

1. Air quality and odour

The site is located within the Smithfield Industrial Precinct, and as described in Section 2.3 of this document is nested nearby businesses that operate warehousing and industrial activities. The closest residential area is located approximately 100 m to the south-west of the site.

1.1 Potential sources of air emissions

The proposed activities involving the storage and processing of mattresses are not considered to be a source of significant air emissions or odour, and therefore will not require any major mitigation or management strategies.

Identified sources of air emissions are: dust from mattress processing; road dust; and, greenhouse emissions from energy use (including transportation fuel emissions).

Key management strategies have been put in place to ensure there are no significant sources of air emissions from the site. These include:

I. Installing dust capture technology for the mattress recycling process.

Mattress storage and process related activities will be conducted within warehouse facility on site. Mattresses that will be stored at the site are not considered to be a source of dust or other air emissions.

Whilst the plant is operating any dust-laden air that is generated from the process will be drawn into a 'Baghouse' which will act to remove dust particulates.

Baghouse technology is commonly employed for industrial and commercial applications. The technology relies on drawing dust through filter bags, made from a specially designed fabric, which captures dust on the filter surface. The filter surface area of the filter bags is equivalent to 155 m², and the air handling capacity of the baghouse is rated at 21,200 to 23,800 m³/hour.

The filter bags require cleaning when the dust forms a 'cake' over the filter surface. The cleaning process will be required periodically and will occur automatically through the use of pulsing compressed air through the bags. Waste material from the cleaning process is collected into a hopper.

II. Ensuring traffic accessing the site travels on sealed roads to ensure no road dust is generated.

All light and heavy vehicles will access the site on sealed surfaces, utilising: roads passing through the industrial precinct; the Cumberland Highway; and the M4 Western Motorway. When entering the site vehicles will use the existing driveway into the site located via Chifley Street, which consists of a hardstand surface.

Traffic associated with the proposed operations will generally avoid residential streets and will be absorbed by the main routes envisaged to carry traffic associated with the industrial precinct.

Car parking for the proposal will be located on a hardstand surface adjoining the warehouse to the south of the facility.

III. Monitoring energy use on site and minimising associated greenhouse gas emissions.

Greenhouse gas emissions for the proposed operations will be as a result of electricity usage (stationary energy used for lighting, plant and equipment, office heating and cooling and office equipment) and transportation fuel (light vehicles, trucks and a forklift).

Efficient use of energy will be a key management strategy for the proposal, and will be carefully monitored both from a cost viewpoint as well managing the greenhouse emissions profile for the site.

1.2 Potential impacts

Given the nature of the proposed operations, and the management strategies that have been included with the proposal, no significant air emissions from facility will be generated.

1.3 Mitigation measures

Further mitigations strategies involved with the proposal are outlined as follows:

I. Transport Greenhouse Emissions

There is limited opportunity to improve fuel efficiency for the current vehicle fleet. However for future improvements, adopting a purchasing policy for evaluating more fuel efficient vehicles will be considered.

On-site strategies will involve a policy that all trucks and other transport vehicles will not be allowed to leave their motor's idling whilst waiting for deliveries. All motors will be shut off when not required to running.

II. Electricity Consumption

Opportunities to improve energy efficiency at the site would involve assessing building lighting, and determine the savings benefits of changing to more energy efficient lighting systems. Other opportunities could include assessing office practices, and opportunities to introduce further efficiency measures regarding office equipment and heating and cooling systems.

In addition to these measures a review the mattress processing plant (including opportunities for turning motors and conveyor systems when not required) would also be undertaken..

III. Emissions from Mattress Fires

Mattresses in their natural state do not emit odour, dust or air pollutants. However, in the event of a fire at the site toxic smoke may be released. The sites overall fire risk management and containment measures are outlined in section 6.4.2 of this document.