

Our Ref FR111017-004/Letter 003
Contact Daniel Thompson

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RE: KEMBLA GRANGE RESOURCE RECOVERY FACILITY

Dear Jane

Patrick Autocare Pty Ltd (PAC) provides motor vehicle shipping, processing and storage services for the Australian import/export industry. PAC operates a number of facilities at Kembla Grange on sites located on both West Dapto Road and Reddalls Road. Cardno has prepared this submission on behalf of PAC due to concerns raised by PAC associated with existing operations at the Kembla Grange Resource Recovery Facility (KGRRF) and the proposed expansion of these operations.

The PAC facilities store cars after they have been offloaded at Port Kembla and are essential to the continued operation of the Australian Amalgamated Terminals Facility in Port Kembla's inner harbour.

The proposed expansion of operations at the KGRRF will create significant environmental problems at PAC's facilities in Kembla Grange. The facility at 66 West Dapto Road will be particularly affected by the dust, aerosol and olfactory emissions of the proposed facility. PAC believes that the proposal's Environmental Impact Statement (EIS) does not adequately describe the air quality impacts on its facility and other properties to the south of the proposed development. Nor does the Air Quality Assessment meet the Director-General's requirements for the environmental assessment of this proposal. The Preliminary Hazard Analysis included with the EIS does not address the full range of risks and thus the proposal does not meet the requirements of SEPP 33 – Hazardous and Offensive Development. The land use conflict generated by the proposal and its non-adherence to best practice design are required to be considered under SEPP (Infrastructure) 2007.

PAC requests that the proponent's Air Quality Assessment be expanded to model additional sensitive receptors within PAC's facilities at 66 West Dapto Road and 17 Reddalls Road. PAC's facilities are sensitive receptors within the definition of the phrase as defined by *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (NSW Dept. of Environment and Conservation, 2005) and are located much closer to the KGRRF site than any of the sensitive receptors presently modelled in the EIS. PAC believes that the revised modelling will show that the KGRRF expansion will not meet air quality regulations. Furthermore, the predicted environmental impacts of the KGRRF on its operations could result in damage to vehicle stock and higher cleaning costs. These considerations will influence PAC's commitment to future operations in the area.

Figure1 Nearmap Aerial Photo (23/09/2014) showing PAC's sites & the KGRRF (at top right).



The Director-General's Requirements for the Environmental Impact Statement

"..Air Quality and Odour – including:

- a quantitative assessment of the potential air quality and odour impacts from the development and the effectiveness of the proposed air quality/odour control measures;*
- construction and operational impacts, including dust generation from the transport of materials and stockpiles; and*
- details of the proposed management and monitoring measures."*

These requirements do not exempt the EIS from assessing the impacts on the employment sites surrounding the proposed development. The Air Quality Assessment conducted for the EIS appears to ignore the existence of PAC's sites and other sites to the west and south despite the likelihood of significant impacts. The EIS clearly does not meet the Director-General's requirements for these matters.

Air Quality Assessment

GHD prepared the assessment on behalf of TCG Planning, the principle planning consultant for the project. Section 2.1 of the Air Quality Assessment qualitatively describes the land uses surrounding the site in each direction. The southerly direction is described thus.. **"To the south of the site opposite the Princes Highway is located residential housing of Kembla Grange, approximately 1 km from the proposal."** (Page 6, Kembla Grange Waste Recovery Facility Air Quality Assessment, GHD, July 2014). This description completely ignores the PAC site at 66 West Dapto Road which is less than 100 metres south of the KGRRF site.

The assessment then includes Table 1, which lists the sensitive receivers identified by either GHD or TCG planning as surrounding the site. The PAC sites are not listed. The definition of sensitive receiver given in the

assessment is “**Air quality sensitive receivers are defined based on the type of occupancy and the activities performed in the land use. Sensitive receivers are locations where people are likely to work or reside;..**” (Page 6, as above).

This definition is consistent with the official definition which is “**A location where people are likely to work or reside; this may include a dwelling, school, hospital, office or public recreational area. An air quality impact assessment should also consider the location of known or likely future sensitive receptors.**” (Page 57, *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* NSW Dept. of Environment and Conservation, 2005)

The PAC sites at 66 West Dapto Road and 17 Reddalls Road are occupied by PAC staff tasked with moving, securing and maintaining the vehicles stored there. These staff work primarily outdoors and will be directly exposed to any air polluting emissions from the KGRRF site.

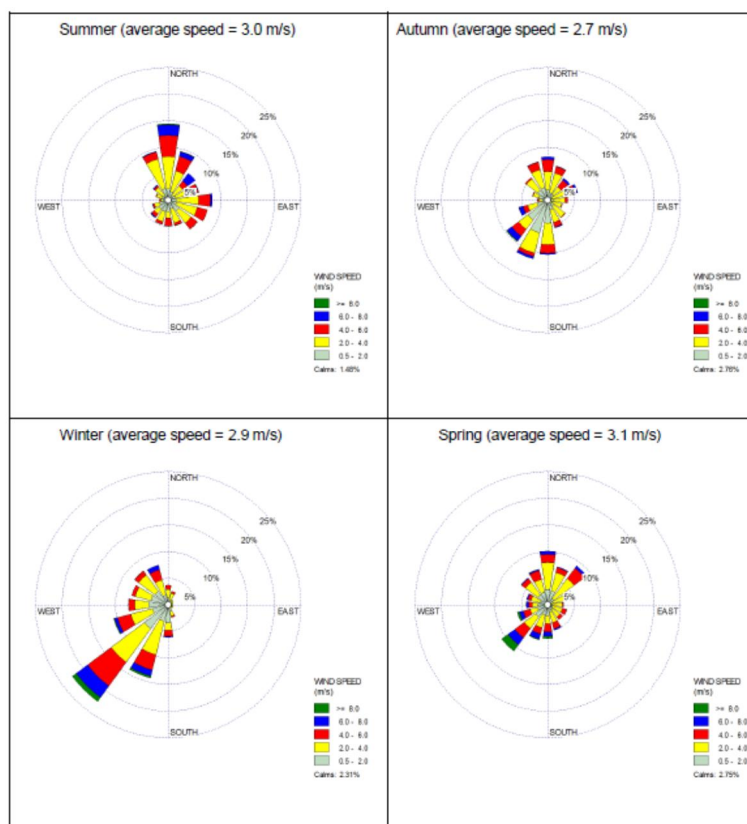
Secondly the vehicles are stored on site and open to the elements. Any dust and odour emissions which were to contaminate these stored vehicles could damage their value and impact on the viability of PAC's operations on site. PAC is especially concerned about dust from the concrete crushing operations at the KGRRF site. Concrete dust is particularly damaging to the paintwork of motor vehicles and can only be removed by through washing by Hydrofluoric Acid (HF). This acid washing process is itself potentially harmful to human health and the environment. The dust fallout from the KGRRF is a real risk to PAC's staff and the continued viability of vehicle storage operations at these sites.

Thus both for the protection of human health and prevention of property damage, the sites at 66 West Dapto Road and 17 Reddalls Road are sensitive receivers and should be modelled in a revised Air Quality Assessment. PAC believes that the Air Quality Assessment cannot meet the requirements outlined by the Director-General until it considers the nearby employment sites as sensitive receivers.

Those sensitive receivers identified in Table 1 of the Air Quality Assessment are all located north or east of the proposed development. No modelling has been conducted for receivers to the south or west of the proposed development which are currently used by PAC and other organisations for employment purposes.

Figure 2 Section from EIS Figure 16, with PAC's sites and identified Sensitive Receivers.



Figure 3 Seasonal Wind Roses (from CALMET 2009)

Figure 6 – Seasonal wind roses (from CALMET 2009)

This highly uneven distribution of receiver sites is significant due to the seasonal variation in wind direction and strength. The Air Quality Assessment's own wind direction diagrams indicate winds from the north and northeast are typical of summer and spring.

The interpretation of these diagrams is that dust, odour and aerosol emissions from the KGRRF site will be blown into PAC's facilities with increased frequency and intensity in spring and summer due to these seasonal prevailing winds. Because the Air Quality Assessment does not model any sensitive receiver sites at these locations, the seasonal peak impacts of the facility are unknown. A revised Air Quality Assessment must analyse the impacts on locations west and south of the facility in order to provide a complete assessment. PAC believes that the Air Quality Assessment cannot meet the requirements outlined by the Director-General until it considers impacts in all directions around the KGRRF site.

Figure 4 Predicted – Cumulative TSP Annual Average Concentration (with mitigation) $\mu\text{g}/\text{m}^3$



Figure 16 – Predicted – Cumulative TSP Annual Average Concentration (with mitigation) $\mu\text{g}/\text{m}^3$

Air Quality Impacts

Given the lack of site specific modelling in the vicinity of PAC's facilities, all air quality impacts have been interpreted from the maps included in the Air Quality Assessment.

TSP

Total Suspended Particles measured in micrograms per cubic metre of air is directly measuring the concentration of fine particles in the atmosphere. The Air Quality Assessment indicates a background level of 42.6 micrograms per cubic metre. The proposed expansion of the KGRRF would result in the predicted

annual average concentration of TSPs rising to between 50 and 60 micrograms per cubic metre on the northern quarter of PAC's facility at 66 West Dapto Road even with all proposed mitigation measures implemented (see figure 4). This is a 25%-50% increase in fine particle levels on this part of the site which is used for the storage of motor vehicles.

This increase could also have health impacts for staff. It is likely that this increased dust concentration will need to be countered with an increase in washing to maintain the condition of vehicles stored on that part of the site. As noted above, the specific chemical effects of concrete dust will damage the paint of vehicles stored at PAC's sites. The chemical cleaning processes to remove concrete dust from cars requires the use of Hydrofluoric Acid which makes it dangerous and expensive.

PM₁₀

Particulate Matter particles of around 10 microns in diameter are linked to a broad range of human health problems. The United States Government's EPA has linked fine particulates with:

"premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing."

(EPA , May 2014, www.epa.gov/airquality/particulatematter/health.html)

Similarly a 2013 study of European cities found that there was no safe exposure limit for aerosol particles and that lung cancer rates increased by 22% for each increase in PM₁₀ levels of 10 micrograms per cubic metre. (Raaschou-Nielsen, O. et al. (2013). Air pollution and lung cancer incidence in 17 European cohorts: prospective analyses from the European Study of Cohorts for Air Pollution Effects (ESCAPE). *The lancet oncology*, 14(9), 813-822.)

The Air Quality Assessment shows the results of the air quality predictions with mitigation measures in Figure 15. The assessment predicts that even with all mitigation measures in place, the PAC site at 66 West Dapto Road will be exposed to a maximum 24 hour average of 50 to 80 micrograms per cubic metre of PM₁₀ particles (See figure 5). Approximately half the site area would be exposed to PM₁₀ concentrations of 50 micrograms per cubic metre or more. The impact at 17 Reddalls Road would be less with levels between 40 and 70 micrograms per cubic metre.

The background level determined was 21.3 micrograms per cubic metre.

The PM10 emissions from the proposed development are a threat to the health of staff at PAC's facility. The PM10 emissions also represent a direct threat to the employees of KGRRF who would be working for extended periods very close to the sources of this pollution.

The Air Quality Assessment notes in Table 13 that the regulatory criteria for exposure to PM10 particles over 24 hours is 50 micrograms per cubic metre. This level is exceeded significantly at PAC's 66 West Dapto Road site.

Figure 5 Predicted – Cumulative PM₁₀ 24-hour Average Concentration (with mitigation) µg/m³

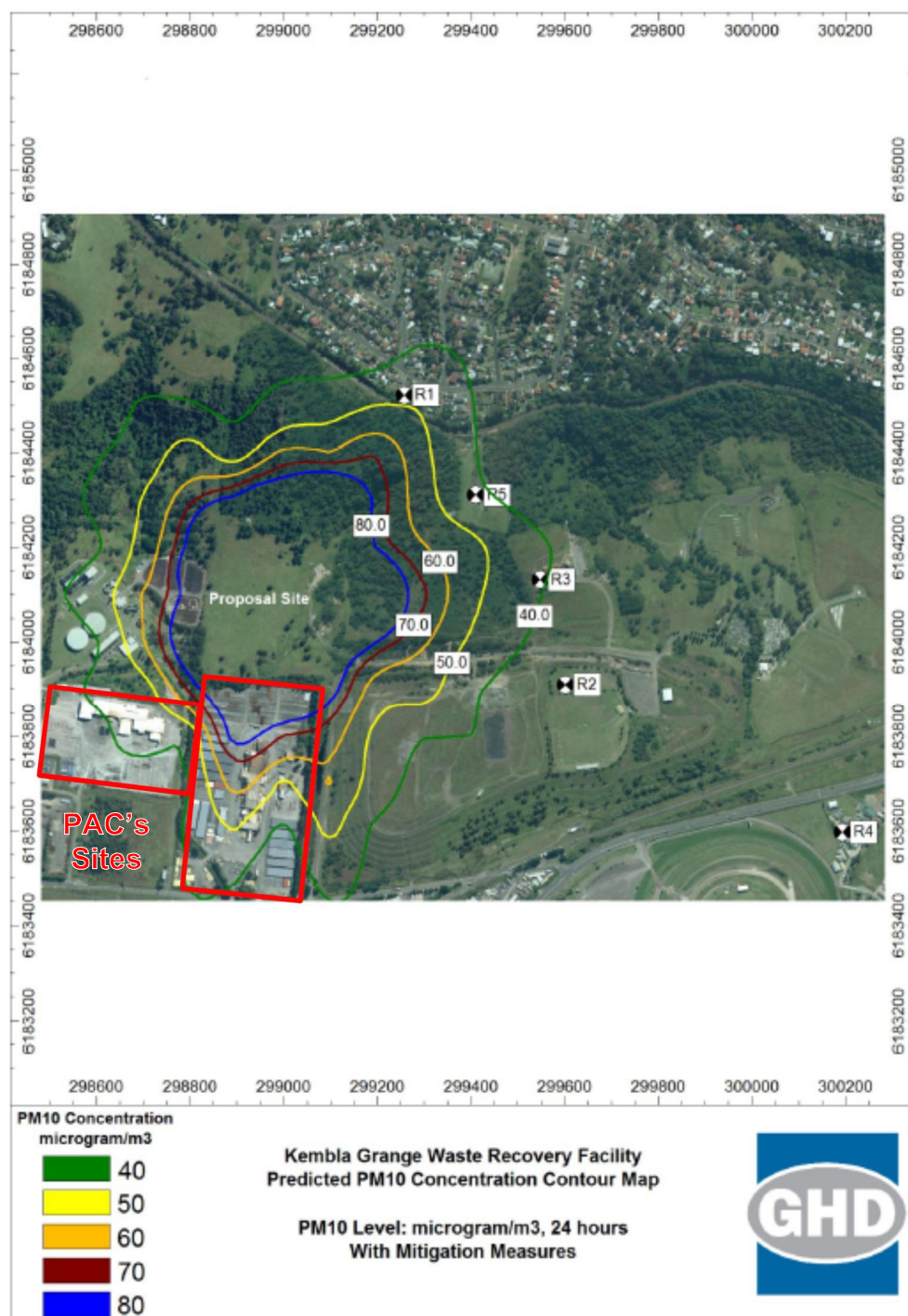


Figure 15 – Predicted – Cumulative PM₁₀ 24-hour Average Concentration (with mitigation) µg/m³

Odour

The KGRRF facility would emit unpleasant odours to an even greater extent than currently occurs due to the expanded operations. Even with all proposed mitigation measures there would still be an unacceptable odour at the northern end of PAC's site at 66 West Dapto Road (See figure 6). This odour could over time permeate the cars stored on this section of the site, with PAC required to introduce an enhanced cleaning regime to maintain these vehicles in an acceptable condition. Furthermore, odour would have an impact on the amenity of the surrounds for staff.

Dust

The Air Quality Assessment does not include maps of the predicted dust impact. Impacts are only provided at the sensitive receivers. Given that PAC's sites are much closer to the KGRRF site than any of the sensitive receivers, it is reasonable to expect that dust deposition would be more intense on PAC's site. As noted earlier the seasonal impacts of the winds and site terrain could lead to more intense impacts in summer and spring.

The dust produced by KGRRF could contain substances harmful to the health of PAC's staff especially considering the range of waste products it would process. The dust would also settle onto and inside the vehicles stored on the sites at 66 West Dapto Road and 17 Reddalls Road. This would increase the amount of vehicle cleaning required at these sites. As noted above, concrete dust is especially concerning because it chemically damages the paintwork of motor vehicles. The only cleaning processes which work to remove it involve the use Hydrofluoric Acid which makes the process dangerous and expensive.

Hydrofluoric Acid is dangerous to humans for a number of reasons. It can pass quickly through skin and lung surfaces. It damages cell membranes as it passes through them, causing extensive cell death. At the same time, it rapidly de-activates the cells of the nervous system, numbing sensation and meaning that people are often unaware that they have been exposed to it for hours after the event. Once Hydrofluoric Acid reaches the bones it causes them to decalcify, both weakening them and pushing a flood of calcium ions into the bloodstream. The combination of these effects makes Hydrofluoric Acid one of the most dangerous substances used in industry. PAC is very concerned that the dust fallout from increased operations at KGRRF could force it to use this dangerous substance on a regular basis.

Approving the proposed development at KGRRF would impose unreasonable human and material impacts on PAC. These impacts have not been adequately assessed in the EIS and Air Quality Assessment.

Figure 6 Predicted Peak Odour Contour Map, OU with building ventilation and biofilter

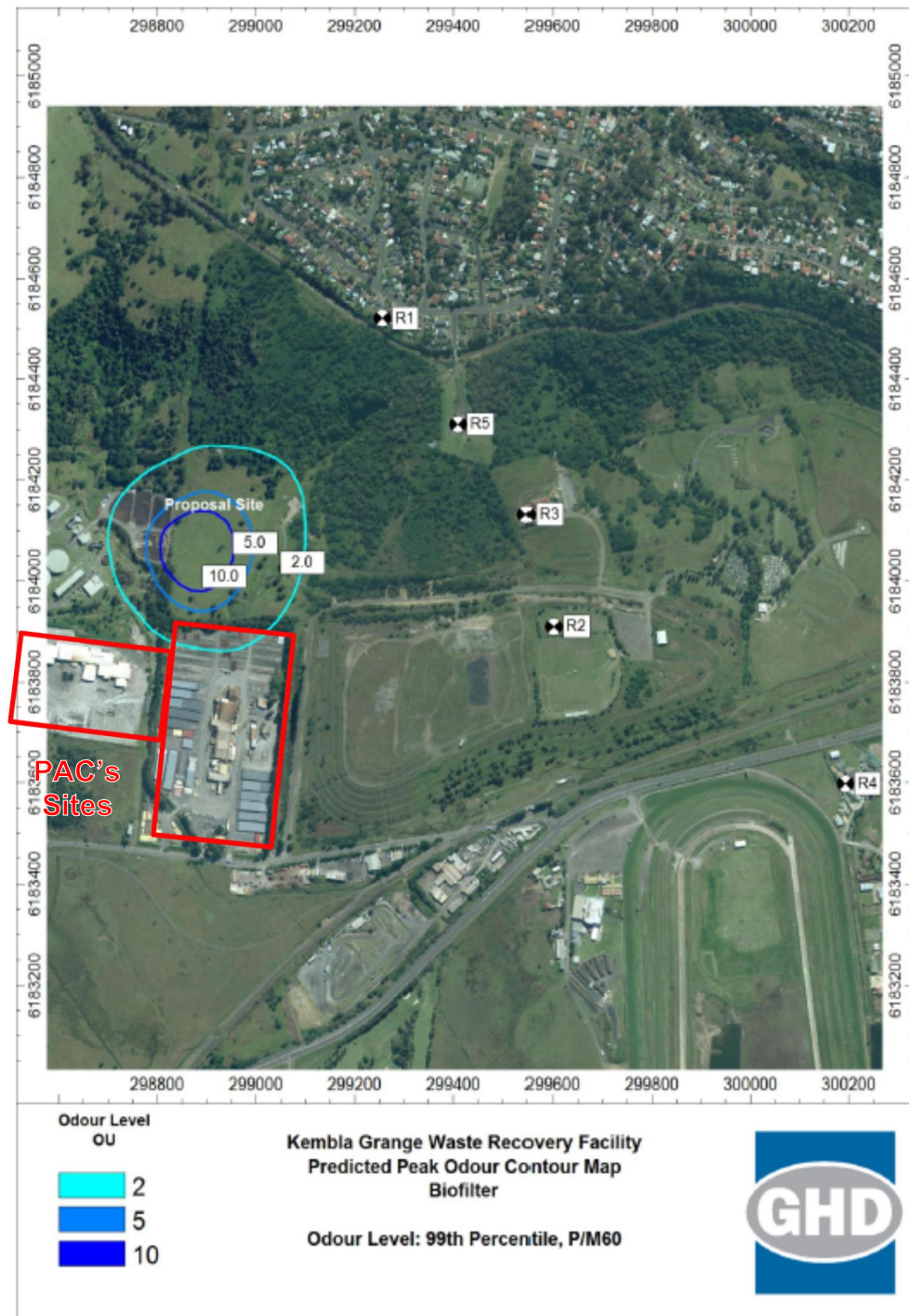


Figure 19 – Predicted Peak Odour Contour Map, OU with building ventilation and biofilter

Preliminary Risk Analysis

The EIS includes a preliminary risk analysis conducted by Benviron Group. This is intended to meet the requirements of SEPP 33 – Hazardous and Offensive Development and other guidelines and standards.

“(d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account, and

(e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact..” SEPP 33, Part 1, Section 2d & 2e.

The preliminary risk analysis lists a number of project components and incidents which could result in scenarios that have impacts on and off site. These are vehicle collisions, vehicle theft, various kinds of fires, explosions, thefts of material, chemical leaks and spills, soil dust release and bushfires.

As noted earlier the proposed expansion of KGRRF will have impacts on air quality on site and on adjacent sites such as those operated by PAC. The risk assessment does not identify any items relevant to the release of PM10 air pollution or release of contaminated dust from construction waste. Significantly it does not assess the risk that the mitigation measures proposed to reduce air pollution such as water spraying, filtration and ventilation systems might fail. The failure of these systems would lead to harmful air pollution events which would exceed the estimates given in the Air Quality Assessment and likely not meet OEH and EPA requirements.

Also of concern, there is no risk assessment of the potential for dangerous forms of waste to be accidentally introduced to the site in the course of its operation. There is no mention of asbestos, lead or other likely contaminants anywhere in the preliminary risk analysis even though these are commonly found in building and soil wastes which the site is intended to process. This is an important consideration given that any contaminants could be significantly released into the air by the crushing, loading and storage processes proposed in EIS.

As a consequence of these major shortcomings the Preliminary Risk Analysis and EIS do not provide sufficient information for the consent authority to assess the development and its mitigation measures. It does not meet the requirements of SEPP33.

Current and Future Land Use

Consideration of current and future land use is significant given that SEPP 33 requires consent authorities to consider future land use in the vicinity of hazardous or offensive industry.

“(e) any likely future use of the land surrounding the development.” SEP33, Part 3, Section 13e.

The land surrounding the KGRRF site to the south and south west is currently used for employment purposes and vehicle storage by PAC. These activities are likely to expand in future given the growth of Wollongong, the need for greater employment in the area and future residential development of the greater West Dapto area. The future land use of West Dapto is outlined in Wollongong City Council’s Wollongong Development Control Plan 2009, Chapter D16: West Dapto Release Area. The West Dapto Master Plan (see figure 7) indicates that the land surrounding the KGRRF to the south and south east is intended for light industrial development. Based on the strategic direction proposed for the area, the lands around the KGRRF will be more intensively used in future, which elevates the potential for future consequences of environmental impacts and incidents at the KGRRF site. It is therefore considered that this is a poor location for such a large facility.

As a consequence of these major shortcomings the Preliminary Risk Analysis and does not provide sufficient information for the consent authority to assess the development and its mitigation measures in the context of future land use.

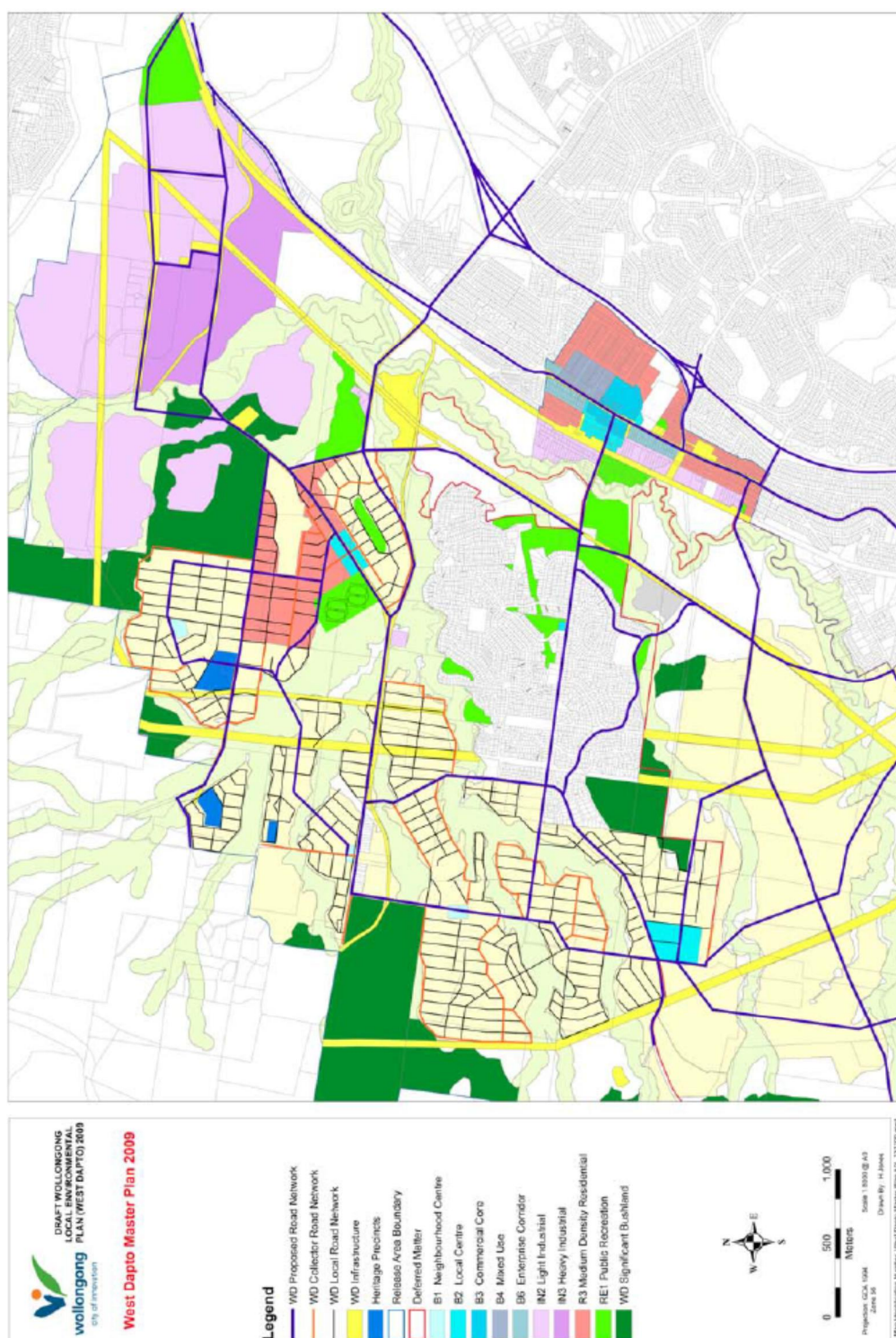
As outlined above the proposed expansion of operations at the KGRRF will have significant impacts on PAC’s operations in the area due to dust and air pollution. This is a land use conflict which is not adequately

addressed in the EIS. This conflict must be considered by the consent authority under the terms of State Environmental Planning Policy (Infrastructure) 2007:

“whether the development is located so as to avoid land use conflicts, including whether it is consistent with any regional planning strategies or locational principles included in the publication EIS Guideline: Landfilling (Department of Planning, 1996), as in force from time to time” SEPP (Infrastructure) 2007, Section 123c(i).

The proposed expansion will produce levels and types of dust and air pollution that will create a land use conflict with PAC’s operations in the area. This has not been addressed adequately in the EIS.

Figure 7 The West Dapto Master Plan 2009, (Wollongong DCP 2009, Chapter D16)



Current Unsafe Practices On Site

The Waste Disposal facility currently on the KGRRF site, operates without due regard to WHS safety regulations and requirements. A member of the public observed and photographed unsafe practices on site in October 2014 such as the operation of heavy machinery within 3 metres of members of the public. The Preliminary Risk Analysis and EIS propose the use of safety procedures as mitigation against the risk of pedestrian collision with vehicles. These measures do not appear to be enforced on the site at present, casting doubt on the commitment to enforce them in future for the proposed expansion.



Figure 8: Photo submitted by a member of the public on site. Heavy machinery operating in close proximity to a member of the public.

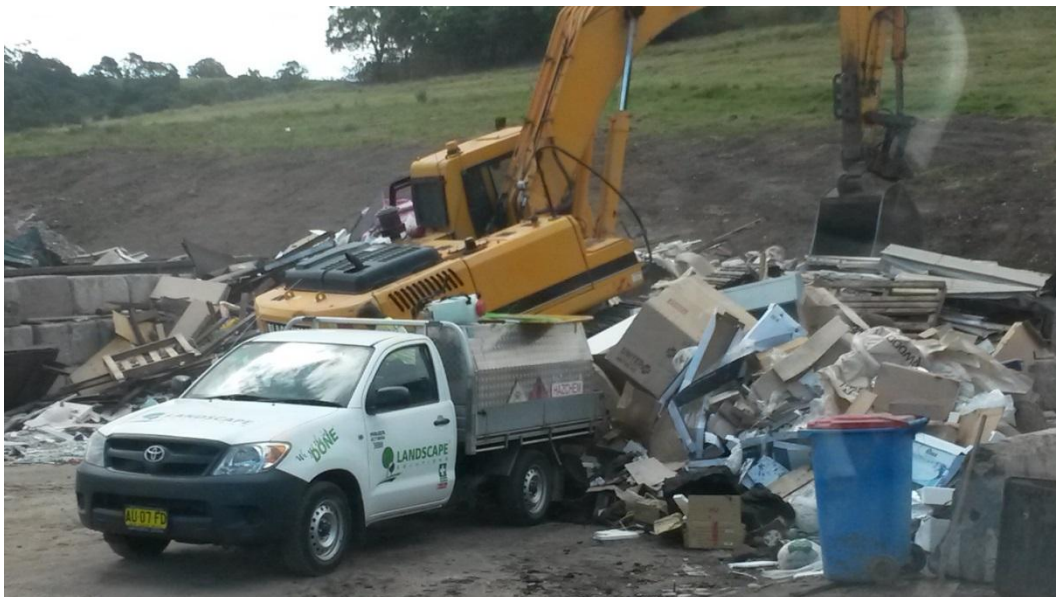


Figure 9: Photo submitted by a member of the public on site. Heavy machinery operating in close proximity to a member of the public.

The failure to enforce best practice approaches to safety on the current waste facility is significant due to the items a consent authority must consider under the State Environmental Planning Policy (Infrastructure) 2007.

“(b) whether the development:

(i) adopts best practice landfill design and operation” SEPP (Infrastructure) 2007, Section 123b.

The proposed expansion at the KGRRF site is not operating in compliance with best practices for a waste processing facility. The proposed expansion of the facility relies on commitments to maintain best practice standards to mitigate air pollution and other environmental consequences. The extent to which these impacts are proposed to be mitigated is insufficient to prevent significant impacts on PAC's sites and other sites adjacent to the facility both in the existing and proposed expanded operating scenario.

In conclusion, the proposed expansion of the KGRRF will have significant negative impacts on PAC operations and staff health, as well as other operators in the wider Kembla Grange area. The increased levels of PM₁₀ particles threaten the health of employees. The increased levels of Total Suspended Particles and Odours could increase costs for the business through increased cleaning requirements and require the use of hazardous substances. PAC requests that its sites be modelled as sensitive receivers in a revised Air Quality Assessment. The proposed development is unlikely to comply with the mandatory EPA & OEH air quality standards once PAC's site at 66 West Dapto Road is taken into consideration. The proposal does not adequately address the risks to surrounding areas and operations, particularly those of PAC. The proposed expansion of KGRRF creates a land use conflict with PAC's operation and this will become worse as other sites in the West Dapto area develop and employ more people. Finally the current KGRRF facility does not appear to be operating at an acceptable environmental level with regard to safety, with the associated risks only likely to increase as a result of the expansion. The proposal's impacts on PAC in terms of air quality, dust and risk are not characteristic of world's best practice which is a required consideration under the SEPP (Infrastructure) 2007.

The KGRRF should not be permitted to expand its operations to the point where its impacts threaten the operation and viability of existing businesses and the health of their employees. Consequently, PAC requests that the proposed expansion of KGRRF be carefully considered with appropriate supporting assessment, which is not provided by the current documentation.

Yours faithfully



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