

Case Study - CMS ISOSheet Foundation isolation



Broughton Printers

Client Broughton Printers
Contractor John Turner and Sons
Area 250m²

In brief

Broughton Printers has used CMS ISOSheet to isolate the foundations of a KBA automated reel logistics system against external vibration.

Project scope

PAs part of a £14 million expansion plan at its Preston site, Broughton Printers, a subsidiary of Express Newspapers and the Northern Shell Group of Companies, invested in a new KBA automated reel logistics system.

To prevent external vibration and shock from reducing the accuracy of the automated reels, and stop machine-induced energy causing structural noise within the facility offices, the two foundations of the reel system had to be isolated. CMS Vibrations recommended CMS ISOSheet for total sidewall isolation. This medium density closed cell structure foam is designed to isolate the foundations of printing presses and similar machinery.

When excavating the pits, main contractor John Turner and Sons, identified that the foundations were within inches of the water table, resulting in excess surface water.



CMS ISOSheet was used to achieve total sidewall isolation of two foundation pits.



Results

The installation of CMS ISOSheet went ahead within project timescales as its closed cell structure makes the material resistant to water penetration.

A combination of 50mm and 25mm thick sheets was used, covering an approximate area of 260m². To account for greater pressure at the bottom of the foundations, 50mm thick material was installed from base level to 2.05m. The remaining depth of 0.70m was covered with 25mm CMS ISOSheet.

Ian Fewtrell, site manager for John Turner and Sons, said: "CMS Vibration Solutions were really responsive and flexible, overcoming the surface water obstacle to complete the foundation isolation in less than a week – ahead of our own timescales. The installation of CMS ISOSheet went extremely smoothly and we were really impressed with the cost and performance of the material."

Benefits

- Excellent dampening and isolation characteristics
- High load bearing capabilities, up to 10,000kg/m²
- Low natural frequency in the range of 10-12Hz
- Environmentally friendly and sustainable
- Quick and easy to install
- Cost effective



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