

Novel polymer technology transforms disused warehouse at 75-year-old dairy



[Image 1&2 Before and after the completed application]

A disused warehouse was transformed into a cold store as part of a major refurbishment of a family run dairy in Gloucestershire.

The Cotteswold Dairy Ltd approached Belzona with a project to transform an old, disused warehouse into a cold store. After a site-survey, Belzona outlined several repair and maintenance solutions that were required to completely transform the warehouse. These included localised repairs to the concrete floors, refurbishment of vertical columns, kerbstone bonding, and a chemical resistant floor coating, incorporating a grip system.

The dairy, established in 1938, sought a comprehensive solution where the rebuilding material, on-site training and a 24 hour support service could all be provided from one source. It was further essential that minimum disruption was incurred during installation as the refurbishment needed to be carried out alongside a number of other renovation projects.

The Belzona systems chosen included a slurry mix of Belzona 4111 (Magma-Quartz), an epoxy based material designed to protect surfaces from impact and abrasion; this was used to bond down the kerbstones. Belzona 4131 (Magma-Screed), a non-porous resurfacing material, was used to repair several areas of concrete floor damage.

A lightweight material, Belzona 4141 (Magma-Build), was used to repair damage to the vertical concrete columns. This material can be applied to vertical surfaces without the use of fixed shuttering. By using this material, the columns will remain thoroughly protected within the busy working environment as it is designed specifically to combat numerous types of deterioration including abrasion, impact, erosion, chemical attack and carbonation of concrete.

For the application, a primer was firstly brush-applied to the concrete floors, walls and vertical columns before the application of Belzona 4141, Belzona 4131 and Belzona 4141. A trowel was used in the larger areas to apply the material and a filling knife and Belzona applicator tool were used in the smaller areas.

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The floor and kerbstones were then coated with Belzona 5231 (SG Laminate). This is a high-build, solvent-free coating ideal for providing protection against the pressure jet washing, sanitising agents and chemicals used on the site. This was applied by brush to cut in around the edges, then again a roller was used for the larger areas. As it can be difficult to attain a seamless finish when coating large floor areas, a team of several people lined up and applied the coating simultaneously. This ensured a consistent layer of coating across the substrate was achieved. Extra aggregate was added to the coating before it cured in order to create a safety grip surface and prevent slippages in the cold store.

Belzona was able to specify the appropriate materials and provide on-site training and guidance at every stage of the project, ensuring the dairy's longstanding reputation for high quality produce and service was upheld at every stage of application.



[Image 3- Disused warehouse before application] [Image 4- During application of the Belzona system]



[Image 5- Completed application]

[Image 6- Completed application]

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Notes to Editor;

About Belzona:

- Established in 1952, Belzona has pioneered innovative polymer technology that has revolutionised industrial repair and maintenance procedures.
- Belzona is a leading company in the design and manufacture of polymer repair composites and industrial protective coatings for the repair, protection and improvement of machinery, equipment, buildings and structures.
- At Harrogate, the full Belzona product range is manufactured to stringent quality and environmental control guidelines complying with the requirements of ISO 9001:2008 and ISO 14001:2004.
- Belzona has over 140 Distributors in more than 120 countries ensuring not only the availability of Belzona materials, but also specification support, project management, application and supervision services. Distributorships and their teams are supported by Belzona Corporate offices in Europe, North America and Asia.

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- Can we contribute to the article you are writing? We can provide images, technical data, case studies or an interview with one of our technical service representatives. Please let us know if this would be of interest.
- Do you have an upcoming topic that we could contribute an editorial on? Please let us know the topic, preferable length and the material submission deadline.

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