6 Impact assessment

This chapter provides an assessment of the likely environmental impacts of the proposal as required by Section 79C(1b) of the EP&A Act. Further details of the existing environment, assessment methods, assessment criteria, predicted impacts and proposed management measures are provided in:

- Appendix D: traffic assessment;
- Appendix E: air quality assessment;
- Appendix F: noise assessment;
- Appendix G: water assessment;
- Appendix H: hydrogeology assessment; and
- Appendix I: bushfire assessment.

6.1 Traffic and transport

6.1.1 Traffic and transport assessment

A traffic and transport assessment has been prepared for the proposal by EMM (see Appendix D). The assessment considers the impacts of traffic generation by the proposal on existing and future traffic network. The assessment is based on average daily vehicle movements to and from the site, including: delivery of 140,000 tonnes of waste; dispatch of products and non-recyclable residues; employee and visitor vehicles; and vehicles associated with ancillary waste activities.

6.1.2 Traffic and transport impacts

The existing traffic volumes the intersections of Anderson Road/Camden Valley Way and Hartley Road/Narellan Road were surveyed on Friday 11 December 2015 and historic tube traffic counts undertaken by RMS were also used (Table 6.1). A SIDRA analysis of the intersections of Anderson Road/Camden Valley Way and Hartley Road/Narellan Road found that the intersections are currently operating at near capacity during peak hours (level of service E) (although Anderson Road/Camden Valley Way is level of service D in the morning peak hour).

Table 6.1 Summary of daily traffic volumes and increases with the recycling facility traffic

Road	Existing daily traffic (all vehicles)	Additional daily traffic (all vehicles)	Increase (%)	Existing daily traffic (heavy vehicles)	Additional daily traffic (heavy vehicles)	Increase (%)
Camden Valley Way (north of Anderson Road)	22,400	132	0.6%	1,120*	50	4.5%
Anderson Road (east of Camden Valley Way)	15,000	166	1.1%	1,230*	64	5.2%
Hartley Road (north of Narellan Road)	22,000	110	0.5%	2,490*	42	1.7%
Narellan Road (east of Hartley Road)	57,400	72	0.1%	5,100*	28	0.5%

For all waste receival, products/rejects dispatch, site employees, site visitors and maintenance vehicle traffic, the proposal will generate a daily average of approximately 276 daily vehicle movements (Table 6.1). This will comprise 170 light vehicle movements and 106 heavy vehicle movements. Construction generated traffic will be much lower than operational traffic with a maximum of 40 daily vehicle movements, comprising ten light vehicles and ten heavy vehicles.

Traffic increases on the local area roads as a result of the proposal will be of the order of +0.1% to +1.1%. These traffic increases will not generally be noticeable to existing road users. The corresponding increases in the daily heavy vehicle traffic movements will be approximately +0.5% to +5.2% which will also not generally be noticeable to existing road users or affect the future maintenance requirement for these roads.

As shown in tables 6.2 and 6.3, the increases in traffic due to the project will not impact the existing service levels of the intersections at Anderson Road/Camden Valley Way and the Hartley Road/Narellan Road.

Table 6.2 Camden Valley Way/Anderson Road intersection operations

Intersection	Peak hour	Existing 2015 base traffic			With project operations traffic		
		LoS	DOS	AVD	LoS	DOS	AVD
Camden Valley Way/Anderson Road	Morning peak hour (8.00 to 9.00 am)	D	0.830	46.4	D	0.842	46.5
Camden Valley Way/Anderson Road	Afternoon peak hour (3.45 to 4.45 pm)	E	0.980	61.0	E	0.987	61.0

Table 6.3 Narellan Road/Hartley Road intersection operations

Intersection	Peak hour	Existing 2015 base traffic			With project operations traffic		
		LoS	DOS	AVD	LoS	DOS	AVD
Narellan Road/Hartley Road	Morning peak hour (8.00 to 9.00 am)	E	0.974	60.8	E	0.974	61.3
Narellan Road/Hartley Road	Afternoon peak hour (3.30 to 4.30 pm)	E	1.000	60.5	E	1.000	60.6

The proposal-generated daily traffic increases will not require any additional road widening or reconstruction of either the Smeaton Grange industrial area roads or the adjoining major traffic routes via Camden Valley Way and Narellan Road.

The proposal will not have any impacts on parking, road safety and traffic management, public transport services, pedestrians or cyclists.

6.2 Air quality and greenhouse gases

An air quality and greenhouse gas assessment was prepared for the proposal by Ramboll Environ Australia Pty Limited (Ramboll Environ) (refer to Appendix E). The assessment considered the potential air quality impacts (including dust, odour and cumulative impacts) of the proposal during both construction and operations on nearby private properties (residential and industrial). Impacts were determined based on consideration of potential sensitive receivers (refer to Figure 6.1); prevailing meteorological conditions; existing sources of air emissions; potential air emissions during construction and operation; and the proposed control measures. A risk screening methods was adopted for construction dust impacts. Impacts to 22 representative receptors were assessed against the relevant NSW EPA ambient air quality criteria.

The air quality impact assessment was conducted based on indicative 24-hour operations at the proposed Recycling Facility. The developed 24-hour period operational emissions profile was repeated throughout the modelling period to combine likely daily emissions against potential atmospheric dispersion conditions that could be experienced. The assessment assumes that 140,000 tpa of waste will be accepted annually and the processing of this waste will be evenly distributed across the year during times the site is processing waste.

6.2.1 Air quality management measures

Management measures that will be implemented during construction and operation of the proposal to minimise air quality impacts include:

- Construction:
  - record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
  - record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the log book;
  - carry out regular site inspections, record inspection results, and make an inspection log available to the local authority when asked;

- impose a maximum-speed-limit of 20 km/h on all internal roads and work areas;
- minimise idling vehicles onsite, wherever practicable;
- ensure proper maintenance and tuning of all equipment engines;
- ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; and
- provide an adequate water supply on site for effective dust/particulate matter suppression/mitigation.

- Operations:
  - the entire site will be sealed except for the landscaped frontage;
  - water sprays will be used over any surfaces that have potential to generate unacceptable amounts of dust;
  - water sprays will be used on stockpiles and vehicle paths as well as the screening plant as required during opening hours;
  - a wheel wash in the weighbridge area will be used to clean truck tyres to prevent mud or sediment being carried to and deposited on the access road (and public roads);
  - potentially dust generating activities will be generally undertaken within the main shed;
  - no composting will be undertaken on the site; and
  - odorous materials will not be accepted on site.

Air quality management is described in 7.1.

6.2.2 Air quality impacts

The air quality assessment locations are shown in Figure 6.1. As shown in Table 6.4, the predicted incremental and cumulative particulate matter concentrations, dust deposition rates and odour concentrations generated by the proposal will be well below the corresponding NSW EPA criteria at the assessment locations.

The majority of material received under the proposal will be inert construction, demolition, commercial and industrial wastes. Therefore, the potential for odour emissions will be low. The most likely waste streams with odour potential are green waste, which create odours if allowed to compost. It is proposed to keep only minimal stocks of green waste as this ensures a high turnover of the material, thereby negating the possibility of green waste starting to compost.

Given the negligible air quality impacts predicted for the proposal, no air quality management measures additional to those described in Section 6.2.1 are warranted. Air quality management and any proposed monitoring measures are described in Table 7.1.

Table 6.4 Incremental and Cumulative Concentration and Deposition Results

Receptor ID	Incremental Concentration/Deposition due to Recycling Facility							Cumulative Concentration due to Recycling Facility + Background Air Quality				
	TSP	PM_{10}	PM_{10}	$PM_{2.5}$	$PM_{2.5}$	Deposition	Odour	TSP	PM_{10}	PM_{10}	$PM_{2.5}$	$PM_{2.5}$
	Annual Average	Maximum 24-hr	Annual Average	Maximum 24-hr	Annual Average	Annual Average	99^{th} Percentile 1-second	Annual Average	Maximum 24-hr	Annual Average	Maximum 24-hr	Annual Average
	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	g/m²/month	OU	µg/m³	µg/m³[(b)]	µg/m³	µg/m³[(b)]	µg/m³
Criteria	**NA**	**NA**	**NA**	**NA**	**NA**	**2**	**2**	**90**	**50**	**30**	**25[(a)]**	**8[(a)]**
R1	0.2	0.8	<0.1	0.5	<0.1	<0.1	0.1	35.2	39.0	16.9	19.0	6.3
R2	0.2	0.7	<0.1	0.4	<0.1	<0.1	0.1	35.2	38.9	16.9	18.9	6.3
R3	0.2	0.9	<0.1	0.4	<0.1	<0.1	0.1	35.2	39.1	16.9	18.9	6.4
R4	0.2	1.3	<0.1	0.5	<0.1	<0.1	0.1	35.2	39.5	16.9	19.0	6.4
R5	0.2	1.1	<0.1	0.4	<0.1	<0.1	0.1	35.2	39.3	16.9	18.9	6.4
R6	0.2	0.8	<0.1	0.3	<0.1	<0.1	0.1	35.2	39.0	16.9	18.8	6.4
R7	0.2	0.5	<0.1	0.2	<0.1	<0.1	0.1	35.2	38.7	16.9	18.7	6.4
R8	0.2	0.5	<0.1	0.2	<0.1	<0.1	0.1	35.2	38.7	16.9	18.7	6.4
R9	0.2	0.5	<0.1	0.2	<0.1	<0.1	0.1	35.2	38.7	16.9	18.7	6.4
R10	0.2	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.2	38.4	16.9	18.6	6.4
R11	0.2	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.2	38.4	16.9	18.6	6.3
R12	0.2	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.2	38.4	16.9	18.6	6.3
R13	0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.9	18.6	6.3
R14	0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.9	18.6	6.3
R15	0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.9	18.6	6.3
R16	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.8	18.6	6.3
R17	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.8	18.6	6.3
R18	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.8	18.6	6.3

Table 6.4 Incremental and Cumulative Concentration and Deposition Results

Receptor ID	Incremental Concentration/Deposition due to Recycling Facility							Cumulative Concentration due to Recycling Facility + Background Air Quality				
	TSP	PM_{10}	PM_{10}	$PM_{2.5}$	$PM_{2.5}$	Deposition	Odour	TSP	PM_{10}	PM_{10}	$PM_{2.5}$	$PM_{2.5}$
	Annual Average	Maximum 24-hr	Annual Average	Maximum 24-hr	Annual Average	Annual Average	99^{th} Percentile 1-second	Annual Average	Maximum 24-hr	Annual Average	Maximum 24-hr	Annual Average
	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	g/m^2/month	OU	µg/m³	µg/m³[(b)]	µg/m³	µg/m³[(b)]	µg/m³
Criteria	**NA**	**NA**	**NA**	**NA**	**NA**	**2**	**2**	**90**	**50**	**30**	**25[(a)]**	**8[(a)]**
R19	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	35.1	38.4	16.8	18.6	6.3
R20	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	35.1	38.4	16.8	18.6	6.3
R21	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	35.1	38.3	16.8	18.6	6.3
R22	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	35.0	38.4	16.8	18.6	6.3

Notes: NA – Not applicable. Criteria are applicable to cumulative concentrations.

a) The NEPM Reporting Standards for $PM_{2.5}$ are referenced for screening assessment purposes.

b) The maximum cumulative value is a sum of the maximum combined 24-hour average concentration from the Recycling Facility and the maximum baseline concentration.

Air quality and noise sensitive receiver locations

Smeaton Grange Recycling Facility
Environmental Impact Statement

Figure 6.1

6.3 Greenhouse gasses

A greenhouse gas quantification assessment was undertaken by Ramboll Environ. The estimation of greenhouse gas (GHG) emissions for the proposed waste recycling and transfer facility is based on the *National Greenhouse Accounts Factors* (NGAF) workbook (DoE 2015).

6.3.1 Greenhouse gasses management measures

Management measures that will be implemented during operations to minimise greenhouse gas emissions will include:

- on-site equipment will be regularly maintained and serviced to maximise fuel efficiency;
- vehicle kilometres travelled on site will be minimised; and
- energy efficiency will be progressively reviewed and implemented throughout the life of the facility.

6.3.2 Greenhouse gasses impacts

The annual Scope 1 emissions (direct emissions occurring within the boundary of a site or as a result of the site's activities) and Scope 3 emissions (indirect emissions that occur from upstream and downstream activities) at full production are shown in Table 6.5. These represent approximately 0.0004% of total GHG emissions for NSW and 0.0001% of total GHG emissions for Australia, based on the National Greenhouse Gas Inventory for 2013. This is not considered to be a significant environmental impact.

Table 6.5 Summary of estimated annual GHG emissions (tonnes CO2-e / annum)

Scope 1 emissions	Scope 2 emissions	Scope 3 emissions			
On-site Diesel	**Electricity**	**On-site Diesel**	**Electricity**	**Product Transport (Diesel)**	**Employee Travel**
563	193	43	29	501	412

Notes: GHG emissions are reported in tonnes of carbon dioxide equivalents (t CO2-e). Non-CO_2 gases are converted to CO_2-e by multiplying the quantity of the gas by its Global Warming Potential (GWP) – see Table 26 of the NGAF workbook.

6.4 Noise

6.4.1 Noise assessment

A noise impact assessment (NIA) was prepared by EMM (refer to Appendix F). The assessment was undertaken in accordance with the *Industrial Noise Policy, Interim Construction Noise Guideline* (ICNG) and *Road Noise Policy* (RNP). The assessment considered impacts to 22 representative assessment locations most likely to be affected by the proposal (refer Figure 6.1). The processing scenario for the assessment assumes that all plant and equipment is operating simultaneously to allow maximum noise levels to be predicted and, as such is considered to represent a worst-case scenario. It is noted that it will be rare for all equipment to be running simultaneously and that more than 140,000 tonnes of waste could be processed annually if all plant was used at full capacity.

Long-term unattended ambient noise monitoring was undertaken at one location in Currans Hill between 10 and 21 December 2015 to quantify the existing ambient acoustic environment (summarised in Table 6.6), with on-site observations made during deployment of the logger. Background noise levels derived from the long-term noise monitoring results were used to determine the relevant noise criteria for the proposal. Sound power levels for the plant to be used on the site were determined based on sound levels from similar equipment listed in EMM's noise emissions database. Noise levels at receivers were modelled using Brüel and Kjær Predictor noise modelling software.

Table 6.6 Summary of measured ambient noise levels

Location	RBL, dB			Ambient (L_{Aeq}) noise level, dB		
	Day	Evening	Night	Day	Evening	Night
L1. 20 Chapman Circuit, Currans Hill	36	35	31	52	53	46

6.4.2 Noise management measures

Management measures that will be implemented during construction and operation to minimise noise impacts will include:

- preparation of a construction noise management plan (CNMP) (to be included in the project Environmental Management Plan) prior to construction to ensure that all employees understand and take responsibility for noise control at site;
- properly maintaining plant to ensure rated noise emission levels are not exceeded;
- undertaking construction activities guided by AS2436-1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*; and
- providing a contact telephone number which the public may use to seek information or make a complaint. A log of complaints should be maintained and actioned by the site superintendent in a responsive manner.

Universal work practices to minimise noise and vibration emissions include:

- regular reinforcement (such as at toolbox talks) of the need to minimise noise and vibration;
- regular identification of noisy activities and adoption of improvement techniques;
- avoiding the use of portable radios, public address systems or other methods of site communication that may unnecessarily impact upon residents;
- minimising the use of equipment that generates impulsive noise;
- minimising the movement of materials and plant and unnecessary metal-on-metal contact;
- minimising truck movements; and
- scheduling respite periods for intensive works.

Measures to minimise noise emissions from plant and equipment include:

- choosing quieter plant and equipment, including installing best-practice noise suppression equipment, based on the optimal power and size to most efficiently perform the required tasks;
- using temporary noise barriers (in the form of plywood hoarding or similar) to shield intensive construction noise activities from residences if required;
- operating plant and equipment in the quietest and most efficient manner; and
- regularly inspecting and maintaining plant and equipment to minimise noise and vibration level increases, to ensure that all noise and vibration reduction devices are operating effectively;
- plant with higher noise emissions will generally be located on the southern side of the site, inside the shed;
- a 10 metre high colourbond fence will be erected long the southern boundary and halfway along the south-eastern boundary (refer Figure 2.1);
- low-frequency reversing alarms ("growlers") will be used rather than the standard high frequency beepers;
- plant and equipment will be switched off when not in use;
- any vehicle queuing will be on site rather than on public roads as a second incoming weighbridge will be installed when required;
- material drop heights and materials dragging along the ground will be minimised;
- site contact details will be provided on a board at the front of the site;
- any noise-related complaints will be handled promptly; and
- a complaints register will be maintained.

Work scheduling to minimise the impact of noise include:

- scheduling construction activities such that the concurrent operation of plant is limited;
- do not process (ie sorting and screening) between 10 pm and 6 am;
- scheduling activities to minimise impacts by undertaking all possible work during hours that will least adversely affect sensitive receivers and by avoiding conflicts with other scheduled events;
- scheduling work to coincide with non-sensitive periods;
- scheduling noisy activities to coincide with high levels of neighbourhood noise so that noise from the activities is partially masked and not as intrusive;
- planning deliveries and access to the site to occur quietly and efficiently and organising parking only within designated areas located away from the sensitive receivers;

- optimising the number of deliveries to the site by amalgamating loads where possible and scheduling arrivals within designated hours;
- designating, designing and maintaining access routes to the site to minimise impacts;
- include contract conditions that include penalties for non-compliance with reasonable instructions by the principal to minimise noise or arrange suitable scheduling; and
- conducting high vibration generating activities in continuous blocks, with appropriate respite periods as determined through consultation with potentially affected neighbours.

6.4.3 Noise impacts

i Construction

Construction noise levels are predicted to be above the noise-affected management level but remain below the highly noise affected level of 75 dB at all assessment locations considered. Given that the predictions assume equipment operating simultaneously and at the nearest locations within the site to the relevant residential dwellings, it is likely that actual construction noise levels would be less than those predicted for the majority of the time. Notwithstanding, mitigation measures are summarised in Table 7.1 to minimise construction noise impacts.

ii Operation

Operational noise levels have been assessed for the daytime/evening, morning shoulder and night time periods during calm and adverse weather conditions. It was conservatively assumed that all plant operates simultaneously for the proposed operations, thereby reflecting the worst-case scenario. As shown in Table 6.7, operational noise emission levels are predicted to meet the relevant criteria at all assessment locations for calm conditions during the daytime, evening, night and morning shoulder periods. During the presence of a temperature inversion during the night and morning shoulder periods, a minor exceedance of up to 1 dB is predicted to occur at one assessment location.

Further analysis of the unattended noise monitoring data revealed that ambient noise levels are generally increasing from 4 am Monday to Friday. On these days during the noise monitoring period, the L_{A90} descriptor was often above 40 dB before 6 am, ie the time the project would commence operations.

In addition to this, a 1–2 dB change in sound levels is deemed ‘typically indiscernible’ to the human ear. Thus, changes of 1–2 dB are unlikely to be perceivable to nearby residences.

With these factors taken into account, it is unlikely that project noise emissions during the night or morning shoulder periods would cause adverse impacts at the assessment locations.

Predicted operational noise contours for calm conditions during the daytime and adverse conditions (ie inversion) during the night-time are provided as an appendix in the attached NIA.

Table 6.7 Operational noise modelling results

Assessment locations	Predicted operational noise level, dB			Target noise level, dB
	Daytime/evening	Morning shoulder		
	Calm	Calm	Inversion	
R1	37	34	36	41 $L_{Aeq(15\text{-}min)}$ daytime
R2	38	35	36	40 $L_{Aeq(15\text{-}min)}$ evening
R3	38	35	37	39 $L_{eq(15\text{-}min)}$ morning shoulder
R4	39	36	37	
R5	39	36	38	
R6	39	36	37	
R7	40	37	38	
R8	39	36	38	
R9	40	37	38	
R10	40	37	38	
R11	39	37	38	
R12	39	37	38	
R13	39	37	38	
R14	40	37	39	
R15	40	38	39	
R16	40	37	39	
R17	39	36	38	
R18	38	35	38	
R19	38	35	37	
R20	37	35	37	
R21	37	34	37	
R22	40	37	**40**	

The loading and/or unloading of trucks during the morning shoulder period was assessed. Typical maximum noise events are likely to include impacts associated with loading activities. A typical impact L_{Amax} sound power level of 126 dB has been used to predict potential sleep disturbance impacts, which are summarised in Table 6.8.

Table 6.8 Predicted maximum noise levels at residential assessment locations

Assessment locations	Predicted L_{Amax} noise level, dB		L_{Amax}, noise criterion, dB
	Calm	Inversion	
R1	52	54	46
R2	53	55	
R3	53	55	
R4	53	54	
R5	53	55	
R6	54	55	
R7	53	54	
R8	53	54	
R9	56	57	
R10	54	56	
R11	54	56	
R12	54	55	

Table 6.8 Predicted maximum noise levels at residential assessment locations

Assessment locations	Predicted L_{Amax} noise level, dB		L_{Amax}, noise criterion, dB
	Calm	Inversion	
R13	54	55	
R14	53	55	
R15	53	54	
R16	52	53	
R17	51	53	
R18	51	52	
R19	50	52	
R20	50	52	
R21	49	51	
R22	55	58	

Noise modelling predicts that the INP sleep disturbance screening criteria will not be met during calm and prevailing meteorological conditions. However, the RNP provides the following conclusion from the research on sleep disturbance:

> maximum internal noise levels below 50 to 55 dB(A) are unlikely to awaken people from sleep

It is widely accepted in the noise assessment profession that a facade including a partially open window will reduce external noise levels by 10 dB. The highest predicted external maximum noise level from site is 58 dB under adverse weather conditions. Therefore, internal noise will be below the above range provided by the RNP and the project is unlikely to disturb the sleep of nearby residences during the shoulder period.

An assessment of cumulative industrial noise from the proposal together with other industrial noise sources in the vicinity was also conducted. The project is not predicted to increase industrial noise levels above the relevant amenity criteria.

The proposal will result in additional traffic movements however the increase will be minor in comparison to existing traffic volumes and the overall increase in road traffic noise level at residences will be negligible.

6.5 Water

6.5.1 Water assessment

A water management report, including an erosion and sediment control plan and stormwater concept plan, has been prepared for the proposal by National Project Consultants Pty Limited (NPC) (refer to Appendix G).

The site will be graded so that all surface water will flow overland to the onsite detention/sedimentation basin/control device in the north eastern corner. As the site is completely bounded by a concrete kerb, water can only exit the site and enter the industrial precinct's stormwater scheme via the onsite detention/sedimentation basin/control device. The onsite detention/sedimentation basin/control device will cater for flows up to the 10 year ARI storm, as required by relevant council guidelines. Flows from more severe storms will flow overland to the onsite detention/sedimentation basin/control device. Water stored in the onsite detention/sedimentation basin/control device will be reused onsite for dust suppression purposes.

6.5.2 Management measures

Design features to prevent impacts to groundwater include:

- there will be no significant excavations within the site;
- a shed will be used to house the majority of the processing activities, preventing generation of runoff from these activities;
- the diesel storage tank will be bunded;
- surface water captured within the runoff management system will be used for dust suppression so that less mains water is required for this purpose;
- the site will be sealed to minimise the requirement for dust suppression using water;
- groundwater will not be used; and
- water will not be used in the product processing, other than for dust suppression.

Site runoff controls will include:

- the site surface will be sealed;
- a sediment trap will be properly maintained so that particulate matter is not discharged to the stormwater system;
- the proposed sedimentation basin in the north-eastern corner of the site;
- a flocculent will be used in the sedimentation basin if necessary;
- the site dust suppression system will preferentially draw from the onsite detention/sedimentation basin/control device first, keeping it nearly empty so as to provide the maximum first flush volume;
- flows from the final onsite detention/sedimentation basin/control device will be controlled to ensure that poor quality water is not discharged from site; and
- the weighbridges, office and amenities blocks will be connected to mains sewer and water.

These management measures and water quality monitoring are included in Table 7.1.

6.5.3 Surface water impacts

The average annual runoff volume from the site under existing conditions has been estimated at approximately 1847 m^3.

Average annual rainfall for the site is about 769 mm. The estimated volume of runoff available following the development of the site is about 3,697 m^3 per year. Water used for dust suppression will reduce runoff from the site by 76% (or about 1410 m^3 of runoff per year) and as such the average annual runoff volume from the site will be approximately 2287m^3.

Runoff water quliaty is controlled across the site in accordance with industry best practove guidelines know as the blue book. The blue book recommends a range of other sediment control measures which link to the sediment control basin. The sediment control basin is will be utilised to control the quality of runoff water leaving the site. Discharge from the site will be controlled by the outlet chamber and pipeline in the sedimentation device.

Water Sharing Plans consider that sedimentation basins are to be accounted in the maximum harvestable right on a site. A water licence can be required if basins extract more than 10% of the mean annual runoff from the property. These sharing plans are generally relevant to catchments supplying runoff to ephermal freshwater creeks which rely on runoff to maintain aquatic and riparian ecosystems and are not considered applicable to the proposal.

6.5.4 Groundwater impacts

A groundwater assessment was undertaken by EMM (refer to Appendix H). Ground excavations for the proposal, including footings and an onsite detention/sedimentation basin/control device are expected to be less than 2 m in depth .These excavations are expected to be shallower than the depth to groundwater in the shale, ie 3.2 m below ground level (BGL), and therefore impacts to groundwater in the uppermost competent rock are not expected.

The site will be sealed and this will prevent potential contamination from entering the groundwater. The reduction in potential groundwater recharge volume from the capture of runoff is considered negligible in the context of the catchment area.

6.6 Flooding

A small protion of the of the site, near north-east the Anderson Road frontage is subject to flooding and affected by Camden Council's flood planning level. It is not proposed to build on this part of the site. Plans of the proposed development have been reviewed by Camden Council and the Council are satisfied that the proposal complies with the relevant flood controls (refer Section 5.5). The water management report prepared for the proposal indicates that the proposed development conforms to the council and state government flood management requirements. Drainage channels in the subdivision have capcity to convey the 100 year ARI flood flow with freeboard.

6.7 Soils and contamination

In accordance with Section 3.3.2iv, due consideration of potential contamination of the site was required at both the rezoning and subdivision approvals phase. It is considered therefore that if the land had been contaminated, sufficient remediation would have been undertaken to render it useable for industrial purposes.

Notwithstanding, the majority of the site will be sealed and there will be minimal soil disturbance during the construction of the waste recycling and transfer facility. No significant ground excavation is required, with ground disturbance restricted anchors for the demountable office and fence foundations.

6.8 Bushfire

A bushfire hazard assessment (BHA) was prepared for the proposal by EMM (refer to Appendix I) in accordance with the NSW Rural Fire Service's *Planning for Bush Fire Protection Guideline* (RFS 2006) (PBP). It considers the bushfire hazard associated with the proposal and describes mitigation measures, in accordance with Appendix 4 of the PBP (submission requirements for SSDAs on bushfire prone land).

6.8.1 Bushfire management measures

- A solid fence will be constructed along the part of the south and the majority of the south-east boundary to provide noise shielding for nearby residential development. This fence will be between the site and the bushfire hazard vegetation and will provide some shielding of the diesel tank from radiant heat, ember attack and the spread of fire in the understorey if there is a fire in the vegetation;

- the diesel tank which will be installed in accordance with *Australian Standard 1940:2004 The Storage and Handling of Flammable and Combustible Liquids* and will be fully enclosed in a colourbond shed;

- sealed entry and exit driveways off Anderson Road will be constructed to accommodate vehicles over 15 tonnes such as fire fighting vehicles. They will have a minimum vertical clearance of 4 m to any overhead obstructions including branches;

- maintenance of the landscaping at the front of the site within the APZ as follows:

  - canopy cover will be kept at less than 15% of total surface area and will be kept at least 2 m from the roof line of a building;

  - garden beds and shrubs will not be located under trees and sited at least 10 m from any exposed windows or doors; and

  - lower limbs of trees up to 2 m above the ground will be removed;

- water, gas and electricity services will be located and installed in a manner that reduces the potential for them to contribute to fire hazard;

- water for fire fighting will be provided to the project as follows:

  - existing fire hydrants in Anderson Road;

  - fire hydrants in the shed; and

  - extinguishers and fire hydrant at the office building.

- the following requirements from Chapter 4 of PBP will be applied to water infrastructure:

  - above ground pipes external to structures in the APZ will be metal including and up to taps; and

  - fire hydrants at buildings will be spaced, sized and pressured in accordance with Australian Standard 2419.1-2005 Fire Hydrant Installations – System Design, Installation and Commissioning.

- electricity and gas services will be located so they do not contribute to the risk of fire to a building. The following guidelines will be followed during detailed project design (from Chapter 4 of PBP):

  - it is preferable to place electrical transmission lines underground. However, If overhead electrical transmission lines are to be used, they will be installed and managed in accordance with Ausgrid (2010) *NS179 Vegetation Safety Clearances*;

- *AS/NZS 1596:2008 The Storage and Handling of LP Gas* will be followed for bottled gas installation and maintenance. Metal piping will be used;

- there will be a minimum 10 m distance between fixed gas cylinders and flammable materials and shielding will be placed on the hazard side of the cylinders; and

- release valves on gas cylinders close to buildings will be directed away from the building and minimum 2 m from combustible material. Metal connections will be used.

6.8.2 Impacts of bushfire mitigation measures

A section of the proposed infrastructure/plant will be on bushfire prone land and measures which ensure that the proposal complies with the objectives of the PBP. Specifically, an APZ will be provided and managed to enable fire fighter access, passage for evacuees and to reduce radiant heat at proposed buildings. The risk of the proposal initiating a bushfire will be minimised through the implementation of management measures.

6.9 Visual

6.9.1 Introduction

This section provides an assessment of the potential visual impact of the proposal. It assesses the potential visual impacts of the proposed waste recycling and transfer facility on the amenity of the surrounding area as required by the Secretary's environmental assessment requirements (SEARs).

6.9.2 Visual character

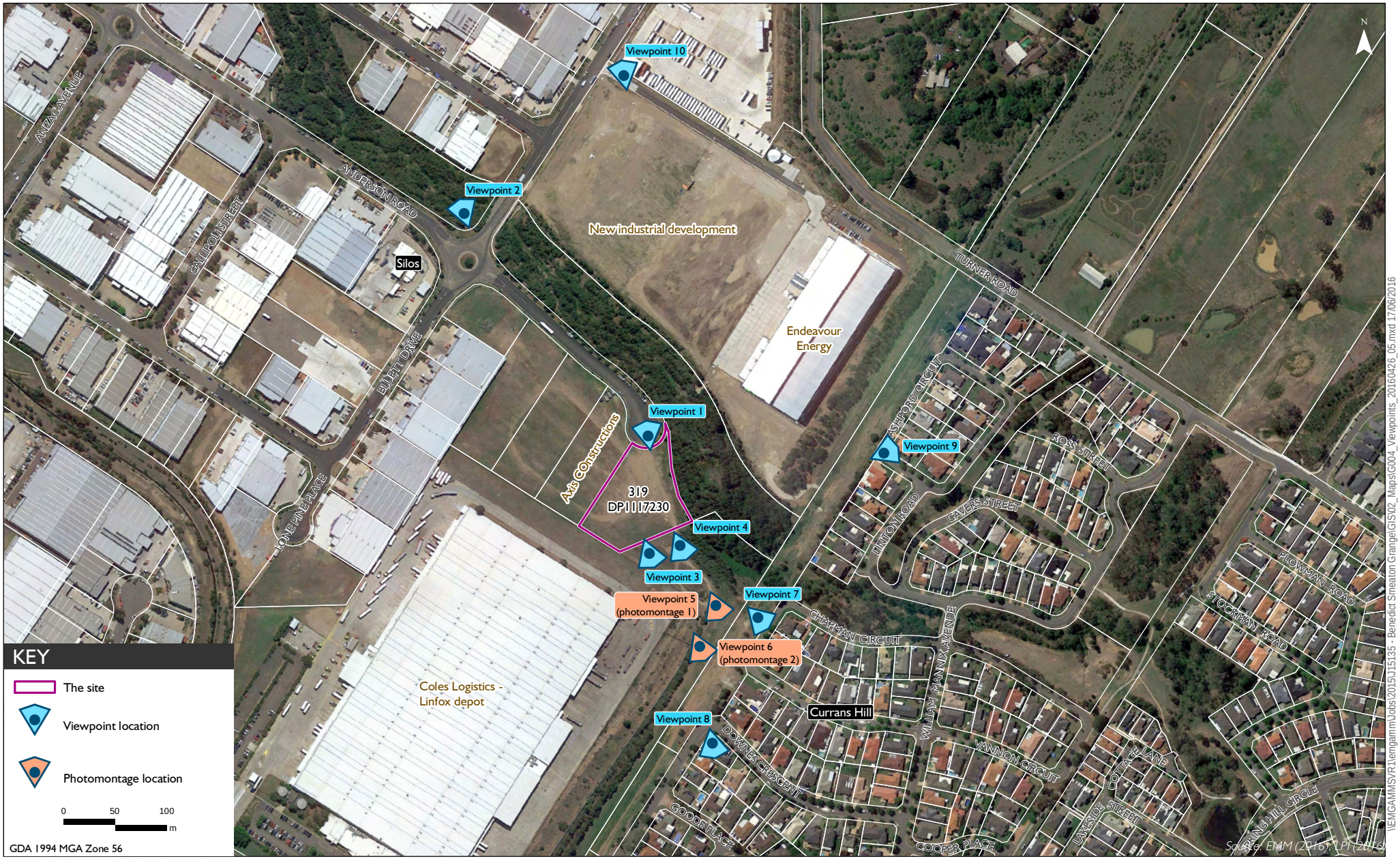
The visual character of the surrounding land to the north, south and west is predominantly industrial, as the site is located within the Smeaton Grange industrial estate. The dominant visual feature in the vicinity is large industrial buildings, including the Coles depot south-west of the site. There are two silos located on the southwest corner of Anderson Road and Bluett Street which are visually prominent due to their height.

The vegetated corridor running along the eastern side of Anderson Road provides a screen between land to the east and west of Anderson Road and form a break in the industrial landscape.

While the site itself is flat, there is a rise across the vacant land at the rear of the site, with a tree lined ridgeline that then slopes down again across a north-east to south-west electricity easement. The closest residential area is Currans Hill, located approximately 120 m from the site, on the far side of the easement.

6.9.3 Viewpoints

A series of viewpoints has been selected in order to assess the potential visual impacts of the proposal on the amenity of the area. These are provided in Photographs 3.1–3.10 and their locations are shown in Figure 6.2.



Location of viewpoints and photomontages

Smeaton Grange
Benedict Industries
Figure 6.2

Viewpoint 1 View into the site from Anderson Road

Viewpoint 2 View south-east to the site along Anderson Road

The site is visible from Anderson Road (Viewpoint 1), however from the west of the intersection with Bluett Street views become increasingly screened due to the vegetated corridor and other industrial development (Viewpoint 2).

The landscaping and a 2.1 m high colourbond fence and automated gates (included in the site establishment works) will enhance the visual appearance of the site from the public domain and limit views into the site, with clear internal views only possible when the gates are open. Elements of the site, including the upper section of the shed, will be visible above the front fence and gates. However, the bulk and scale of the building will be keeping with surrounding industrial development.

The external stockpiles, up to 5 m in height, will be located along the rear (southern) site boundary. The tops of these stockpiles may just be visible from Anderson Road prior to full establishment of landscaping. The external stockpiles will contain concrete (or similar) or wood and will be brown-grey when viewed from a distance. Any visual impacts of the stockpiles will be variable (as stockpiles will be constantly changing) and not significant.

Co-mingled and other waste stockpiles that may contain a range of colours will be located within the shed and significantly less visible from Anderson Road, if at all.

Viewpoint 3 **View north-west into the site from rise adjacent southern site boundary**

Viewpoint 4 **View looking north-west from midway up the informal road at the rear of the site**

Viewpoints 3 to 5 depict views into the site from the rise outside the southern boundary of the site. These views show that unobstructed views to the site are possible from the south and south-west. Further to east the view becomes further obstructed by vegetation so that by the western edge of the easement, views to the site are increasingly obscured.

Views of the southern boundary fence, shed walls and shed roof will be possible however the 10m high fence will mean that internal views will not be possible from these viewpoints. The south elevation will present a view that is in keeping with the Coles development adjacent the site.

Viewpoint 5 **View looking north-west towards the site**

Photomontage 1

Two photomontages have been prepared for the proposal, from Viewpoints 5 and 6. Photomontages were only produced for these two Viewpoints as the proposed development is not visible from Viewpoints 7 to 10 and the other viewpoints at the rear of the site provide a similar view to that provided in viewpoints 5 and 6.

Photomontage 1 demonstrates that the 10 m high fence and shed are visible from the south of the site, but only to the west of the easement. From Viewpoint 5, the view of the development is filtered by existing vegetation.

Viewpoint 6 **View north-west into the site from the Coles rear boundary**

Photomontage 2

Views of the site are possible from the eastern corner of the Coles site, as this viewpoint (Viewpoint 6) is elevated above the site. While this viewpoint is accessible by the public, it is not in close proximity to any public access way or to any dwellings and is most likely seldom accessed.

Photomontage 2 demonstrates that the proposal is similar in height and scale to surrounding industrial development, although it is noted that it does not extend as far to the southwest as development on the adjacent Coles site. The visual impact is lessened by the colour of the colourbond to be used for the fence and shed cladding.

Further, internal views of the site will be prevented by the rear wall and roof of the 10 m high shed (the maximum roof height is 11 m however this is along the internal northern side of the shed, and not on the boundary).

Viewpoint 7 **View north-west from eastern side of easement (adjacent residential development)**

Viewpoint 8 **View north-west from residence on corner of Downes Crescent, Currans Hill**

Currans Hill is the closest residential area to the site, located at least 120 m from the nearest point of the site. The topography of the area restricts views between the Smeaton Grange industrial estate and nearby residences. The site is relatively flat, with a rise in elevation at the rear of the site, across a vacant property at the rear (which forms part of the adjoining Coles lot). From the vegetated ridgeline, the land slopes gently downwards towards residential development on the far side of the easement.

Viewpoints 7 and 8 are from residential development in Currans Hill towards the site. As can be seen, any views to the site are restricted by vegetation and topography. It is anticipated that there will not be views of the proposal from the lower storeys or gardens of residential properties. Notwithstanding, if any views were possible from upper stores, they would be limited to the rear of the shed and boundary fence which are in keeping with the adjacent Coles development and other industrial development within the industrial estate.

Viewpoint 9 **View south-west to site from vegetation to the north of the vegetated corridor**

Viewpoint 9 provides a view looking south-west from the residential area on the corner of Ashford Circuit in Currans Hill to the easement. The vegetated corridor in the distance and new landscaping within the adjacent industrial site (to the west) prevent any views into the site.

Viewpoint 10 **View south to the site across vacant industrial land on far side of vegetated corridor**

A view south towards the site from undeveloped industrial land on the northern side of the vegetated corridor is shown in Viewpoint 10. The silos, located on the southwest corner of Anderson and Bluett Streets, can be seen to the right. Views to into the site are obscured by the vegetated corridor. Even if limited views into the site are possible from upper storeys of future industrial development, the proposal is in keeping with the industrial character of the area and any views would be distant and from within the industrial estate.

6.9.4 Management measures

Management measures that will be implemented during construction and operations to minimise visual impacts will include:

- the construction of a colourbond boundary fence, to a height of 10 m that will restrict any external views into the site. It is anticipated that the fence will have the appearance of a regular industrial building, such as the Coles to the south-west of the site;
- the colourbond fence will be coloured 'windspray'. A sample of the 'windspray' is provided in Figure 4.1. This colour has been specifically chosen as it is a non-reflective, natural colour that is used commonly throughout the Smeaton Grange industrial estate; and
- the site entrance on Anderson Road will be landscaped and the area will be kept tidy.

Source: Colourbond roofing colour chart

Figure 6.3 Colourbond colour sample

6.9.5 Visual impact assessment

The proposal is unlikely to have significant visual impacts given that it is located within an existing industrial estate and is consistent with the visual character of the area. External views of the colourbond shed and fence will be possible from some viewpoints however, no internal views of the site will be possible, except for from the Anderson Road site frontage if the gates are open. Further, except for the driveways and visitor parking, the entire frontage will be landscaped.

While some viewpoints will provide full and/or partial views of the proposed shed walls/fence, these comply with the maximum height requirements for the area, will be constructed in 'colour' Coulourbond (a non-reflective, natural colour) and are characteristic of other industrial developments nearby and within the broader Smeaton Grange industrial estate.

Therefore, no loss of visual amenity is expected as a result of the proposal.

6.10 Socio-economic

The recycling sector is economically important and unique as it provides resources or inputs to a range of industries without depleting natural resources. This constitutes a significant distinction between recycling and waste management activity, such as landfill disposal.

The direct socio-economic benefits of the proposal include the full time employment of eight persons in the waste recycling and transfer facility and potentially more for ancillary activities. These persons will be sourced from the local area, where possible, to help alleviate local unemployment.

In addition to the provision of employment, recycling can create a sense of civic pride and satisfaction felt through participation in recycling; and an improved natural resource base for future generations due to higher recycling uptake.

Other socio-economic benefits of industrial development of within the Smeaton Grange industrial estate include:

- stronger regional industrial activity; and
- utilisation of suitable industrial land and resources.

Social amenity impacts of the proposal, including noise, air quality, and visual impacts, are discussed in Chapter 6.

7 Statement of commitments

A site specific EMP, to be required as a condition of consent, will be prepared for the proposal that incorporates the site specific measures summarised in Table 7.1. All Benedict staff will be trained to understand and implement the EMP as it relates to the tasks that they are undertaking.

Table 7.1 Summary of mitigation measures to be included in the EMP

Key issue	Management measure
Air quality	Management measures that will be implemented during construction and operations to minimise air quality impacts will include: • Construction: – record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; – record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the log book; – carry out regular site inspections, record inspection results, and make an inspection log available to the local authority when asked; – impose a maximum-speed-limit of 20 km/h on all internal roads and work areas; – minimise idling vehicles onsite, wherever practicable; – ensure proper maintenance and tuning of all equipment engines; – ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; and – provide an adequate water supply on site for effective dust/particulate matter suppression/mitigation. • Operations: – all existing sealed areas must be maintained; – water sprays will be used over any other bare surfaces that have potential to generate unacceptable amounts of dust; – water sprays will be used at stockpiles, operational areas and the screening plant during material handling; – a wheel wash in the weighbridge area will be used to clean truck tyres to prevent mud or sediment being carried to and deposited on the access road (and public roads); – dust generating activities will be generally undertaken within the main shed; and – no composting will be undertaken on the site.
Greenhouse gases	Management measures that will be implemented during construction and operations to minimise greenhouse gas emissions will include: • on-site equipment will be regularly maintained and serviced to maximise fuel efficiency; • vehicle kilometres travelled on site will be minimised; and • energy efficiency will be progressively reviewed and implemented throughout the life of the facility.

Table 7.1 Summary of mitigation measures to be included in the EMP

Key issue	Management measure
Noise	Management measures that will be implemented during operation to minimise noise impacts will include: • no processing (ie sorting and screening) between 10 pm and 6 am; • choosing quieter plant and equipment, including installing best-practice noise suppression equipment, based on the optimal power and size to most efficiently perform the required tasks; • plant with high noise emissions will generally be located inside the shed; • plant and equipment will be regularly maintained and serviced; • low-frequency reversing alarms ("growlers") will be used rather than the standard high frequency beepers; • a site layout has been adopted that minimises the need for mobile plant to reverse; • plant and equipment will be switched off when not in use; • any vehicle queuing will be on site rather than on public roads; • material drop heights will be minimised and dragging materials along the ground will be minimised; • site contact details will be provided on a board at the front of the site; • any noise-related complaints will be handled promptly; and • a complaints register will be maintained.
Visual	Management measures that will be implemented during construction and operations to minimise visual impacts will include: • this site will be colourbond fenced on the boundaries; and • the visual appearance of the site entrance on Anderson Road will be landscaped and kept tidy.
Water	Features to prevent impacts to groundwater include: • no significant excavations within the site; • existing sheds will be used to house the majority of the processing activities, preventing generation of runoff from these activities; • bunded fuels storage area; • sheds and the segregated heavy waste stockpiling and processing area will be outside of major overland flowpaths; • surface water captured within the runoff management system will be used for dust suppression so that mains water is not required for this purpose; • the majority of the site will be asphalt sealed to minimise the requirement for dust suppression using water (see Section 2.10.1); • groundwater will not be used; and • water will not be used in the product processing, other than for dust suppression. The site runoff controls will include: • a concrete perimeter kerb to keep runoff from entering and leaving the site; • an onsite detention/sedimentation basin/control device on site and remove sediment; and • flows from the sediment device will be controlled to ensure that poor quality water is not discharged from site.

Table 7.1 Summary of mitigation measures to be included in the EMP

Key issue	Management measure
Bushfire	In order to maintain APZs, the landscaping vegetation will be maintained as follows: • canopy cover will be kept at less than 15% of total surface area and will be kept at least 2 m from the roof line of a building; • garden beds and shrubs will not to be located under trees and sited at least 10 m from any exposed windows or doors; and • lower limbs of trees up to 2 m above the ground will be removed. Services including Water, gas and electricity services will be located and installed in a manner that reduces the potential for them to contribute to fire hazard. Water for fire fighting will be provided as follows: • existing fire hydrants in Anderson Road; • fire hydrants in the shed; • extinguishers and fire hydrant at the office building; and The following requirements from Chapter 4 of PBP will be applied to water infrastructure: • above ground pipes external to structures in the APZ will be metal including and up to taps; • pumps in the APZs will be shielded; and • Fire hydrants at buildings which will be spaced, sized and pressured in accordance with *Australian Standard 2419.1-2005 Fire Hydrant Installations – System Design, Installation and Commissioning*. In relation to the diesel tank: • the diesel tank which will be installed in accordance with *Australian Standard 1940:2004 The Storage and Handling of Flammable and Combustible Liquids* and will be fully enclosed in a colourbond shed.
Contamination	In the event of encountering suspected contaminated land, the area should be left undisturbed until a suitably qualified consultant can assess the area in question and provide appropriate mitigation measures identified if required.
Diesel spill	<u>Prevention</u> Overfilling of tanks will be prevented through gauging or monitoring of the tank's contents. Tanks, vents and fittings will be inspected regularly and valves will be regularly overhauled (at periods not exceeding 10 years). Hoses used for transfer of diesel, these will be regularly inspected. <u>Protection</u> The diesel tank will be self-bunded. The bund will be large enough to contain a spillage in accordance with the requirement of AS1940 para 5.8. The bund drain valve will be kept closed and locked except during supervised drainage, and a sign will be placed to display the need to keep the drain valve closed and locked. Provision will be made to quickly shut off the flow of liquid from the storage tank to a consuming device in an emergency. The shut off valve will comply with para 6.3.3 in AS1940, including resistance in a fire. Diesel pumps will be designed such that the discharge pressure cannot exceed design limit of pump or piping in the case of dead heading (shut-off at the pump discharge). An emergency shut-off device will be provided on each pump. There will be a diesel spill kit stored at the bowser. <u>Detection</u> Regular inspections by site personnel will be undertaken. Any liquid inside the bunded areas, such as rain water or any spilt liquid, will be removed following established procedures.

8 Conclusion and justification

8.1 Introduction

This chapter provides justification for the carrying out of the proposal against the principles of ecologically sustainable development (ESD). It also discusses the suitability of the site, any submissions made and whether the proposal is in the public interest as required by Section 79C(1)(c)–(e) of the EP&A Act.

Justification for the proposal based on biophysical, economic and social considerations is provided in Section 1.4.1.

8.2 Principles of ecologically sustainable development

The principles of ESD are defined in Clause 7(4) of Schedule 2 to the EP&A Regulation and include the following:

(a) the precautionary principle, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

  (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

  (ii) an assessment of the risk-weighted consequences of various options,

(b) inter-generational equity, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as:

  (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

  (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

  (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

Consideration of the proposal against the four principles of ESD is given below.

8.2.1 The precautionary principle

Consideration of the precautionary principle requires two things. First, that the proponent properly assesses all potential impacts using plausible worst case assumptions and, either, avoids them in project planning or incorporates effective safeguards into the project design. Second, that the relevant authorities make a well-informed decision about the project based on a sound knowledge of the project's implications and impacts, including any limitations on the accuracy of impact predictions.

There are no "threats of serious or irreversible damage" from the proposal and the project's planning and design meets the first test above. The design and management measures incorporated as 'safeguards' are described in Chapters 2 and 6 this EIS. The Statement of Commitments (Chapter 7), summarises the key measures that will be implemented under the proposal to avoid, manage or mitigate predicted environmental impacts.

The second test will be satisfied by the comprehensive decision-making processes to be followed by the government, including the JRPP (or GSC depending on timing).

8.2.2 Inter-generational equity

The proposal will recycle waste materials that would otherwise be sent to lower order uses of landfill. The proposal will therefore extend the benefits provided by existing landfills for current and future generations. The recycled materials will largely be used in construction projects that will also benefit current and future generations.

8.2.3 Conservation of biological diversity and ecological integrity

The ecological integrity of the site is poor given its location within an existing industrial area on land that has previously been used for agricultural purposes. The site is devoid of vegetation other than grass and the proposal will not impact any threatened biodiversity on the site.

8.2.4 Improved valuation, pricing and incentive mechanisms

The proposal will use waste diverted from landfill to produce construction materials containing recycled material that have economic value. This will avoid the economic (and environmental) cost of disposing of the materials to landfill and, therefore, incorporates improved valuation, pricing and incentive mechanisms.

8.3 Suitability of the site

As described in Section 1.4, the site is considered suitable for the proposed activities given that it is within an industrial area, has existing site access and infrastructure. Suitable boundary treatment will screen the proposed operational activities. The proposal will secure and make use of an existing vacant industrial site.

8.4 Submissions made

The EIS for the proposal will be placed on public exhibition for a determined period of time. During this period, the public will be invited to provide submissions on the proposal. These submissions will be considered by CC and the determining authority in their determination of the proposal.

8.5 Public interest

The proposal is considered to be in the public's interest for the following reasons:

- the proposal provides a suitable use for an existing industrially zoned site;
- the proposal will provide socio-economic benefits through employment and stronger regional industrial activity;
- the materials received onsite will be recycled to minimise waste sent to landfill and to provide material suitable for construction projects and other purposes; and
- the proposal's environmental and social amenity impacts will be negligible with the implementation of the recommended mitigation and management measures.

8.6 Conclusion

There is currently only one other waste facility in a region which is experiencing unprecedented residential and commercial growth, in turn creating a significant demand for recycling services. The proposed waste recycling and transfer facility will accept waste from councils, businesses and the general public and would complement the activities of the Spring Farm ARRT, allowing additional waste generated in the region to be recycled, reducing the region's existing sole reliance on Spring Farm for waste transfer and recycling services. The waste recycling and transfer facility would therefore contribute to meeting the NSW Government's recycling strategies and targets.

The site is zoned IN1 General Industrial under the Camden LEP 2010 and the proposal is permissible with consent.

Benedict Recycling has entered into a JV agreement with the landowner to purchase the site with the sole purpose of developing a waste recycling and transfer facility. The site is ideally suited for the development of a waste recycling and transfer facility because it is: in an industrial area centrally located in the Narellan area; readily accessible to light and heavy vehicles; distant from residences; is devoid of vegetation, flat and ready to develop with services already in the industrial site. Development of the proposal will provide an ongoing economic and social benefit from a site that is only suitable to a small range of uses.

This EIS has been prepared in accordance with the SEARs, Clauses 71 and 72 of the EP&A Regulation and advice provided by CC following the pre-DA meeting. It describes the existing environment, the proposal, the legislative and policy context, proposed environmental management measures and the impacts of the project. Given the location and condition of the site, and the proposed environmental management measures incorporated, the proposed activities will only have minor environmental impacts.

It is therefore recommended that the proposed waste recycling and transfer facility is approved subject to the mitigation measures outlined in this EIS.

Abbreviations

APZ	Asset protection zone
ARI	Average recurrence interval
ARRT	Advanced Resource Recovery Park
CC	Camden Council
CP Act	*Coastal Protection Act 1979*
DA	Development application
DCP	Development Control Plan
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EIS	Environmental impact statement
EMM	EMM Consulting Pty Ltd
EP&A	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment protection license
ESD	Ecologically sustainable development
GHG	Greenhouse gases
LEP	Local Environmental Plan
JV	Joint venture
LGA	Local government area
LOSP	Light organic solvent preservative
LPG	Liquid petroleum gas
mAHD	Australian Height Datum
MNES	Matter of national environmental significance
NSW	New South Wales
OEH	Office of Environment and Heritage
PAC	Planning assessment commission
PHA	Preliminary hazard analysis
POEO Act	*Protection of the Environment Operations Act 1997*
RDF	Refuse derived fuel
RMS	Roads and Maritime Services
RNP	Road Noise Policy
RTA	Roads and Traffic Authority
SEARs	Secretary's Environmental Assessment Requirements
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
TSP	Total suspended particulates
VNEM	Virgin natural excavated material
WMP	Waste Management Plan
WM Act	*Water Management Act 2000*

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