

Project Case Study: Kawasaki Precision Machinery (KPM) Plymouth, UK

Kawasaki is internationally famous for quality engineered systems. Its UK manufacturing base is now benefitting from a floor joint upgrade, thanks to a specialist system of an entirely different kind – Permaban’s Signature AR joint repair system.

A global entity, Kawasaki Precision Machinery (KPM) was established in 1968 and has its UK base in Plymouth. There it designs and manufactures hydraulic components and systems for industrial, construction and marine markets throughout Europe, the Middle East and Africa.

The Plymouth factory also manufactures and designs the world famous Staffa radial piston motor, well regarded in marine and industrial applications.

Damaged walkway and forklift track

The damaged joint was in a hard-working forklift track and walkway, located in an extension area to the main factory, built in the 1980s. A previous repair to the joint had been carried out, but the area had once again become badly damaged through use – not an uncommon problem when joints are repaired with mortar.

Permaban Signature AR: the permanent joint repair

Both Permaban and KPM are active members of The Plymouth Manufacturers Group (PMG) Network, a thriving business networking group enabling manufacturers in South Devon to collaborate and share best practice. In September 2015 Permaban extended an offer to its fellow group members to trial its latest innovation, the Permaban Signature AR joint repair system.

Permaban Signature AR (‘arris repair’) is designed to replace damaged saw-cut joints, or sections of the floor where a straight armoured joint and the surrounding concrete have become damaged. It provides a permanent, professional repair - saving building owners and operators the considerable cost and disruption of future floor repairs.

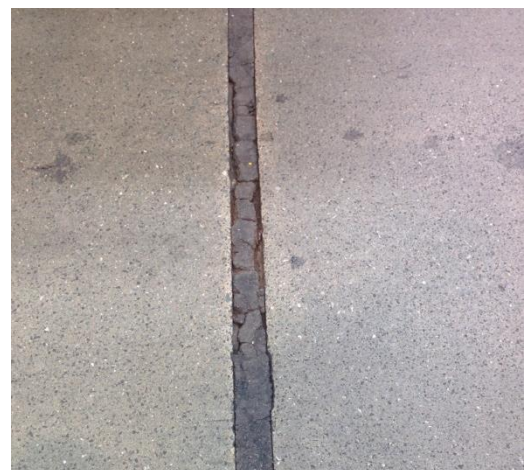
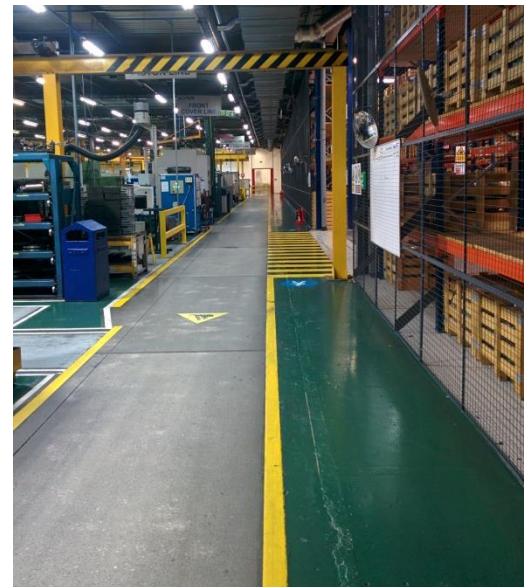
Based on Permaban Signature

Signature AR is based on Permaban’s highly successful Signature armoured joint, used in new warehouse and industrial floors worldwide. With its distinctive half-hexagonal design, materials handling vehicles can pass smoothly across a Signature joint in the floor, causing no impact and no damage – even when vehicles cross the joint at 90°. This saves significant repair costs to both the floor and vehicles, for the lifetime of the building.

Project Key Facts

Project type	Factory joint repair
Location	Plymouth, Devon, UK
Products	Signature AR, 3.25m

Client	Kawasaki Precision Machinery (KPM) UK
Contractor	Permaban
Concrete cutting	Ace Of Diamonds, Plymouth



Cont'd

Complete repair system

The Signature AR system incorporates all the products needed for a professional joint repair – including a reduced-height length of Signature, along with complementary products from fellow RCR companies Rinol and Rocland, including a concrete bonding agent, resin repair mortar and resin screed finish.

The repair process

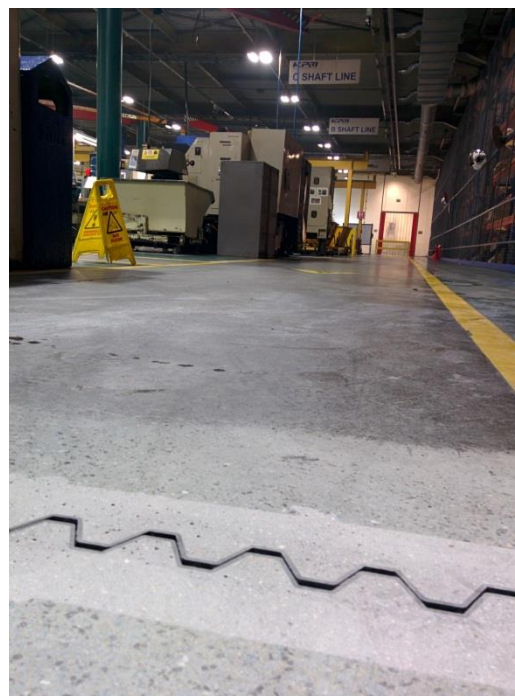
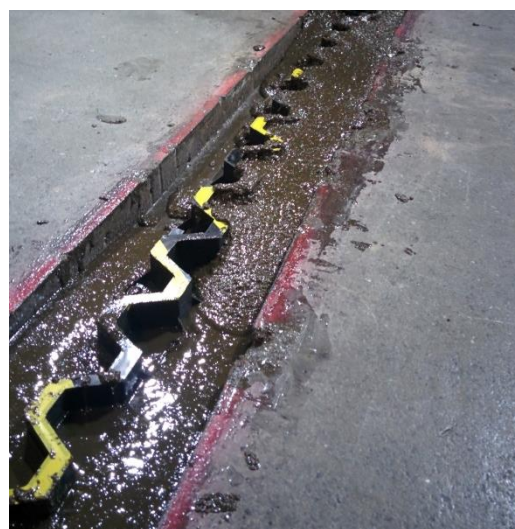
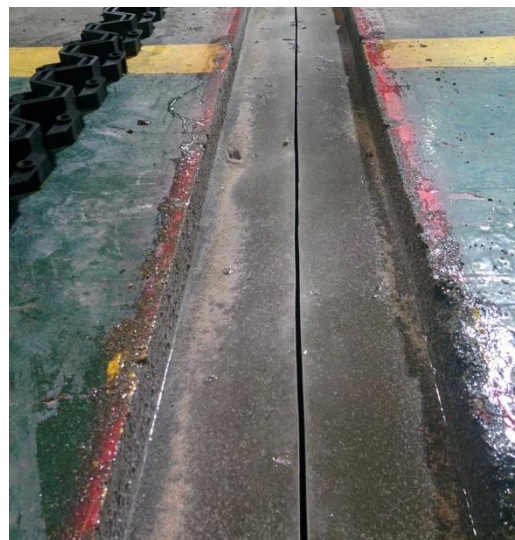
The damaged portion of floor was cut away (by Ace Of Diamonds Concrete Drilling & Cutting, Plymouth). This created a 55mm deep by 150mm wide channel. A bonding agent – part of the Signature AR system - was used to ensure good adhesion of the repair mortar to the existing concrete.

The repair area was 3.25m long, which constituted three complete 1m lengths of Signature AR, and an additional length cut to size. These were easily clipped together, as per Signature AR's design. The Signature AR joint was placed in the channel, anchored below the surface of the floor so that there would be no visible evidence of anchoring once the floor had been finished.

The channel was filled with repair mortar; then the repair area was ground so that the finish was completely seamless with the surrounding floor.

14-hour repair

The joint repair at KPM was undertaken on 19th January 2016, and took just 14 hours to complete, in stages, over one long working day. The repaired area was able to be brought quickly back into use, and the client is very pleased with the result.



"We're very pleased with the floor repair using Permaban Signature AR. Forklifts can cross the joint easily; the floor looks professional and we know it will stay that way. We look forward to repairing other joints in the factory in the same way in future.

Ray Wilson, Maintenance Manager, Kawasaki Precision Machinery