

Case Study – AirScape®, TailScape & K-Containment® Seal

Kinder Australia Product:	<u>AirScape®, TailScape & K-Containment® Seal</u>
Product Category:	Conveyor Skirting & Transfer
Location:	Brisbane, QLD
Conveyed Materials:	Clay, raw material for brick manufacturing
Conveyor Belt Width / Speed:	750mm Belt Width / 1 m/sec
Installation Date:	January 2025

CHALLENGE:

- *High dust levels affected air quality and worker safety.*
- *Frequent spillage led to material loss and increased maintenance efforts.*
- *Limited access in the basement area made cleaning difficult.*
- *Ineffective skirting rubber failed to control dust and contain material.*

A leading brick manufacturer in Brisbane operates one of Queensland's largest production facilities, relying on advanced bulk materials handling systems to efficiently process raw materials like clay and sand.

Automated conveyors and precision batching ensure high-volume output with minimal waste, supporting sustainable and efficient manufacturing. With a strong focus on quality and innovation, the company remains a trusted supplier for residential and commercial construction.

The brick manufacturer faced significant challenges with dust and spillage at the tail end of an incline conveyor used for transporting clay to a crusher. The basement location of this conveyor provided limited access for cleaning, making routine maintenance difficult and time-consuming.

High dust volumes also posed operational and environmental concerns, while excessive spillage increased clean-up efforts and reduced overall efficiency. The previous use of skirting rubber proved ineffective in containing material and controlling dust.



Before & After Photos: Dust and spillage reduced by 95% + after installing AirScape®, TailScape & K-Containment® Seal.

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SOLUTION:



Following demonstrations of the AirScape® solution through our QLD Distributor, **ConBulkS**, the brick manufacturer proceeded to install a combination of Kinder's AirScape®, TailScape, and K-Containment® Seal solutions to address the dust and spillage challenges. The installation process, completed over two days, involved rebuilding and extending the chute to accommodate the AirScape® system.

- **AirScape®:** A 4-metre-long, non-contact side sealing system designed to prevent spillage and reduce dust at the conveyor transfer points. By utilising a unique air flow design, AirScape® creates an inward suction effect that contains fine dust particles while allowing bulk material to flow efficiently.
- **TailScape:** Installed at the tail end of the conveyor, TailScape enhances dust suppression and spillage control by effectively sealing the conveyor belt's return side. Its specialised design ensures minimal material loss while reducing the need for frequent maintenance and clean-up.
- **K-Containment® Seal:** A 4-metre sealing system placed inside the chute to contain material drop and flow. This seal ensures that material remains within the transfer point, reducing spillage and maintaining the efficiency of material movement through the conveyor system.
- **Additional Modifications:** Extended the rear of the chute and built a 2-metre front extension tunnel to improve material handling efficiency.

RESULTS:

- *Significant dust reduction and elimination of spillage.*
- *Reduced maintenance time and manual clean-up efforts.*
- *Improved workplace safety with lower dust levels.*
- *Enhanced operational efficiency and cost savings.*



Photos: After Installation of AirScape® and K-Containment® Seal

The newly installed system significantly improved material containment and dust control. The maintenance supervisor reported a **95%+ reduction in dust and elimination of spillage**, allowing the team to focus on more critical maintenance tasks.

Following the success of this installation, the manufacturer committed to expanding the use of AirScape®, TailScape, and DustScape across other transfer chutes. A third system of 12 metres, including three DustScrapes, is scheduled for commissioning in the coming weeks to further enhance dust management across the site.

“Last year we installed one system on-site and we proved the cost savings. A third system of 12 metres will be commissioned on site in the next few weeks, which includes three DustScape systems”, reported the Maintenance Supervisor.