Newcastle Office
Ground Floor, 241 Denison Street, Broadmeadow, NSW Australia 2292
PO Box 428, Hamilton, NSW Australia 2303
T +61 2 4940 4200 F +61 2 4961 6794 E newcastle@rpsgroup.com.au W rpsgroup.com.au

Our Ref:	Shaun Smith	**E-mail:**	shaun.smith@rpsgroup.com.au
Date:	3 November 2017	**Direct Dial:**	02 4940 4226

Attn: Kate Masters
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Kate,

RE: Greenspot Wetherill Park – SSD 7401 – Response to comments

I make reference to your email comments received on Thursday 19 October 2017 for the abovementioned project proposed by Bettergrow. The following information seeks to address the comments provided by the Department and resolve any outstanding information requests.

Air Quality and Odour

DPE Comment:

1. Provide further details regarding the hours of receival and dispatch of food and organic waste. It is noted that the odour assessment was modelled off a 5 day period, however waste receival is proposed for 5.5 days including Saturday 6am to 2pm (See page 8 of the RTS).

Bettergrow Response:

The following operational hours will apply to the resource recovery facility:

- Hydro-excavation / drill muds will be received over a 24 hour period Monday to Friday and from 6am to 2pm Saturdays;
- Garden organics and mixed food and garden organics will be received between 5:00am to 11:00pm Monday to Friday.
- Food organics will be received between 4:00am to 4:00pm Monday to Friday. This is primarily to capture the generation times for café's and food outlets;
- Bulk landscape materials will be received at the site from wholesalers between 5am to 11pm Monday to Friday;
- Processing of waste is to occur only during the hours of 7am to 6pm Monday to Friday; and
- Dispatch of processed waste and landscape materials will occur during the hours of 7am to 6pm Monday to Friday, and on Saturdays from 6am to 2pm.

Please note that no organic waste (food or garden) will be received at the site outside of the weekday hours (ie. no organics received on Saturday's or Sunday's).

DPE Comment:

2. Please confirm how often (ie. how many times a year) waste would need to be stored on the site for 48 hours.

Bettergrow Response:

Based on Bettergrow's other operations at Ravensworth and Bathurst, it is envisaged that waste would remain on site for up to 48hrs no more than 8 times per year. This waste material would relate only to the organics operations and would be stored inside the buildings that are managed by the carbon odour control system. The amount stored would be minor (up to half a truck load), and significantly less that that held onsite during normal weekday operations. As the odour control system has been designed to manage odour generation from a significantly larger volume of organic waste, the system would easily treat the odour produced from such a small amount of remaining organic waste.

DPE Comment:

3. The Dust Assessment, Appendix 7 of the RTS does not include the background concentrations of PM_{10}, dust deposition or TSP. The air quality criteria is based on a cumulative impact. Therefore the background concentration and the proposed development's contribution to dust needs to be compared to the NEPM Ambient Air Quality criteria. The assessment must also include an assessment of $PM_{2.5}$.

Bettergrow Response:

The EPA Approved Methods specifies air quality assessment criteria for assessing impacts from dust generating activities. These criteria are consistent with the National Environment Protection Measures for Ambient Air Quality (NEPC, 1998).

The following table summarises the air quality goals for dust and particulate matter which are relevant to this assessment. The air quality goals relate to the total concentrations of dust and particulate matter in the air and not just that from the proposed development. Some consideration of background levels needs to be made when using these goals to assess impacts.

Impact Assessment Criteria – Dust and Particular Matter

Pollutant	Averaging Period	Impact	Criteria
Total Suspended Particulates (TSP)	Annual	Total	90 µg/m^3
Particulate Matter ≤ 10 µm (PM_{10})	Annual	Total	30 µg/m^3
	24 Hour	Total	50 µg/m^3
Deposited Dust (DD)	Annual	Total	4 g/m^2/month
	Annual	Incremental	2 g/m^2/month

The air quality assessment has been prepared utilising background PM_{10} data from the nearest EPA air quality station which is located at Prospect. Data for PM_{10} collected in the years 2007 to 2015 is provided in the following table for both the Annual Average and 24 Hour Average.

PM_{10} Data 2007 to 2015 – EPA Prospect Monitor

Year	Annual Average PM_{10} ($\mu g/m^3$)	24 Hour Average PM_{10} ($\mu g/m^3$)	
		Maximum	90th Percentile
2007	18.1	46.3	28.1
2008	17.8	41.8	27.5
2009	25.9	**1680.3**	32.3
2010	15.4	40.1	22.8
2011	15.8	41.5	24.3
2012	17.2	38.7	26.5
2013	19.2	**81.8**	30.0
2014	17.6	44.3	25.6
2015	17.6	**68.7**	26.2

The above table indicates that ambient PM_{10} concentrations in the area surrounding the site are generally below recommended limit of 50 $\mu g/m^3$. Widespread bushfires in the Blue Mountains and Sydney region during summer 2009 and October 2013 resulted in a number of days where ambient PM_{10} concentrations were significantly elevated. Background concentrations during these years are considered to be artificially elevated by these natural occurrences.

There is no available site specific for Total Suspended Particle (TSP) and deposited dust monitoring data and the Prospect monitoring site does not measure these components. However, estimates of the background levels of TSP concentrations can be determined from a relationship between measured PM_{10} concentrations. This relationship assumes that 40% of the TSP is PM_{10} and has established as part of a review of ambient monitoring data collected by co-located TSP and PM_{10} monitors operated for reasonably long periods of time in the Hunter Valley. In the absence of TSP data at the Prospect monitoring site, this method has been applied to the assessment.

Applying this relationship to the 2007 to 2015 annual average PM_{10} data at the Prospect monitoring station provides the following estimates for annual average TSP concentrations.

Estimated TSP and Depositional Dust Concentrations Calculated from PM_{10} Data

Year	Annual Average PM_{10} ($\mu g/m^3$)	Estimated Annual Average TSP ($\mu g/m^3$)	Estimated Annual Average Depositional Dust (g/m^2/month)
2007	18.1	45.25	2.01
2008	17.8	44.50	1.97
2009	25.9	64.75	2.87
2010	15.4	38.50	1.71
2011	15.8	39.50	1.75
2012	17.2	43.00	1.91
2013	19.2	48.00	2.13
2014	17.6	44.00	1.95
2015	17.6	44.00	1.95

Estimated background values for annual average TSP in all years are below the recommended limit of 90 µg/m^3.

To estimate annual average dust deposition levels, a similar process to the method used above to estimate TSP concentrations is applied. This approach assumes that a TSP concentration of 90 µg/m^3 will have an equivalent dust deposition value of 4 g/m^2/month. Estimated depositional dust levels are provided in the table above. Estimated annual average depositional dust levels in all years are below the recommended limit of 4 g/m^2/month.

Based on the background information presented above, and the previous project generated results provided in Table 12 of the Dust Assessment prepared by AED, below is an updated results table which shows project generated dust, background dust, and total dust for the project. Note only background level data from 2013 to 2015 period has been used from the EPA Prospect monitor.

Revised Dust Impact Results – Background and Incremental Results for PM10, TSP and Depositional Dust

Scenario	Vehicle Movement Scenario	Pollutant (unit)	Averaging Period	Meteorological Year	Background Level	Project Generated	Total	Assessment Criteria
1	Peak (415.5 tonnes/day)	TSP (µg/m^3)	Annual	2013	48.0	17.4	65.4	90
				2014	44.0	16.5	60.5	90
				2015	44.0	17.8	61.8	90
		PM_{10} (µg/m^3)	24 Hour	2013	**81.8**	21.3	**103.1**	50
				2014	44.3	18.1	**62.4**	50
				2015	**68.7**	22.2	**90.9**	50
			Annual	2013	19.2	4.6	23.8	30
				2014	17.6	4.3	21.9	30
				2015	17.6	4.6	22.2	30
		Dust Deposition (g/m^2/month)	Monthly	2013	2.13	0.07	2.20	2.0/4.0
				2014	1.95	0.07	2.02	2.0/4.0
				2015	1.95	0.04	1.99	2.0/4.0
2	Average (287.5 tonnes/day)	TSP (µg/m^3)	Annual	2013	48.0	12.0	60.0	90
				2014	44.0	11.4	55.4	90
				2015	44.0	12.3	56.3	90
		PM_{10} (µg/m^3)	24 Hour	2013	**81.8**	14.7	**96.5**	50
				2014	44.3	12.5	**56.8**	50
				2015	**68.7**	15.3	**84.0**	50
			Annual	2013	19.2	3.1	22.3	30
				2014	17.6	3.0	20.6	30
				2015	17.6	3.2	20.8	30

		Dust Deposition (g/m^2/month)	Monthly	2013	2.13	0.05	2.18	2.0/4.0
				2014	1.95	0.05	2.00	2.0/4.0
				2015	1.95	0.03	1.98	2.0/4.0

Results indicate that the incremental increase in dust emissions from the development at the site boundary will not exceed the relevant assessment criteria except for 24 hour PM_{10} levels.

Background values for PM_{10} are already high, and exceed the 50 $\mu g/m^3$ assessment criteria in year 2013 and 2015 without the addition of dust from the subject site. It is most likely that these background levels are excessively high due the high density of surrounding industrial development to the EPA Prospect monitoring station.

When considering the site in isolation to the background levels, the predicted 24 hour PM_{10} dust levels generated are below the 50 $\mu g/m^3$ assessment criteria during peak and average operational scenarios, however further verification of the project increment is to be undertaken and provided to DPE.

Due to the nature of the particle size distribution of particulate matter that is typically associated with bulk landscape material handling, results for $PM_{2.5}$ have not been developed. Combustion type emission sources are more likely to contribute to impacts in the particle size range of $PM_{2.5}$ or less and are not considered applicable to this project.

DPE Comment:

4. Please provide further justification as to why to the landscape supplies area is not proposed to be sealed and whether air quality monitoring is proposed.

Bettergrow Response:

Following on from a discussion with Northrop who have undertaken the engineering design for stormwater for the development, directing stormwater from the landscape area through the drill mud processing plant would potentially see a doubling of the amount of water that would need to be sent to trade waste each day, ie. an increase from 103.4kL a day (on average) up to 200kL a day. The treatment and release of this amount of water to trade waste could potentially become operationally constraining due to the ongoing costs with this option.

As such, Bettergrow proposes to treat the yard in the bulk landscape area with a 2 coat tar seal and still send the water to stormwater as per the current design prepared by Northrop for the EIS. The sealing of this area will reduce the potential for fine clay particles to be generated and entrained to the site stormwater system. The proposed stormwater system to treat water from this area includes the following key components:

- Surface water runoff from the bulk landscaping area is proposed to be directed to a sediment trap with a minimum storage volume of 41kL. The system has been designed in accordance with NSW Managing Urban Stormwater: Soil's and Construction 'Blue Book' guidelines to capture sediment laden rainfall from across the area. Given the sealed nature of the surface with minimal fines, the trap has been sized as a type C basin to collect course sediment, assuming a peak runoff coefficient of 0.8; and
- The piped stormwater network is also to be directed to a proprietary STC-27 Humeceptor system. The Humeceptor system is an underground, precast concrete stormwater treatment solution that utilises hydrodynamic and gravitational separation to efficiently remove total suspended solids (≥10 microns) and entrained hydrocarbons. The proposed system has been designed to provide a

storage volume of 27kL, including an oil storage volume of approximately 4000 L in case of onsite spillages.

Any material spilt during loading or unloading activities will be recovered by the loading plant and placed back into the product bays. Any remaining finer materials will be recovered by the use of an onsite road sweeper. The area will be inspected and maintained on a regular basis throughout the day and prior to heavy rains.

The sealing of this area, the proposed stormwater management devices, and the regular maintenance of the sealed surface will ensure stormwater generated from this area is suitably treated prior to discharge to the Council stormwater system.

As this area is now proposed to be sealed the need for any air quality monitoring is not considered required. All landscape product bays are 3 sided which allows for the containment of materials from adverse weather. Also materials will not be stockpiled higher than the sides of the bays and water sprays will be installed over each bay to allow for dust suppression and product treatment as required. Should ongoing inclement weather be experienced the product bays can be tarped as a further mitigation measure.

Traffic

DPE Comment:

5. Please demonstrate that the facility will not result in queuing along Davis Road during peak times. This should include a plan showing how many heavy vehicles can be accommodated on the site, how long the weighbridge process takes and how long it takes for vehicles to enter/exit the site and further details on how the queuing impacts will be managed.

Bettergrow Response:

In order to prevent the queuing of trucks outside of the site boundary the following will be implemented:

- Separation of vehicles with all staff and visitors entering the site via the Eastern entry gate only;
- The bulk of the trucks expected to arrive at the peak times between 7:00am and 9:00am will be from Council kerbside collection vehicles (medium rigid vehicle) with an average length of 8.8m;
- All vehicles will be supplied with identity tags allowing them to enter the bridge and activate the tag, weight is recorded and docket printed if required. Individual transaction time a maximum of 2 minutes;
- Maximum number of vehicles entering and exiting the site, as shown in the breakdown of the vehicle movements, is estimated to be up to 38 during the hour of 7:00am-8:00am. This number will be reduced by re-distributing truck and dog, tanker, and fuel delivery vehicles to less congested time slots throughout the day. Up to 10 of the vehicles predicted during the 7:00am-8:00am period can be rescheduled to other less congested daytime periods resulting in peak traffic volumes during this period being reduced to 28 movements;
- Average transaction time on the incoming weighbridge estimated to be 2 minutes;
- Provision of separate incoming and outgoing weighbridges; and
- Design allows for one truck on the weighbridge with one 19m B-Double parked ready to enter (or 2 medium rigid vehicles 8.8m long each) without queuing over the nature strip or onto the roadway.

Queuing of trucks exiting the facility will be managed through the following:

- As with trucks entering, transaction time on the weighbridge to be 2 minutes on average;

- Capacity for queuing on the internal roads in the top area of the site; and
- Average turn-around time on site for trucks to be no greater than 15 minutes.

It should also be noted that traffic volumes used in the traffic modelling are based on peak daily volumes which are 25% above the anticipated average volumes. Prior to the commencement of operations a detailed traffic management plan will be developed in consultation with RMS and Council to ensure any potential traffic concerns are addressed.

The following figure has been prepared showing the dimensions of the proposed heavy vehicle access, the weighbridges, and the queuing of 19m B-Double trucks on the weighbridge and one truck waiting to enter.

N

MGA

21
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19
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17
16
15
14
13

CAR PARKING

3.2

PROPOSED WEIGH BRIDGE 22m

WEIGHBRIDGE OFFICE

12.5

19.9

3.7

HOLDING TANKS
WITH CONCRETE

GROUND TANKS

CARPA

SHARED ZONE

4
3
2
1

ADMINISTRATION BUILDING

DISH

DRAIN

PP

PP

0 5 10 15

SCALE 1 : 200 (A3)

DIAL BEFORE YOU DIG
www.1100.com.au

TITLE: SITE ACCESS

LOCATION: DAVIS RD
WETHERILL PARK

DATUM: GDA 94
PROJECTION: MGA ZONE 56

DATE: 25/10/2017
PURPOSE: PLANNING

AUTOCAD REF: J:\JOBS\127K\127695 Wetherill Park\10 - Drafting\Acad Drawing Files
VERSION: D A3

CLIENT: BETTER GROW
JOB REF: PR127695

RPS AUSTRALIA EAST PTY LTD (ABN 44 140 292 762)
241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4940 4200 F: 02 4961 6794 www.rpsgroup.com.au

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DPE Comment:

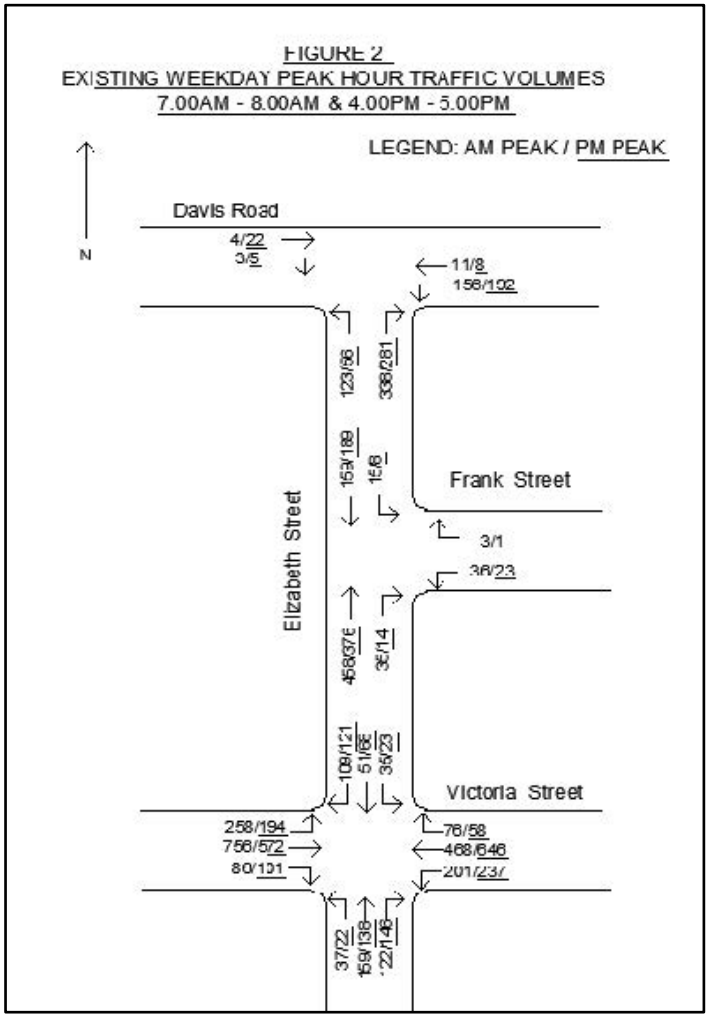
6. Please provide further details as to why traffic modelling from 4pm-6pm was considered appropriate. The Department notes that Council has requested modelling be conducted from 3pm-4pm.

Bettergrow Response:

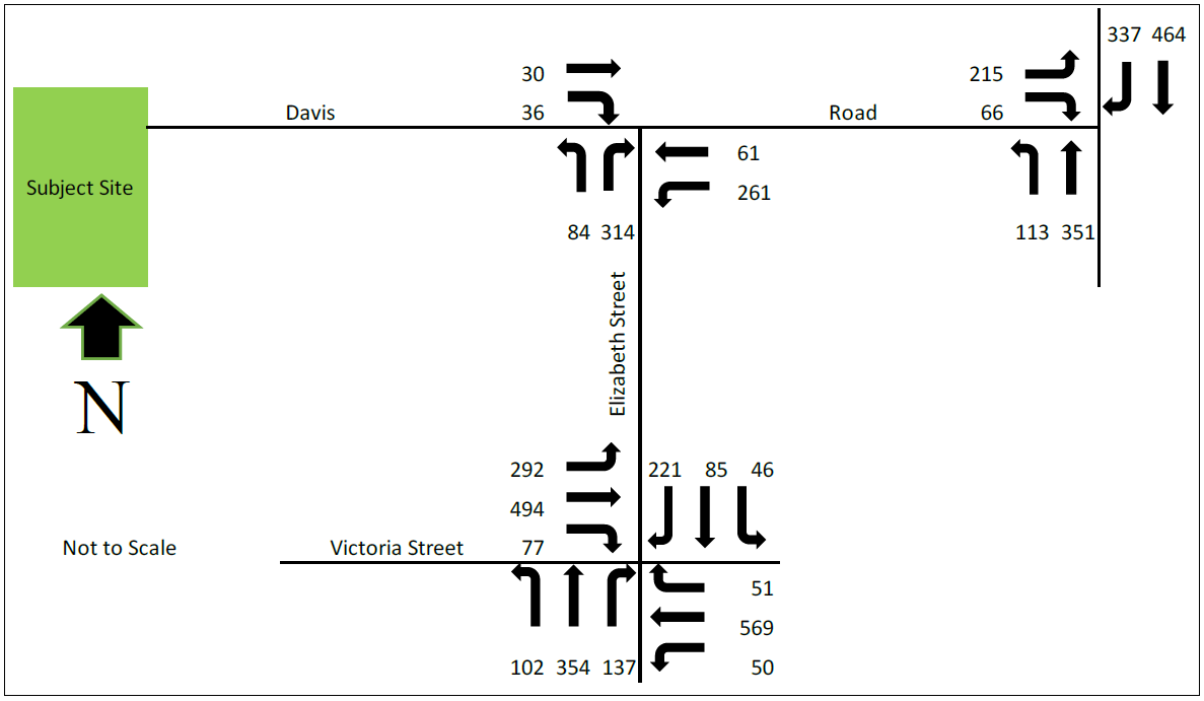
As stated in the RTS, previous and recent observations and surveys of the surrounding road network in the immediate vicinity of the site indicate that the evening peak is generally between 4pm – 6pm, which is commensurate with the operating hours of the surrounding industrial land use. Times outside of this peak period and on weekends have been observed to be generally lower. An evening/afternoon peak of between 3:00pm–4:00pm would be appropriate if there were schools within the immediate vicinity of the site, however there no schools within close proximity to the site or any specific factors nominated by Council that would indicate 3:00pm–4:00pm as being the evening peak period.

To further bolster this argument, a comparison has been made between the AM and PM peak hour traffic volumes collected by Thompson Stanbury for the subject development (period 7:00am to 8:00am & 4:00pm to 5:00pm) and the traffic counts collected by PeopleTrans (2016) for the EIS for the expansion of the Suez waste facility on Davis Road Wetherill Park (SSD 7267) (period 7:15am to 8:15am & 3:00pm to 4:00pm).

Figure 2 from the Traffic Impact Assessment prepared by Thompson Stanbury (below) shows the weekday peak hour traffic volumes between 7:00am-8:00am and 4:00pm-5:00pm.

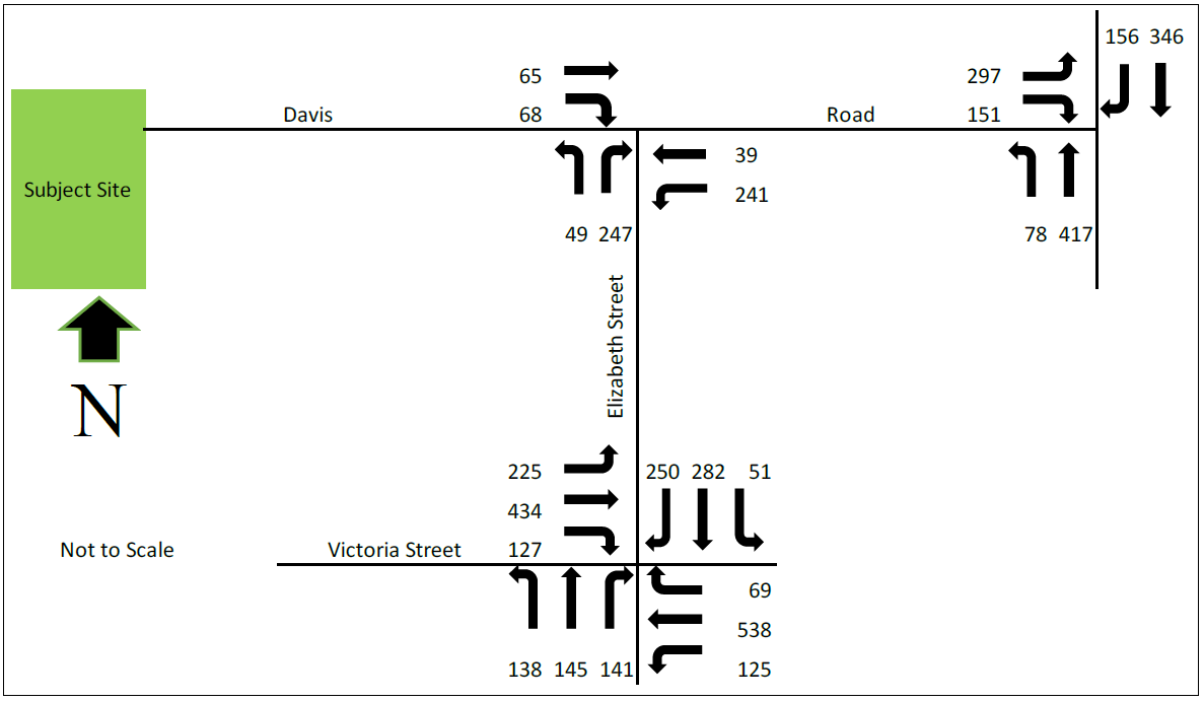


Figures provided below are taken from the Traffic Impact Assessment prepared by PeopleTrans (2016) for the EIS for an expansion of the Suez waste facility on Davis Road Wetherill Park (SSD 7267). These counts apply to the same roads as those provided for the Bettergrow EIS. The first figure represents morning peak hour traffic volumes between 7:15am-8:15am.



(Source: PeopleTrans (2016))

The second figure represents afternoon peak hour traffic volumes between 3:00pm-4:00pm.



(Source: PeopleTrans (2016))

On comparison of the traffic counts undertaken by Thompson Stanbury and PeopleTrans (2016) it was found that they are generally the same for both the AM and PM periods for both assessments. Further, the counts for the 4:00pm-5:00pm period undertaken by Thompson Stanbury and the 3:00pm-4:00pm period undertaken by PeopleTrans (2016) are also generally the same. Therefore there is no significant difference in traffic volumes during these periods.

This would indicate that the traffic counts undertaken by Thompson Stanbury for the Bettergrow EIS during the 4:00pm-5:00pm period are relevant and accurate for the assessment undertaken.

DPE Comment:

7. Please provide the existing daily truck movements along Davis Road and how this compares to the proposed development's daily truck movements.

Bettergrow Response:

Existing daily vehicle movements on Davis Road are estimated to be 7,000 as detailed in the Traffic Impact Assessment prepared by PeopleTrans (2016) for the EIS for an expansion of the Suez waste facility on Davis Road Wetherill Park (SSD 7267). The expanded Suez development is proposing to add 620 vehicle movements a day to Davis Road, which brings the total daily traffic movements to 7,620. The proposed vehicle movements for Bettergrow's project are estimated to be up to 304 movements per day. The additional movements from the Bettergrow development represent an overall 4% increase in daily traffic movements for Davis Road, bringing total movements to 7,924 daily.

Surface Water

DPE Comment:

8. Please provide further justification on why the landscape supplies facility is not proposed to be roofed and how surface water run-off from the landscape supplies area will be managed (i.e whether it is proposed to divert the run-off to the wastewater management system, if so, it needs to be demonstrated that the wastewater management system is capable of processing the additional surface water run-off).

Bettergrow Response:

The landscape bays are not proposed to be roofed as adequate stormwater management and treatment will be installed in this area. Also, it is not standard practice to have a roof over landscape product bays due to the operational and safety constraints posed by loading equipment. If a roof were placed over the landscape bays they would need to be at a height of 5 meters or more so as not to impede the use of loading equipment. A roof of 5 meters or more at this elevation would increase the visual impacts from the development.

As detailed above in Item 4, directing stormwater from the landscape area through the drill mud processing plant would potentially see a doubling of the amount of water that would need to be sent to trade waste each day, ie. an increase from 103.4kL a day (on average) up to 200kL a day. The treatment and release of this amount of water to trade waste could potentially become operationally constraining due to the ongoing costs with this option.

As such, Bettergrow proposes to treat the yard in the bulk landscape area with a 2 coat tar seal and still send the water to stormwater as per the current design prepared by Northrop for the EIS. The sealing of this area will reduce the potential for sediment to be generated and entrained to the site stormwater system. The proposed stormwater system to treat water from this area includes the following key components:

- Surface water runoff from the bulk landscaping area is proposed to be directed to a sediment trap with a minimum storage volume of 41kL. The system has been designed in accordance with NSW Managing Urban Stormwater: Soil's and Construction 'Blue Book' guidelines to capture sediment laden rainfall from across the area. Given the sealed nature of the surface with minimal fines, the trap has been sized as a type C basin to collect course sediment, assuming a peak runoff coefficient of 0.8; and
- The piped stormwater network is also to be directed to a proprietary STC-27 Humeceptor system. The Humeceptor system is an underground, precast concrete stormwater treatment solution that utilises hydrodynamic and gravitational separation to efficiently remove total suspended solids (≥10 microns) and entrained hydrocarbons. The proposed system has been designed to provide a storage volume of 27kL, including an oil storage volume of approximately 4000L in case of onsite spillages.

Any material spilt during loading or unloading activities will be recovered by the loading plant and placed back into the product bays. Any remaining finer materials will be recovered by the use of an onsite road sweeper. The area will be inspected and maintained on a regular basis throughout the day and prior to heavy rains.

The sealing of this area, the proposed stormwater management devices, and the regular maintenance of the sealed surface will ensure stormwater generated from this area is suitably treated prior to discharge to the Council stormwater system.

Fire

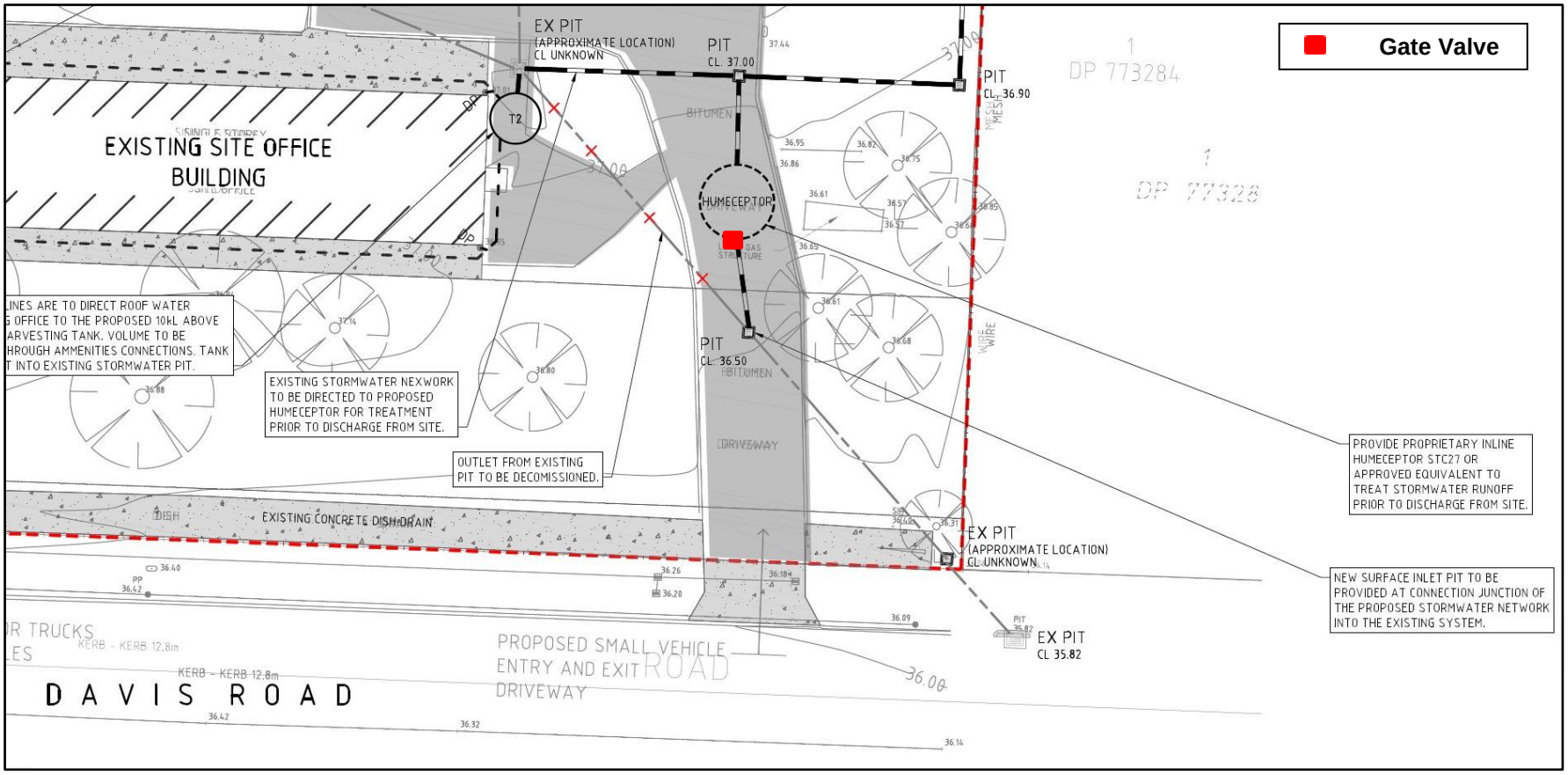
DPE Comment:

9. Please detail how external fire water would be managed.

Bettergrow Response:

Should a fire occur at the site, all fire water generated external to the processing buildings on the upper level will be captured and managed through the ability to isolate the site stormwater system from the Council stormwater system. The site stormwater system includes a sediment trap in the bulk landscape area with a capacity of 41kL. From the sediment trap the system then connects with a secondary treatment device (Humeceptor STC-27) that will have a capacity of 27kL. The entire system will have the ability to be shut off from the external street system by way of a gate valve on the outlet side of the Humeceptor. The two treatment devices will act as containment for fire water in the event of a fire.

The figure below is extracted from the Surface Water Assessment prepared by Northrop. Shown on the figure is the location a gate valve which will be installed to isolate the site surface water system from the Council stormwater system.


Gate Valve
EX PIT
(APPROXIMATE LOCATION)
CL UNKNOWN
PIT
CL. 37.00
PIT
CL. 36.90
EXISTING SITE OFFICE
BUILDING
T2
HUMECEPTOR
PIT
CL. 36.50
LINES ARE TO DIRECT ROOF WATER
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ARVESTING TANK. VOLUME TO BE
HROUGH AMMENITIES CONNECTIONS. TANK
T INTO EXISTING STORMWATER PIT.
EXISTING STORMWATER NEXWORK
TO BE DIRECTED TO PROPOSED
HUMECEPTOR FOR TREATMENT
PRIOR TO DISCHARGE FROM SITE.
OUTLET FROM EXISTING
PIT TO BE DECOMISSIONED.
EXISTING CONCRETE DISH DRAIN
PROVIDE PROPRIETARY INLINE
HUMECEPTOR STC27 OR
APPROVED EQUIVALENT TO
TREAT STORMWATER RUNOFF
PRIOR TO DISCHARGE FROM SITE.
NEW SURFACE INLET PIT TO BE
PROVIDED AT CONNECTION JUNCTION OF
THE PROPOSED STORMWATER NETWORK
INTO THE EXISTING SYSTEM.
EX PIT
(APPROXIMATE LOCATION)
CL UNKNOWN
EX PIT
CL 35.82
PROPOSED SMALL VEHICLE
ENTRY AND EXIT
DRIVEWAY
DAVIS ROAD
DP 773284
DP 773328

We trust this information is sufficient for your purposes, however should you require further details or clarification, please do not hesitate to contact Shaun Smith in our Newcastle office on 02 4940 4226.

Yours sincerely

RPS

Shaun Smith
Principal Environmental Planner