COCKBURN CEMENT

Working towards a cleaner **community**

To help reduce dust emissions at Cockburn Cement's Munster operations, a $24 million baghouse will be fitted to kiln 6, which produces lime and is the largest source of dust emissions at the site. The baghouse will eventually replace an existing dust control system, an electrostatic precipitator (ESP), and will be more effective in ensuring continuous dust capture.

This is the first in a series of community updates we will be providing, detailing the purpose of the baghouse, how it will work and what the current project status is.

What is a baghouse?

A baghouse is an efficient dust collection system used in industry. The baghouse we will use will be engineered specifically for kiln 6 with distinct electrical and mechanical elements. The design phase of the baghouse has taken around 6 months.

What are the basic design elements to the baghouse?

The baghouse is a large, rectangular metal structure with 6-8 collection chambers inside. Each chamber is fitted with its own set of filter bags, with each chamber having the ability to be isolated. Refer to the diagram overleaf for a more detailed description.

How will the baghouse work?

The kiln exhaust fan generates the gas flow. In the process, dust-laden gases are then drawn through the baghouse where fine dust or particulates are collected by the filter bags. The gas passes through the filter bag and is vented to the atmosphere via the clean air exhaust.

What are the filter bags made of?

They are made of fiberglass and laminated with a smooth, microporous membrane, which is a film of expanded polytetraflouro ethylene (ePTFE - originally designed by GORETEX). Filter bags must withstand high temperatures, flex and abrasion.

What will be the capacity of this baghouse?

The baghouse will be designed to handle all the exhaust gases from kiln 6.

When will the baghouse be completed?

The baghouse should be operational by 2012. Please see overleaf for the construction timeline.

Will the baghouse collect all the dust produced from the kiln?

The baghouse will operate continuously and prevent the current spikes in dust emissions from kiln 6, which can be caused by disruption of power to the existing ESP. The baghouse will ensure a significant reduction in particles that could pass through the baghouse.

Where is it placed?

The baghouse will be constructed to the north of kiln 6, adjacent to the current ESP. See diagram overleaf.

How does a baghouse differ to an ESP?

The baghouse is a physical barrier between the process and the exhaust stack. An ESP has an electric field that charges the particles of dust where they are then collected on the collector plates. If the ESP loses power the particles don't get charged and are not collected. If the baghouse loses power the dust laden exhaust gases must still pass through the filter bags before being exhausted.

How do you clean the baghouses?

Periodically a jet of high-pressure compressed air is directed down the centre of each bag to remove the dust cake that collects on the filter. The cake is collected in the hopper and returned to the lime making process.

What happens if a baghouse fails?

The baghouse has compartments which can be isolated. This means in the event of a broken bag, the compartment can be sealed and the bag blanked off or replaced to stop any increase in emissions.

Will the baghouse be noisy?

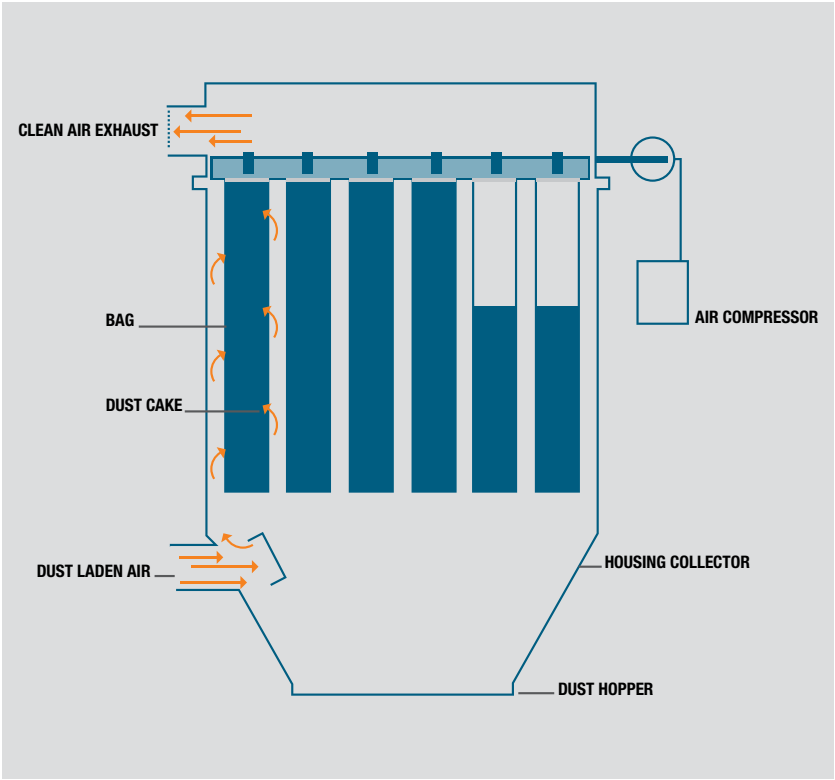
No. The baghouse structure is fully enclosed. Any noise created from the mechanics within the baghouse will be below the relevant guidelines/standards.

Why is the baghouse only being built on kiln 6?

Kiln 6 during upset conditions is the largest contributor to particulate emissions.

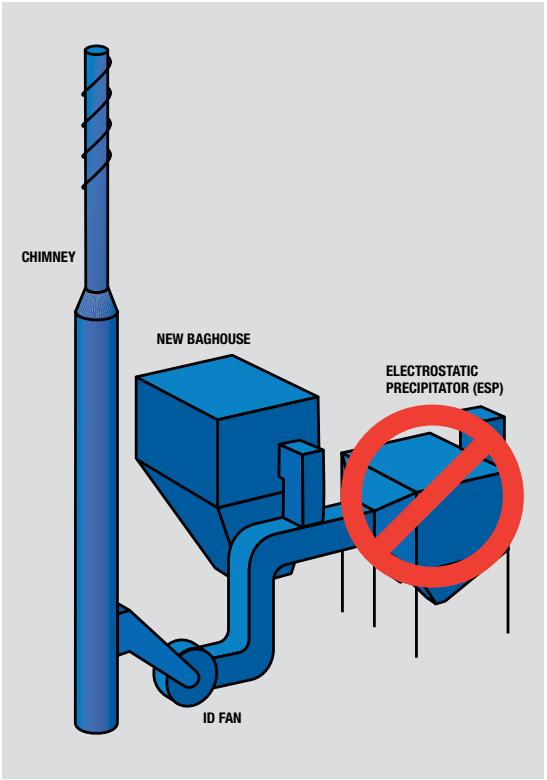
Baghouse

This cross section diagram of a baghouse demonstrates the type of filter which will be fitted to kiln 6. Dust laden gases enter the baghouse via a duct below. The gases are filtered and exit through the clean air exhaust, particulate free.



Existing ESP & kiln 6

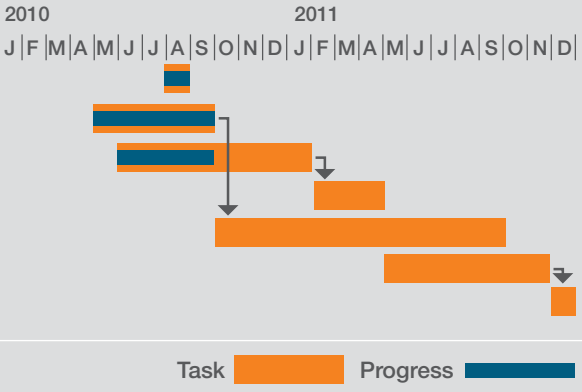
This diagram demonstrates where the baghouse will be built in relation to the existing ESP and kiln 6.



Timeline

This timeline shows design and construction deadlines. We will keep the community updated on this project as construction of the baghouse progresses.

1. Approval of $24 million budget for baghouse
2. Tender for engineering and baghouse package
3. Electrical and mechanical design for baghouse
4. Tender for WA suppliers for construction works
5. Manufacture of baghouse and heat exchanger
6. Construction of bag house and heat exchanger on site
7. Commissioning



Cockburn Cement Limited, Russell Road East, Munster WA | Tel: (08) 9411 1000 | Fax: (08) 9411 1150
community@cockburncement.com.au | www.cockburncement.com.au