
ALEXANDRIA LANDFILL

PREMIER WASTE MANAGEMENT FACILITY

**Submission
on behalf of
Alexandria Landfill Facility**

**PROPOSED DEVELOPMENT – ST PETERS
MATERIALS RECYCLING FACILITY PROJECT
(MP_0086)**

T. 9519 9999 | F. 9516 5559 | Mail: PO Box 1040, Mascot NSW 1460 | W: dadi.com.au

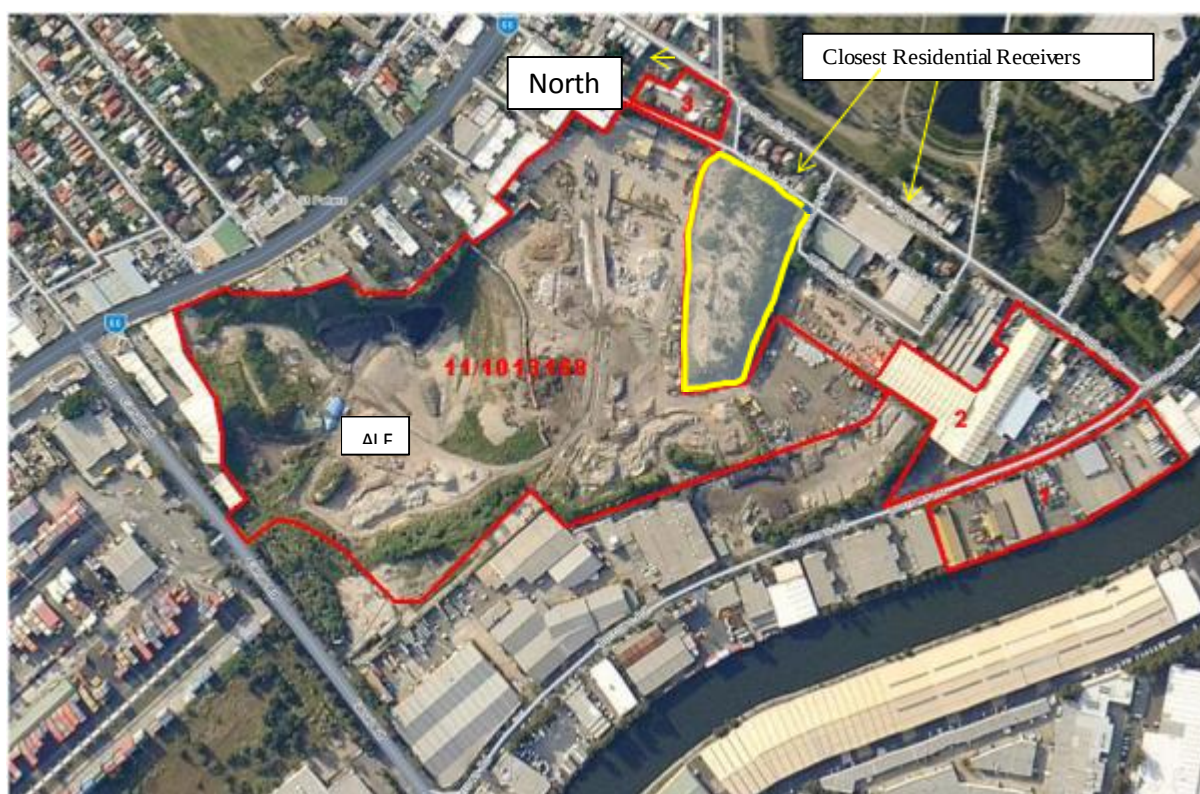
Introduction:

We act for Alexandria Landfill Facility (**ALF**) and are authorised by the Managing Director and Chief Executive Officer Mr Ian R Malouf to make this submission in respect of the exhibited Environmental Assessment (**EA**) lodged by the Concrete Recyclers (Group) Pty Ltd (**Proponent**).

In accordance with section 147 of the *Environmental Planning and Assessment Act 1979* (NSW) (**EP&A Act**), Mr Malouf declares that he has not made a political donation in the previous two years.

We thank you for the opportunity to forward this submission to the Department of Planning & Infrastructure (**DOP&I**). We hope our concerns are addressed accordingly.

By way of background, ALF is located at 10-16 Albert Street, St Peters (Lot 11 in DP 1013168).



ALF has been in operation since 2002, when the site was acquired from the City of Sydney Council, it now operates as a non-putrescible waste landfill, waste transfer and recycling depot, (since 1987 by the City of Sydney Council).

The ALF site is zoned IN1 General Industrial under the Marrickville Local Environmental Plan 2011. ALF employees up to 52 employees, (at any one time).

The ALF site consists of 16 hectares with the operation area confined to Lot 11 DP 1013168 (known as 10-16 Albert Street and 314 Princes Highway), with an area of 15 hectares.

The latest in a series of comprehensive Dust and Odour Assessment and Management Plans for the site was completed by Independent Air Quality Consultants and submitted by the client to the EPA in September 2011.

Previous reports on the immediately adjacent site have been modelled by the modelling author of this present report.

This Air Quality report is misleading and deceptive.

Local Setting and Overview of Operations:

The proposed development is located at 10-16 Albert Street, St Peters, NSW.

Significant local landmarks include Sydney Park to the northeast and Sydney Airport which lies approximately 2 km south of the site. The surrounding area is largely industrial in nature although commercial, retail and residential developments do exist in the locality.



Similar operations in the area include;

1. Alexandria Landfill Waste Transfer and Recycling Facility;
2. Council of the City of Sydney Recycling facility bordering the southeast of the site;
3. Metropolitan Demolitions building materials depot at 576 Princess Highway; and
4. Bingo Recycling – Burrows Road South.

The neighbouring ALF facility operates pursuant to detailed Development Consent conditions and Environment Protection Licences providing for the following requirement(s):

- (a) Sealed internal roads: we are required under our development consent (as modified) to ensure that roads (marked and identified in the consent) are paved in concrete or asphalt or other dust suppressing material.

- (b) The maintenance and use of a wheelwash: we have operating condition O7.1 (in our EPL 12594 regulating resource recovery & waste storage) *“all vehicles leaving the premise must be first put through an operating wheel wash except those that have not been in the landfilling or the materials processing area”*. We are also required under our operating development consent to ensure that all vehicles leaving the site go through the wheel wash (chapter 7 of the consent).
- (c) The use of a water truck to wet down roads: we are required under our development consent to ensure that *“dust emissions from stockpiles and other areas of the site shall be suppressed at all times by a permanently installed irrigation system and by a water truck”* (condition 8.3 of the consent).
- (d) The use of dust mitigation measures water sprays and sprinklers: we have operating conditions O3 (dust) O3.1 to O3.4 regulating dust control and dust sprays, in our EPL for resource recovery & waste storage). We are also required under our operating development consent to ensure that dust suppression measures are in operation, including dust sprays, sprinkler system and availability of a water truck (chapter 8 of the consent) and to operate in accordance with a Dust Management Plan (chapter 13 of the consent).
- (e) The carrying out of waste transfer operations within an enclosed building: we are required under our development consent (as modified) to construct an enclosed building (concrete & steel cladding) to carry out our waste transfer operations.
- (f) The stockpiling of materials having certain size and qualities upon the lower level of the site: we are required under our resource recovery & waste storage EPL to manage our stockpiles and ensure that waste processing, crushing & grinding activities only occur below 8.0 metres RL and at certain locations under our development consent no. 11646 of 2004 granted by the Land & Environment Court on 28 September 2006.

The Proposal:

The Proponent seeks Ministerial Approval to establish a sandstone recycling facility at 2 Albert Street, St Peters.

As marked below



The proposal is to, (re-develop Lot 1 DP 88087 and Lot B DP 376646), include:

- Removal of the existing stockpile of sandstone material (approximately 400,000 tonnes) (The Air quality report estimates 600,000 tonnes) from the site (from years 1 to 5); and
- Establishing a sandstone recycling facility, (with operational commencement in year 6), capable of receiving recyclable sandstone and sand with a proposed capacity of 75,000 tonnes per annum of building and construction waste.

The proposal for the continued operation of the sandstone recycling facility upon the completion of the processing of the existing sandstone will involve the importing of sandstone and importantly other waste materials including concrete brick and demolition rubble material onto the site for crushing and processing.

We note that the Proponent's Proposal outlined in the EA was prepared in accordance with the Director-General's Requirements issued on 11 July 2011 (under section 75F of the EP&A Act)

We raise a number of pressing concerns in respect of the Proponent's Proposal to re-development the subject site.

The issues raised are not in any particular of importance as we view every issue as being of significance.

Inadequate assessment of impacts on human health:

There has been no genuine attempt by this Proposal to assess the impacts of the proposed activity on human health.

It is not enough that there be only assessment under the *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*.

There must also be a full assessment on the risks of such an activity on human health.

We stress this, as we employ up to 16 people who work at the landfill, 20 drivers, 6 mechanics and a further 5-10 individuals at ALF (including staff at the weighbridge). We have an obligation to ensure that our employees work in a safe environment with no risk to their health.

The crushing of sandstone is a hazardous activity.

The Proponent is proposing to conduct the crushing and processing activities outdoors.

There needs to be careful assessment and consideration of preventing worker exposure to hazardous substances and situations.

This should not be limited to just workers at the Proponent's facility but also to the works at ALF (which immediately adjoin the subject site), as well as the adjoining local residents nearby.

In our view, the potential impacts on human health have not been comprehensively addressed in the Proponent's EA.

Further, we believe that this issue should have been made a separate requirement under the Director-General's Requirements pursuant to section 75F of the EP&A Act.

Detailed Modelling should be undertaken to determine expected inhalable dust, and respirable dust and quartz concentrations during normal separation/recycling activities and to make recommendations and proposals as required.

Modelling should also take into account all relevant and known wind directions and wind roses. We comment on this aspect further.

MEASUREMENT METHODS:

A. RESPIRABLE DUST AND QUARTZ

Modelling of these should have regard to standards required for AS 2985-2009 'Workplace Atmospheres - Method for Sampling and Gravimetric Determination of Respirable Dust' in conjunction with Direction filter method of the National Health & Medical Research Council 'Methods for Measurement of Quartz in Respirable Airborne Dust by Infrared Spectroscopy and X-Ray Diffractometry', October, 1984.

B. INHALABLE DUST

Inhalable Dust is not referred to or defined in the Index to the Air Quality assessment. Inhalable dust is that fraction of airborne dust taken in through the nose and mouth during breathing, as defined by the International Organisation of Standardisation in ISO/TR 7708, 1995.

Modelling should have regard to AS 3640 - 2009 'Workplace Atmospheres - Method for Sampling and Gravimetric Determination of Inhalable Dust', whereby airborne dust is measure during a modified UKAEA ('seven holer') sampling head fitted with a 25 millimetre, 5 micrometre pore size, Gelman GLA 5000 PVC membrane filter.

WORKPLACE EXPOSURE STANDARDS – Adjacent Property

Safework Australia, has recommended the following Workplace Exposure Standard (**WES**).

In simple concepts, the forms of WES are as follows:-Time Weighted Average (**TWA**) – the average airborne concentration of a substance calculated over an 8 hour day, for a 5 day week.

Short Term Exposure Limit (**STEL**) – average airborne concentration of a substance calculated over a 15 minute period, not exceeding 4 occasions per day with 1 hour between exposures.

Peak Limitation – maximum airborne concentration of a substance not exceeding 15 minutes at any time during the day.

In accordance with the *Work Health and Safety Act 2011* and *Regulations 2011*, exposure to hazardous substances with a WES must be kept as low as reasonably practicable.

The following WES value is provided¹:-

Substance	TWA	STEL	mg/m ³	mg/m ³
crystalline silica (respirable quartz)	0.1	-	dust not otherwise classified*	10

-of dust in the ears, eyes and upper respiratory tract, as well as some irritation effects.

In addition to this, the *NSW Work, Health and Safety Regulations 2011* indicates health monitoring is required where there is a significant risk of exposure for workers to use, handle, generate or store hazardous chemicals 'Crystalline silica' dust, which results from the grinding / processing of sandstone, is a listed hazardous chemical (under Schedule 14 of the *Work, Health and Safety Regulations 2011*) requiring health monitoring.

Respirable crystalline silica dust is responsible for respiratory illness and workers (working at this subject site) or exposed to the silica dust at the ALF site are exposed to this hazard as well as local residents who are opposite to the site.

Exposure to silica dust causes many problems, (in particular in construction and demolition work), including silicosis. Silicosis is a serious disease of the lungs caused by breathing in crystalline silica dust. The disease can be disabling or often fatal.

It is important that there is proper and full control of the hazard at the source rather making attempts to modify, screen or exclude workers from the source, by way of imposing conditions on a Project Approval. Any conditions of Project Approval would not go far enough in ensuring that there would be no impacts on human health as it relies on enforcement of the condition.

The Air Quality Assessment blandly assumes that since the adjacent property is currently also a Recycling and waste Transfer Centre that it is therefore just acceptable to load those employees with additional airborne particulate loadings.

This is not acceptable.

The Adjacent ALF site is also reaching the close of its days as a landfill and a Closure Plan is currently being prepared in anticipation as a site for industrial redevelopment.

Airborne Particulates generated by this Proposal will significantly devalue its redevelopment potential and degrade its retail commercial value.

Given the proximity to existing industrial activities and local residents this proposal should not be granted Project Approval by the Minister for Planning & Infrastructure.

Modelling defects in the Proponent's assessment - air quality goals must be properly established:

These are shown as:

1. A maximum total 24-hour PM₁₀ concentration of 150 µg/m³;
2. A maximum incremental 24-hour PM₁₀ concentration of 50 µg/m³ expressed as a 98.6 percentile;
3. An annual average PM₁₀ concentration of 30 µg/m³; and
4. A maximum increase in deposited dust of 4 g/m²/month.

NSW DECCW Impact Assessment Criteria

Table shows NSW Department of Environment, Climate Change and Water (DECCW) impact assessment criteria for dust and particulate matter (NSW DEC, 2005).

Table Project – Impact Assessment Criteria

Pollutant	Averaging Period	Criterion	
Short-Term Impact Assessment Criteria			
Particulate Matter <10 μm (PM ₁₀)	24 hour	50 μg/m ³	
Long-Term Impact Assessment Criteria			
Particulate Matter <10 μm (PM ₁₀)	Annual	30 μg/m ³	
Total Suspended Particulate Matter (TSP)	Annual	90 μg/m ³	
		Max Increase	Max Total
Deposited Dust (insoluble solids)	Annual	2 g/m ² /month	4 g/m ² /month

The problem is that the goals that have been expressed show modelling results only for the Project and not the incremental effect which the Project will have on the overall Air Quality of the surrounding area.

Criteria Applicable to Particulate Matter less than 10 Microns (PM₁₀):

Emissions of PM₁₀ and PM_{2.5} are considered important pollutants in terms of impact due to their ability to penetrate into the respiratory system.

In the case of the PM_{2.5} category, recent health research has shown that this penetration can occur deep into the lungs. Potential adverse health impacts associated with exposure to PM₁₀ and PM_{2.5} include increased mortality from cardiovascular and respiratory diseases, chronic obstructive pulmonary disease and heart disease, and reduced lung capacity in asthmatic children.

One of the difficulties in dealing with air quality goals governing fine particles such as PM₁₀ is that the medical community has not been able to establish a threshold value below which there are no adverse health impacts.

The NSW Department of Environment and Conservation (**DEC**) PM₁₀ impact assessment goals, as expressed in their document, "*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*", (AMMAAP) (DEC, 2005) are:

- ☐ 24-hour maximum of 50 µg/m³.
- ☐ Annual average of 30 µg/m³.

The 24-hour PM₁₀ reporting standard of 50 µg/m³ is numerically identical to the equivalent National Environment Protection Measure (or NEPM) reporting standard except that the NEPM reporting standard allows for five exceedances per year.

These NEPM goals were developed by the National Environmental Protection Council (NEPC) in 1998 to be achieved within 10 years of commencement.

The DOPI in setting development consent conditions for extractive industries under Section 80 of the EP&A Act, additionally reference Land Acquisition Criteria, which when exceeded, require the developer to acquire the land. The DOPI short term land acquisition criteria for particulate matter are given as Short Term Land Acquisition Criteria

Pollutant Averaging Period Criterion Percentile Basis

- PM10 24-hour 150 µg/m³ 99 Total¹
- PM10 24-hour 50 µg/m³ 98.6 Incremental²

Note¹ Background PM10 concentrations due to all other sources plus incremental increase in PM10 due to development alone.

Note 2 Incremental increase in PM10 concentration due to development alone.

The DOPI land acquisition criterion thus states that the total PM10 concentration (background plus increment) should not exceed 150 µg/m³ on more than three occasions in any one year.

The incremental PM10 concentration, due to the development alone should not exceed 50 µg/m³ on more than five occasions annually.

These important criteria have not been addressed.

The US EPA has developed an Air Quality Index (**AQI**) for reporting to the community on daily air quality. The AQI is designed to tell the community how clean the air is and focuses on the health effects that may be experienced from breathing polluted air for periods ranging between a few hours to days.

The US EPA AQI for particulate pollution is given in US EPA AQI for Particulate Pollution

AQI	Air Quality	Health Advisory	Equivalent PM10 Concentration
0-50	Good	None	0 µg/m ³ - 54 µg/m ³
51-100	Moderate	Unusually sensitive people should consider reducing prolonged or heavy exertion	55 µg/m ³ – 154 µg/m ³
101-150	Unhealthy for sensitive groups	People with health or lung disease, the elderly and children should reduce prolonged or heavy exertion.	155 µg/m ³ – 254 µg/m ³
151-200	Unhealthy	People with health or lung disease, the elderly and children should avoid prolonged or heavy exercise. Everyone	255 µg/m ³ – 354 µg/m ³

AQI	Air Quality	Health Advisory	Equivalent PM10 Concentration
		should reduce prolonged or heavy exertion.	
201-300	Very Unhealthy (Alert)	People with health or lung disease, the elderly and children should avoid all outdoor activity. Everyone should avoid prolonged or heavy exertion.	355 µg/m ³ – 424 µg/m ³

The US EPA AQI indicates that at 24-hour PM10 concentrations in the region of 55 µg/m³ to 154 µg/m³ may have moderate health implications for unusually sensitive people. 24-hour PM10 concentrations in excess of 155 µg/m³ are considered unhealthy.

Criteria Applicable to Particulate Matter less than 2.5 Microns (PM2.5):

In December 2000, NEPC initiated a review to determine whether a new ambient air quality standard for particulates 2.5 microns or less in aerodynamic diameter (PM2.5) was needed in Australia, and the feasibility of developing such a standard.

The review found that:

- ☐ there are health effects associated with fine particles,
- ☐ the health effects observed overseas are supported by Australian studies,
- ☐ fine particle standards have been set in Canada and the USA, and an interim guideline proposed for New Zealand.

The review concluded that there was sufficient community concern regarding PM2.5 to consider it an entity separate from PM10. As such, in July 2003 a variation to the Ambient Air Quality National Environment Protection Measure (NEPM) was made to extend its coverage to PM2.5. The NEPM reporting standards for PM2.5 are:

- ☐ 24-hour maximum of 25 µg/m³.
- ☐ Annual Average of 8 µg/m³.

As there is little data available regarding PM2.5 emission factors, PM2.5 has not been quantitatively assessed within the report. In addition, given the nature of activities being undertaken at the Alexandria Landfill site, PM2.5 is not considered to be a significant issue.

Criteria Applicable to Total Suspended Particulate:

The annual goal for Total Suspended Particulate (or TSP) is given as 90 µg/m³ as recommended by the National Health and Medical Research Council (NHMRC) at their 92nd session in October 1981.

It was developed before the more recent results of epidemiological studies suggested a relationship between health impacts and exposure to PM10 concentrations. It is noted that the PM10 sub-set is typically 50% of total suspended particulate (TSP) mass in regions where road traffic is not the dominant particulate source (USEPA, 2001).

This would be consistent with an annual average PM10 goal of approximately 45 µg/m³ (derived from 50% of the annual NHMRC goal of 90 µg/m³). Thus, the historical NHMRC goal may be regarded as not as stringent as the newer PM10 goal of 30 µg/m³ expressed as an annual average.

The Project area is bounded on four sides by major arterial and regional roads, including the Princes Highway to the north, Canal Road to the east, Burrows Road to the south and Campbell Road to the east.

These routes are major traffic arteries and include heavy vehicle traffic.

Where road traffic is the dominant source of particulate pollution, (as may be the case here, the PM10 subset of TSP from heavy vehicle exhaust emissions (diesel emissions) can be as high as 96% (Watson et al, 2000).

Therefore, as the annual TSP goal is seen to be achieved if the annual PM10 goal is satisfied, TSP has not been considered adequately in this report.

Nuisance Impacts of Fugitive Emissions:

The preceding sections are concerned in large part with the health impacts of particulate matter. Nuisance impacts need also to be considered, mainly in relation to dust.

In NSW, it is accepted practice that dust becomes a nuisance in relation to its impact on residential areas when annual average dust deposition levels exceed 4 g/m²/month (inclusive of background dust levels).

The NSW EPA impact assessment goals for dust fallout, showing the allowable increase in dust deposition level over the ambient (background) level which would be acceptable so that dust nuisance could be avoided and the maximum allowable total dust level before loss of amenity is experienced is show here

EPA Goals for Allowable Dust Deposition

Averaging Period Maximum Increase in Deposited Dust Level Maximum Total Deposited Dust Level

Annual 2 g/m²/month 4 g/m²/month

Source: AMMAAP, DEC 2005.

By misleadingly presenting only the estimates for contribution by this Project and ignoring existing air quality and surrounding projects the report pretends that the EPA Goal for allowable dust deposition will not be exceeded.

LOCAL METEOROLOGICAL AND TOPOGRAPHICAL CONDITIONS HAVE NOT BEEN ACCURATELY INTRODUCED INTO THE MODELLING:

Local wind patterns would be influenced by micro-topography of the site and effects of building channelling etc, however general wind patterns can be examined by looking at the wind patterns observed at Sydney Airport.

Annual and seasonal wind roses for Sydney Airport (2008) are shown in the project report and display winds from all directions. On an annual basis strong southerly winds (greater than 7.5 m/s) occur for approximately 13% of the time.

The seasonal wind roses indicate:

In summer, strong winds from the south dominate for approximately 18% of the time with occurrences from the northeast for 10% of the time;

- In autumn, winds from the south dominate (14%), with moderate to strong winds occur from the west (9%), northwest (11%) and north-northwest (11%);
- In winter, winds from the west dominate (19%), with occurrences from the west-northwest (12%) and northwest (12%);
- In spring, strong winds from the south dominate (15%), with moderate to strong winds from the north (11%), north-northeast (10%) and northeast (9%);

A view of aerial photography shows,

- 1 That the southern approach to the project area from the coast and from the airport is unimpeded by construction or other topographical constraints. The project area is not protected therefore by Wind blowing from the southerly direction and there is no evidence to suggest (as has been suggested) that the Airport is likely to be “windier”.
- 2 The comparison data sites at Earlwood and Randwick are wholly unsatisfactory for modelling purposes by reason both of distance and their residential surrounds. They are clearly vastly different from the Project region. See following photograph.



Google earth

miles 3
km

- 3 The Topography of the site is not “mainly flat” being 15 metres above its surround (see photograph)



Google earth

Google earth

feet 10
meters

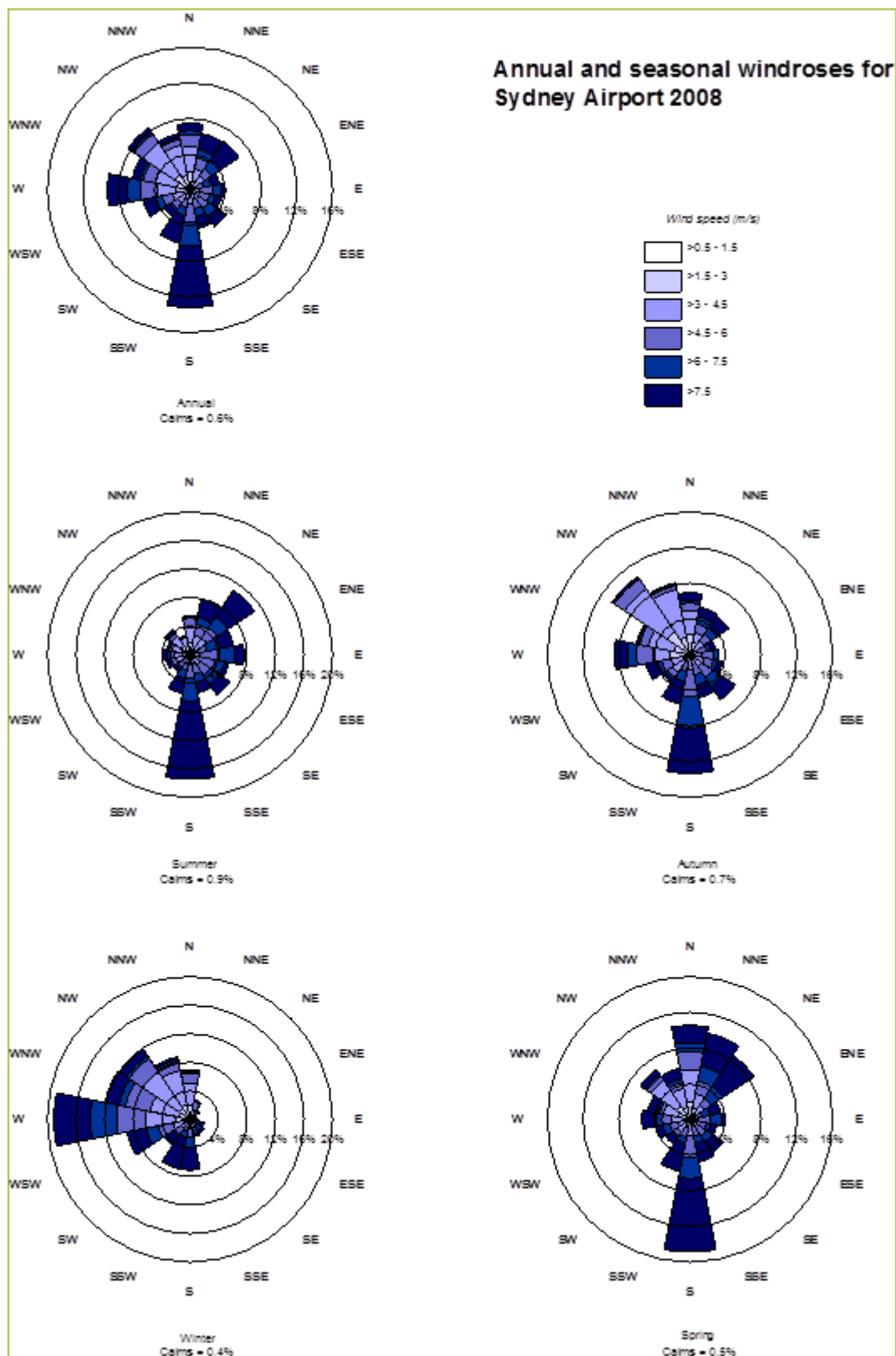


Figure 3 Annual and Seasonal Wind Roses for Sydney Airport

These windroses indicate that the 8 (can you believe it?) residential homes only 15 metres from the northern boundary of the site would be those likely to be affected.



The rear gardens of those homes are only a 4 metre lane width away from the Project area.

Contrast this where the same modelling author, (then employed by a different company), modelled potential effects on residential receivers of an identical style operation at Eastern Creek but where the residential receivers were more than 400 metres away.

In that case the modelling was supported by actual real time results contrasted with here where theoretical modelling is being used to gloss over the potential health effects to nearby residents.

DEFECTIVE DISPERSION MODELLING METHODOLOGY:

The atmospheric dispersion modelling carried out for the Project utilises the Ausplume Gaussian Plume Dispersion Model software developed by EPA Victoria, Version 6.0. Ausplume is the approved dispersion model for use in the majority of applications in NSW.

Default options specified in the Technical Users Manual (EPA Victoria, 2000) have been used, as per "*Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales*", DEC 2005.

It does not however account for the Topography of sites being modelled.

Local topography plays an important role in atmospheric dispersion of pollutants by allowing or obstructing free movement of air masses.

Given that processing is to take place atop a hill the topography of the area surrounding the project site being characterised by relatively flat terrain and is therefore unlikely to impede the dispersion of atmospheric pollutants. The dispersal area is likely to be large in periods of strong winds.

Strong southerly winds coincide with hot dry summer months and accordingly a terrain file should be incorporated into the dispersion model used for this assessment.

This site does not have the benefit of any natural wind break against wind erosion for exposed surfaces and stockpiles on site and no natural barriers to inhibit the spread of larger dust particles which will tend to settle out quickly and not get transported significant distances by wind.

The adjacent site has been able to exploit the topography of its site, its quarry pit, and its berms and surrounding walls to mitigate its dust generating effects.

The proposed site has no such benefits and crushing and grinding works carried out atop a hill 15 metres above surrounding ground levels will (having regard to wind speed and direction have an effect on surrounds far exceeding the 8 (can you believe it? 8) residential receivers whose gardens are a bare 5 metres away.

Dispersion Meteorology

Climate Averages

The nearest Bureau of Meteorology (**BoM**) Automatic Weather Station (**AWS**) to the Alexandria Landfill is Sydney Airport AMO, located approximately 2 km south of the site. Climatic averages are available since records began in 1929. Full details of the climate averages for Sydney Airport AMO are available.

Air Temperature

The monthly fluctuations in mean daily minimum and mean daily maximum temperatures at Sydney Airport AMO are also available

TAPM Generated Meteorology

TAPM, developed by the Commonwealth Scientific and Industrial Research Organisation (**CSIRO**),

is a prognostic model which may be used to predict three-dimensional meteorological data, with no local data inputs required.

The TAPM program allows the user to generate synthetic observations by referencing databases (covering terrain, vegetation and soil type, temperature and synoptic scale meteorological analyses) which are subsequently used in the model input to generate site-specific hourly meteorological observations.

TAPM is often used where insufficient on-site meteorological data is available, and as such is considered suitable to predict indirect meteorological parameters in this assessment. It has however not been used.

EXISTING AIR QUALITY ENVIRONMENT:

The existing air quality in the vicinity of Alexandria Landfill is associated with that of an industrial environment. A number of open-air recycling operations in proximity to each other ALREADY results in an elevated level of airborne particulates compared with other light and non-industrial areas.

PM10

The closest NSW Department of Conservation (**DEC**) air quality monitoring stations to Alexandria Landfill are the Randwick and Earlwood air quality monitoring sites. Both monitoring stations assess ambient PM10 concentrations using a Tapered Element Oscillating Microbalance (**TEOM**) instrument.

The Randwick site is located in the grounds of the Randwick Army Barracks, on the corner of Avoca and Bundock Streets, approximately 5.6 km east of Alexandria Landfill. The Earlwood site is located within Beaman Park, Riverview Road, Earlwood, approximately 5.5 km west of Alexandria Landfill.

Both monitoring stations are sited in residential areas within the DEC's East Sydney region. Data from these sites has been inappropriately used as a comparison basis for establishing baseline modelling.

This is a cheap and inadequate substitute for actual air quality monitoring which should be carried out to establish actual local baseline results.

There is a Sydney Airport Corporation Limited (**SACL**) operated Tapered Element Oscillating Microbalance (**TEOM**) monitoring station located at Sydney Airport, approximately 2 km south of the project area.

In the absence of actual monitoring which should have been carried out for baseline data this might provide the appropriate comparison data for this proposal.

Results of this monitoring in connection with previous reports provided in respect of the adjacent site provide an indication of the average annual background concentration of PM10 of the area surrounding the site which is known from previous measurements to be in the order of between 15 µg/m³ to 20 µg/m³.

For the purposes of establishing the existing air quality, the annual average from the SACL TEOM data set (closest monitoring station to the site) should at the very least have been taken as the background PM10 concentration for the area surrounding Alexandria Landfill.

In the absence of a reliable meteorological data set contemporaneous with the SACL TEOM data a variable PM10 background file was not produced for inclusion in the dispersion modelling. The annual average PM10 concentration of 16 µg/m³ was previously taken as the background concentration for each 24 hour period modelled.

It may or may no longer be relevant the point is that we do not know.

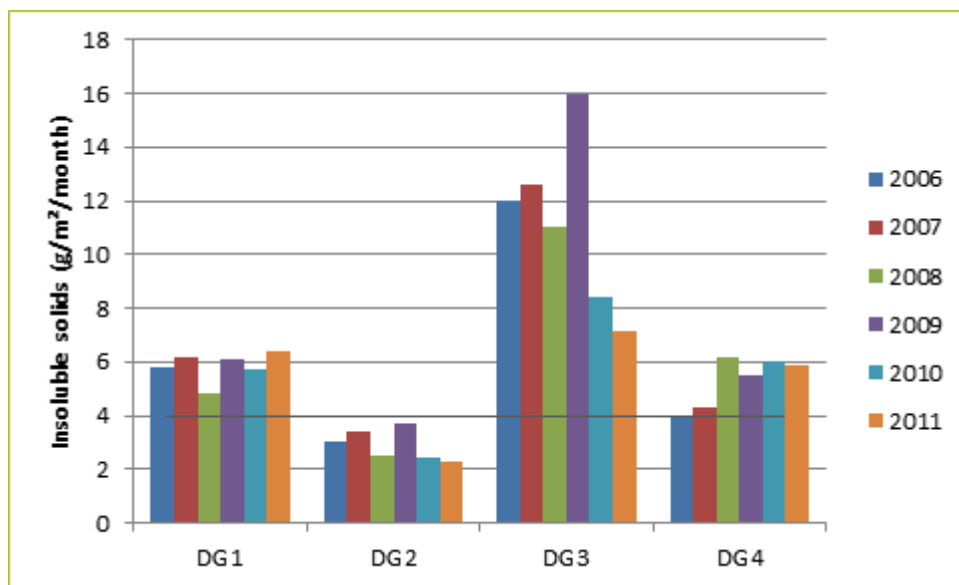
Complaints from occupiers on the north / northeast boundary of the adjacent site have been ongoing and are likely to be greatly exacerbated by the current proposal.

A study by the State Pollution Control Commission (SPCC 1983) indicates that members of the public are expected to begin to complain when dust fallout levels reach 4 g/m²/month,

with amenity deteriorating to an unacceptable level when annual average fallout rates exceed $10 \text{ g/m}^2/\text{month}$ (SPCC, 1993).

Another study suggests that maximum acceptable dust deposition levels for industrial areas would be between $4 \text{ g/m}^2/\text{month}$ to $6 \text{ g/m}^2/\text{month}$ depending on the nature of the industry (NERDDC, 1998). Notwithstanding this, complaints have arisen and measures are required to control dust emissions from this area of the site.

Figure 4.1: Dust Deposition Monitoring Results



MODELLING RESULTS IN THIS CASE ARE FOR THE PROJECT ALONE AND ARE NOT PRESENTED AS AN INCREMENTAL INCREASE IN DUST DEPOSITION RATES SET AGAINST EXISTING AIR QUALITY STANDARDS

Plant and Equipment

Insufficient details of the significant plant and equipment proposed to be used on-site in processing are given.

Operating times for the plant and quantity of processing throughput are not given. Whether or not these are realistic estimates given the proposed throughput are not therefore able to be judged.

Without these details no adequate modelling of the environmental and health effects of the proposal can have been carried out.

Dust management:

The details of dust management measures are wholly inadequate

- Dust spray systems must be installed and operating to minimise dust from all stockpiles and processing areas at the facility.
- Dust sprays and/or dust collection systems must be installed and operating on all crushing, grinding and screening equipment at the facility.
- The Proponent must ensure that all stockpiles are wetted prior to material being removed from them for processing and that during processing, they are kept wet and high-pressure water sprays are utilised to prevent the migration of dust.
- The vehicle routes in use around the premises, except for concrete handstands, are to be kept damp from 700hrs to 1700hrs Monday to Fridays and 700hrs to 1600hrs Saturdays.

All vehicles leaving the premises must be first put through an operating wheel wash

- Continual operation - modeling to take account of water throughput
- Establishment of trigger values when various mitigation and management steps are to be taken and when activities should cease.

No assessment has been shown of the mitigation effects of these where and when they may be utilised or the effect that they have had on the modelling.

No proper assessment can be made therefore as to their accuracy.



IDENTIFICATION OF DUST SOURCES:

During dry conditions, the following site activities have the potential to generate dust.

- ✚ Waste unloading to the raw stockpiles area;
- ✚ Excavating activities (sorting waste, feeding plant, maintaining stockpiles);
- ✚ Front End Loaders (FEL) loading product, loading raw feed, loading stockpiles;
- ✚ Movement of heavy vehicles on sealed and unsealed areas within the site (waste trucks, haul trucks, product trucks and
- ✚ Wind erosion from active stockpile areas and exposed ground.

Each of these factors must be detailed including their capacities, operating hours, throughput and distances of travel in order for any modelling to be useful or valid.

Enclosure of proposed activities:

The EPA's stated position is that general non putrescible waste transfer on the adjacent site (and at ground level not 15 metres in the air) should take place under the cover of a fully enclosed building. The EPA have actively communicated this position by reference to implementing additional measures to mitigate off-site dust. More recently earlier this year,

the EPA were particularly vocal in this when advising Marrickville Council of a number of additional conditions outside the normal course of recommending reasonable conditions of development consent.

Non putrescible waste transfer involves the loading and unloading of trucks only:

It does not involve the crushing grinding and screening of hardfill materials (such as sandstone).

If the EPA's position is that mere loading and unloading of trucks should take place undercover at ground level it can hardly be the EPA's position that crushing grinding and screening can appropriately be carried out in the open air 15 metres above ground level.

Given the proximity to both residential and commercial premises as a minimum, best practice and minimal impact to the environment would dictate that processing of sandstone by crushing or grinding should take place within an enclosed building

The height of the existing sandstone stockpile is 10-15metres above road level of Campbell Rd or Albert Street. This means that crushed sandstone particles will become windborne more readily than similar material from the neighbouring property. This places both residences of Campbell Rd, Albert St, Barwon park Road and users of Sydney Park at greater risk.

Minimising the exposure of the operations of this proposal to ALF and the adjoining residents in Albert Street and Campbell Road is critical given the close interaction between industrial zones and residential zones.

The adjoining neighbours of the Proponent (including a number of residents to the north in Albert and Campbell Road) will also be greatly affected by both the noise and dust generation of proposed crushing and processing activities.

The Proponent has failed to design the site and the proposed built form, (being largely earth-works), having regard to the operational constraints and the surrounding environment.

In our view, there should be a complete re-design of the proposed development to construct a large building to house these proposed activities.

PROPOSED ADDITIONAL DUST MANAGEMENT MEASURES - Physical Barriers:

Physical barriers berms and bunds are the most effective method of preventing dispersion of airborne particulates.

The sandstone berm on northeast boundary of the ALF provides a physical barrier to windblown dust

Crushing and grinding **on top of the berm removes completely the protection.**

Dust suppression equipment is not specified, (at material transfer area for feed), water sprays/misters within separation plant and dust extraction within the separation plant have not been specified with any precision

With regard to water use (mist and sprays) there is a fine balance between application of not enough water and too much water which can impact later processes.

The Proposal does not indicate the quantity of water expected to be used, where it is to be sourced from and where it is to drain to.

NOISE:

The operation of crushing, grinding and screening plant, front end loaders and trucks loading and unloading are all known to be noisy activities.

Similar noisy activities currently take place within the ALF site but that site is protected by high concrete walls and berms (of which the Project site is one)

The Project site has no such protection and the machinery and plant noise will affect all local residences.

The EA (Part 7) outlines the Draft Statement of Commitments for this Proposal, one of which is that:

*“Concrete Recyclers is committed to the following objectives: ... **To protect the health of site workers and the general public**, and ensure business viability by compliance with relevant legislation standards and regulating authorities”. (Our emphasis added).*

The proposed measures to minimise and control dust leaving the subject site are not designed to “*protect the health of the site workers and the general public*”.

All the Proponent has recommended are the following, (taken from the proposed ‘Air Quality Management Plan’^[1]):

Summary of proposed measures	Our comments
Maintain dust suppression devices to all processing equipment.	What are these?
Maintain the sprinkler system including fine sprays on the conveyors of the processing plant and stockpile sprinklers.	If the material becomes too wet it becomes difficult to handle and process.
Use of water cart to suppress dust on unsealed roads, truck loading areas and non permanent stockpile during dry conditions on days of operation.	The use of one cart for a site of this size and scale is wholly inadequate.
20 km/hr speed limit on inertial, unsealed access tracks to minimise dust generation.	Again, this is wholly inadequate and virtually impossible to enforce on a large scale site of this type.

Proposed F6/St Peters Industrial Route:

The subject site is owned by the NSW Roads & Maritime Services (**RMS**) and the site is leased to the Proponent.

The RMS have a road reservation over the site, for the F6 Corridor, which is substantially mirrored in the local government zoning.

^[1] Page 7-7 from the Environmental Assessment prepared by Nexus Environmental Planning Pty Ltd.

At present this road reservation is extensive and imprecise. However, the road reservation depicted in the Draft Sydney LEP 2011 appears to consolidate the position of the road.

Given the status of this designation on title, we are of the view that the Proponent should not be pursuing a major re-development in circumstances where the

EXCESSIVE HOURS OF OPERATION:

The EA outlines that the proposed hours of operation will be:

Loading of trucks	Monday to Friday	6:00am to 6:00pm
	Saturday	7:00am to 4:00pm
Truck movements	Monday to Friday	6:00am to 6:00pm
	Saturday	7:00am to 4:00pm
Use of crusher/screens	Monday to Friday	7:00am to 6:00pm
	Saturday	7:00am to 4:00pm

These proposed hours of operation are excessive.

The Office of Environment & Heritage recommended that the standard construction hours that are applicable during construction are:

Monday to Friday	7:00am to 6:00pm
Saturday	8:00am to 1:00pm

We are of the view that these hours should also be adopted, if the proposal is approved, to minimise impacts on the surrounding neighbourhood. The loading and movement of large trucks from 6:00am is a public risk and the use of crushers from 7:00pm every morning (excluding Sunday) is a major noise impact to adjoin neighbours and residents in the area.

STORMWATER IMPACTS:

We understand from the 'combined' Traffic and Stormwater Drainage Report prepared by Lyle Marshall & Associates Pty Ltd (September 2012) that with respect to the proposed stormwater drainage system (during the site preparation and excavation stages) that run-off from the site catchment area of 5170 m² will drain to retention basins 1 and 2 which have a combined capacity of 743 m³.^[2]

In our view, we do not believe that it adequate, as the stormwater design should be prepared to handle a one in one hundred year flooding event, as this site area is significant.

There are also inadequate details of what management measures will occur if the detention basins overflow – where will they be discharged to? We also suggest that there should be a perimeter catch drain constructed around the site to divert run off from the subject site away from the adjoining ALF site.

It appears that diesel pumps will also be operated manually between the hours of 6:00am to 6:00pm as required to discharge stormwater from the site to Holland Street. The operation of diesel pumps will also add to the noise load – normally stormwater should be gravity drained.

We also note that stormwater drains in Holland Street are notorious for blockages, as this has been the case for the last decade.

OUTDATED TRAFFIC DATA:

The traffic volume and classification counts relied upon by the Proponent in the EA (Traffic and Stormwater Drainage Report prepared by Lyle Marshall & Associates Pty Ltd) is inadequate.

The report discloses that the traffic counts were carried out over 7 days in December 2009^[3] showed:

*“that the peak hours were 7:00-8:00am and 5:00-6:00pm. Traffic volumes were highest in the am peak hour. The two-way traffic of **1047** vphr included **114** heavy vehicles”.*

This traffic data is close to **3 years old** and should not be relied upon for the purposes of making any informed and meaningful assessment by the DOPI's assessment officers. The traffic count and data should be re-done by the Proponent.

Further to this, we point out that the:

“count was a made of all turning movements from 7:00am to 9:00am to Albert Street / Campbell Road intersection in March 2011. For a two-way total of 1059 pcu's / hr in Campbell Road the practical capacity for the right turn from Albert Street is 104 pcu's / hr. The existing volume is 41 pcu's/hr”.

^[2] Page 20 of the Traffic and Stormwater Drainage Report dated September 2012.

^[3] Page 26 of the Traffic and Stormwater Drainage Report dated September 2012.

Once again this traffic count is **over 12 months old** and should not be relied upon for the purposes of assessment by the DOPI.

We have a number of trucks which are parked at ALF (overnight) and the Proponent has not taken into account our truck movements.

The DOPI, as the relevant determining authority for this Major Project Application, is bound to consider relevant information, not outdated data counts that may not reflect the current traffic counts of the relevant road network.

To do otherwise, may potentially leave the Corporation Sole, (administering the EP&A Act) open to challenge of any Project Approval granted to the Proponent in judicial review proceedings in the Land and Environment Court.

EROSION IMPACTS:

There has been an inadequate assessment of potential erosion impacts in the EA.

Given the proximity of this Proposal to the ALF site we have no confidence in the measures recommended in the EA to ensure site and stockpile stability are adequate.

The EA states that should the western face of the existing stockpile start to erode then, (upon inspections), the surface may be “*stabilised with spray grass or a light grade woven polypropylene fabric pinned to the surface*”.¹

Stating that an inspection would take place after a heavy rain event, is not in our view, an adequate response given the enormous stockpile and implications for major slippage should the western face become de-stable.

Comprehensive measures to ensure that adequate erosion control take place should be carefully dealt with in the Proponent's EA.

CUMULATIVE ENVIRONMENTAL IMPACTS:

As DOPI will be aware, environmental impacts from development may be considered relatively insignificant when assessed in isolation, however, they may potentially become very significant when assessed in the context of the impacts of other developments nearby or in the general locality.

The DG's Requirements included a consideration of:

“Cumulative Impacts – including potential cumulative impacts (particularly on air quality, noise and traffic) that may arise from the combined operation of the project, together with the operations within the broader context of St Peters”.

There has been no comprehensive consideration of the cumulative environmental impacts having regard to the existing operations underway at ALF.

The potential impacts (dust, traffic and noise) that the Proponent's development will have, as a cumulative impact, will be significant.

We believe that a comprehensive assessment of the proposed impacts having regard to the impacts at ALF is required.

¹ Environmental Assessment prepared by Nexus Environmental Planning Pty Ltd, page 4-20.

Giving cursory acknowledgement that the Proponent's site adjoins ALF, is not, in our view providing a comprehensive assessment of the cumulative environmental impacts.

BCA ISSUES:

We see no details of whether any BCA assessment has been carried out by the Proponent.

Legal Department
Alexandria Landfill Facility
Ph: 9519 9999
