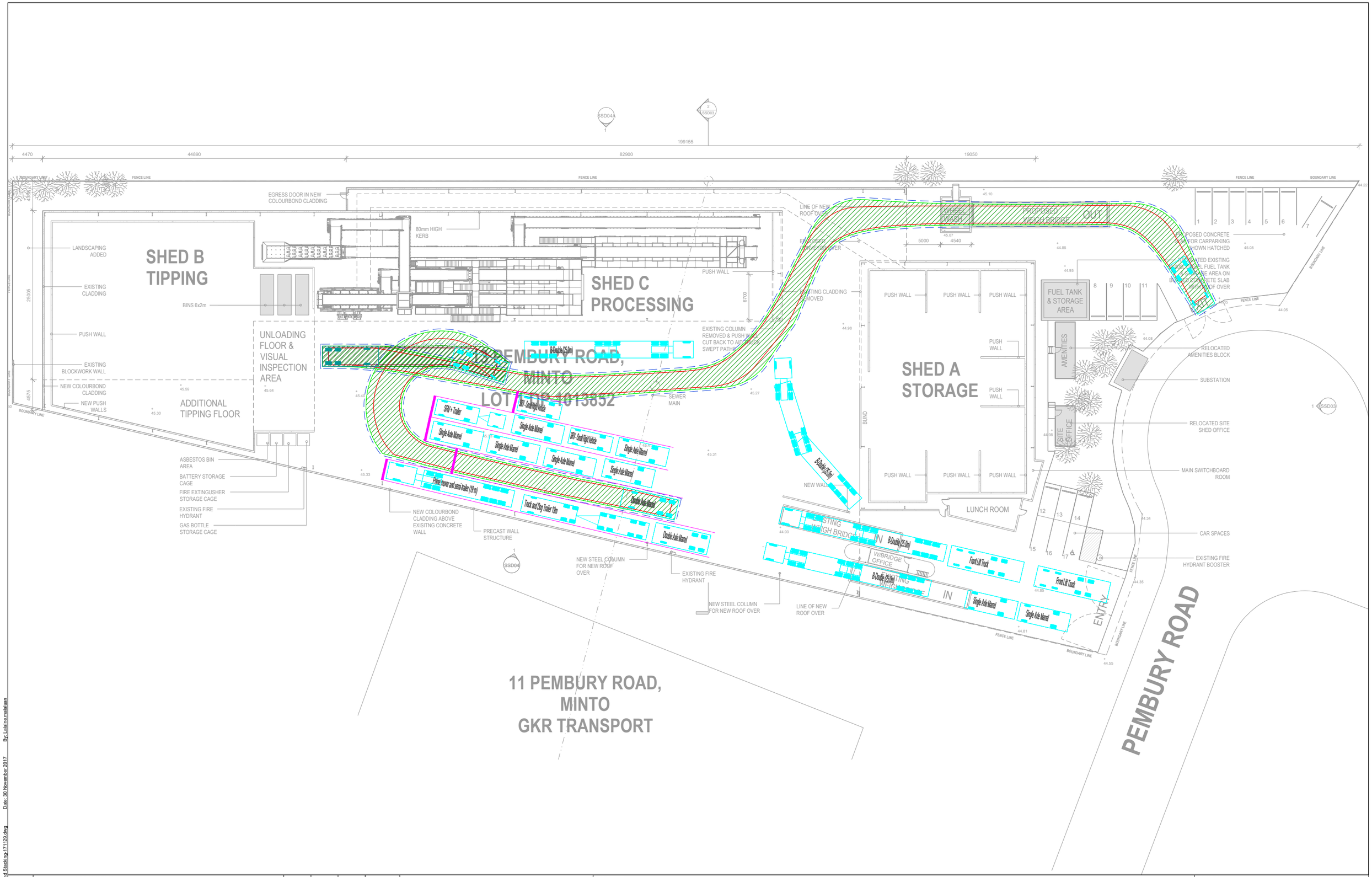
TITLE: WASTE DISPOSAL
11m FRONT LIFT TRUCK SWEPT PATH

DWG No. FIGURE 10

DATE STAMP 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD15-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.malaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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PROJECT: 13 PEMBURY ROAD, MINTO

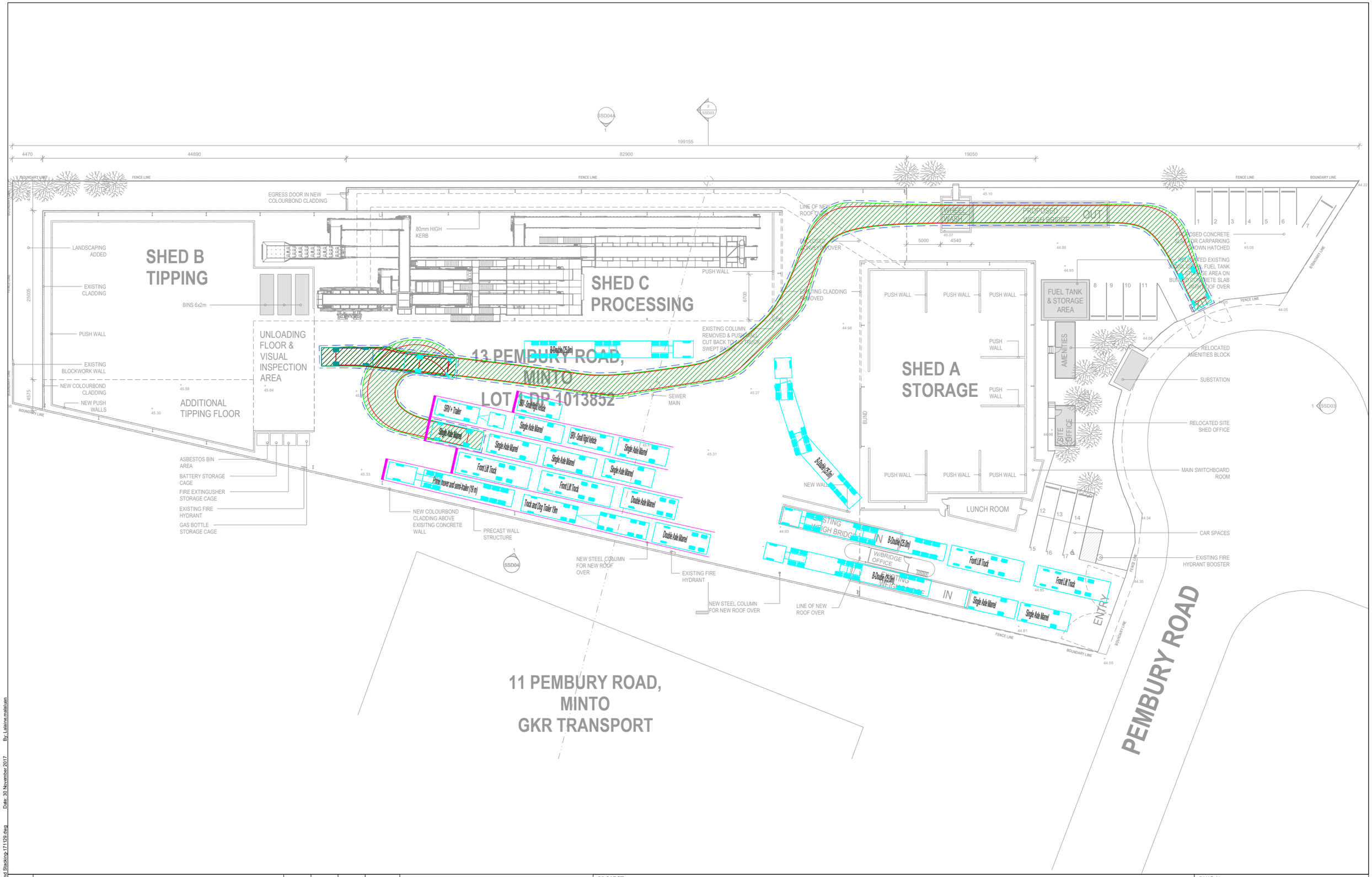
TITLE: WASTE DISPOSAL
8.3m DOUBLE AXLE MARREL TRUCK SWEPT PATH

DWG No.: FIGURE 11

DATE STAMP: 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD16-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lakline.mahaluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
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PROJECT: 13 PEMBURY ROAD, MINTO

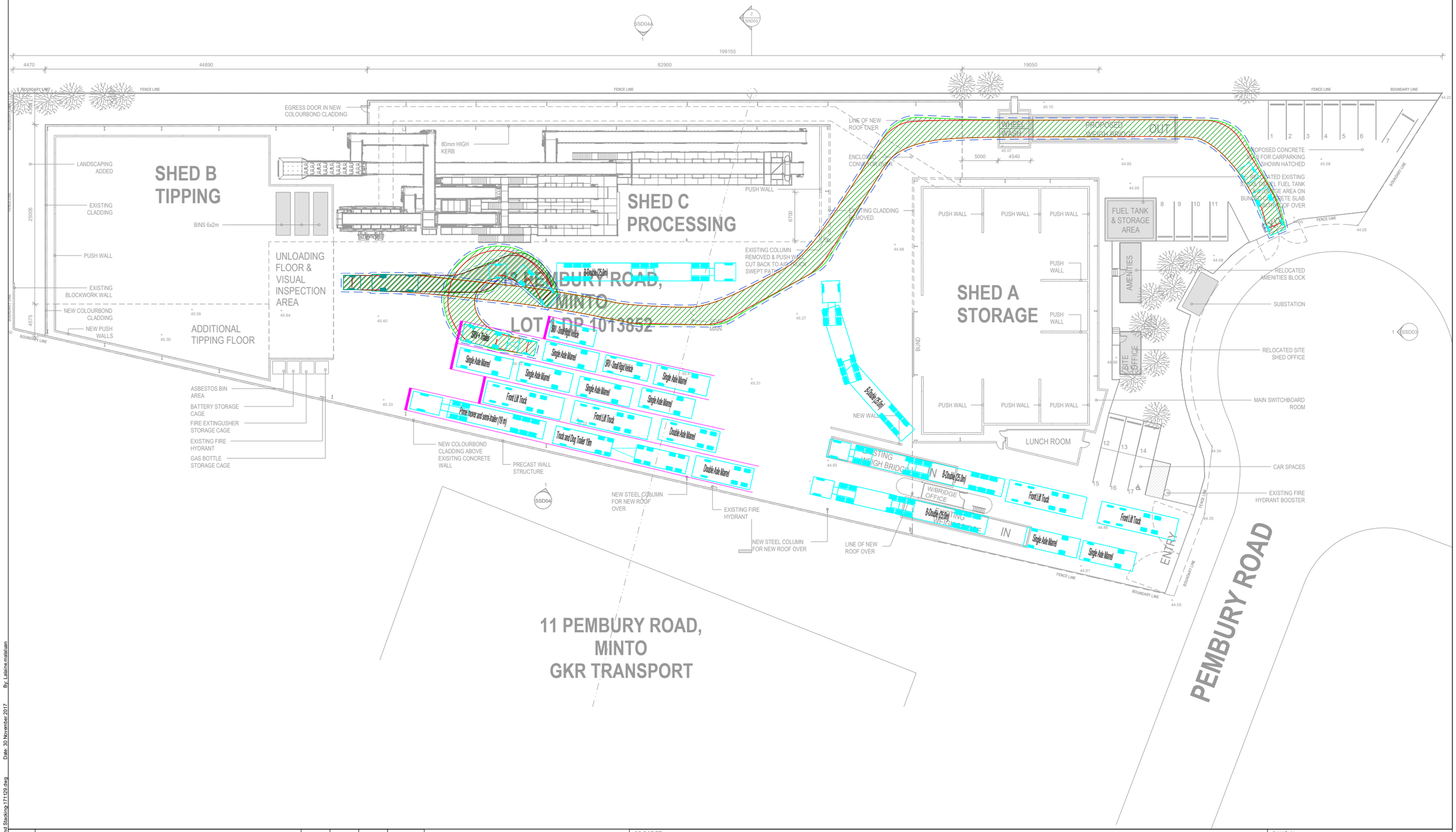
TITLE: WASTE DISPOSAL
7.6m SINGLE AXLE MARREL TRUCK SWEPT PATH

DWG No. FIGURE 12

DATE STAMP 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD15-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.maliluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

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Tel: 02 8437 7800
Email: info@ttpp.net.au

PROJECT: 13 PEMBURY ROAD, MINTO

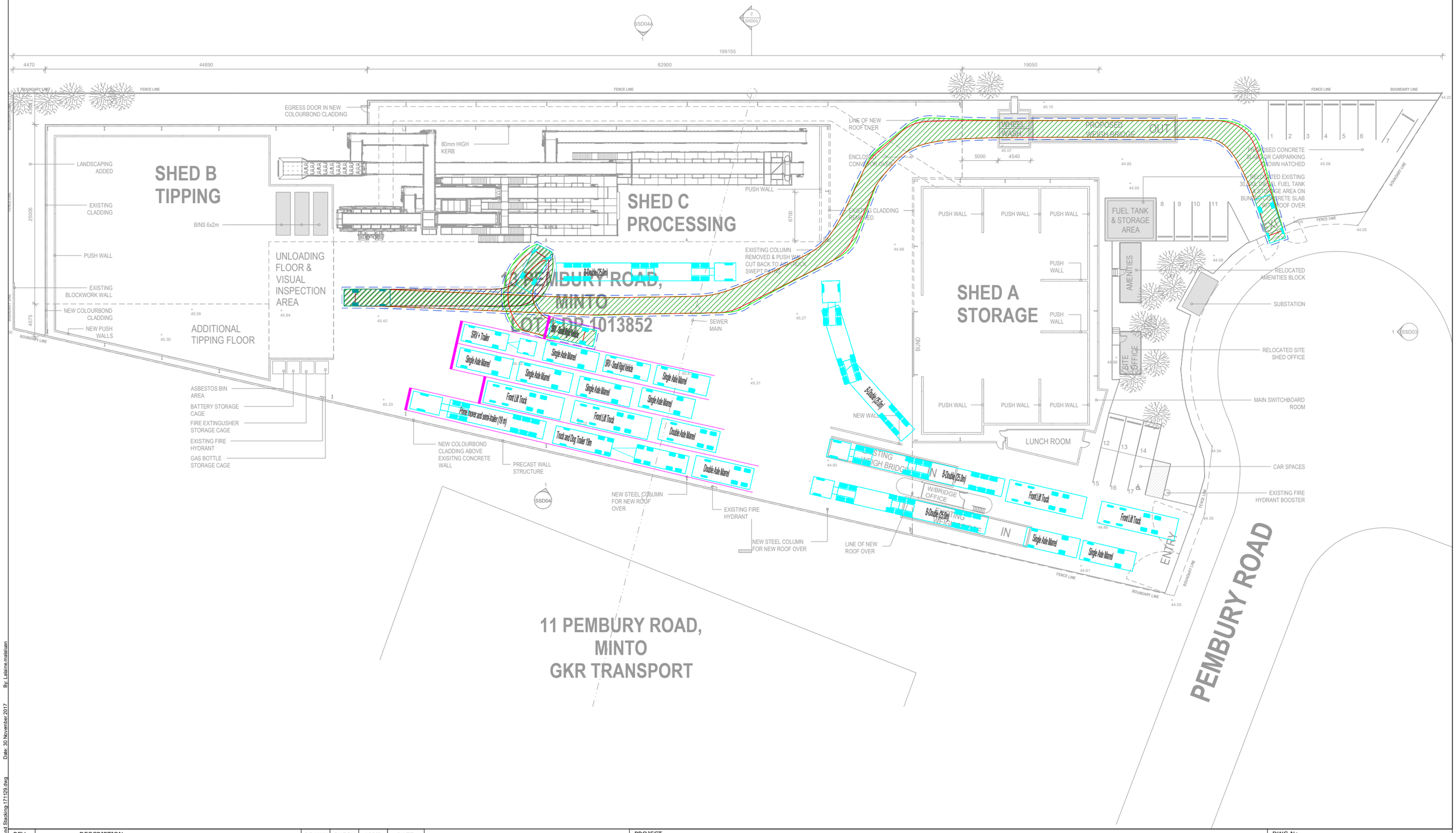
TITLE: WASTE DISPOSAL
6.4m SMALL RIGID VEHICLE WITH TRAILER SWEPT PATH

DWG No. FIGURE 13

DATE STAMP 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD15-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.maliluan



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	WJ	30/11/17

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PROJECT: 13 PEMBURY ROAD, MINTO

TITLE: WASTE DISPOSAL
6.4m SMALL RIGID VEHICLE SWEPT PATH

DWG No. FIGURE 14

DATE STAMP 30 NOVEMBER 2017

PROJECT No.	SCALE	REV.
15016	1:500 @A3	A

Filename: 15016CAD15-Swept Path and Stacking-171129.dwg Date: 30 November 2017 By: Lalaine.maliluan

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