CoGRI GROUP

CG FLOORING'S SOLUTION TO A FLOOR HEAVE PROBLEM

About The Client:

CG Flooring Systems (CGFS) was recently called to a technically demanding project for a global supply chain management company. Supplying and distributing aviation, aerospace, automotive and industrial equipment throughout the world, they are also heavily involved in the research and development side of the pharmaceutical industry.

The Situation:

Stepping Out
The floor of their industrial unit was demonstrating heave in a localised area, which was impacting the ability of the operation to perform at an optimum level.

The warehouse floor slab directly in front of the loading bays was higher in one section than the loading bay dock levellers. At its highest point, there was a 30mm stepped edge off the warehouse floor onto the loading bays.

The Only Way is Up
It was believed to have been caused by piles put in after construction of the floor slab, displacing the original sub-base material adjacent to the pre-cast dock levellers as they were placed. This left the sub-base material nowhere to go except up, pushing the slab upwards with it.

The Solution:

Controlled Reduction of Slab Levels
CG Flooring, therefore, had to provide a repair solution. This included the controlled reduction of the levels of the slab within a very defined area of 90m2, flattening, smoothing, and aligning the two adjacent floor areas.

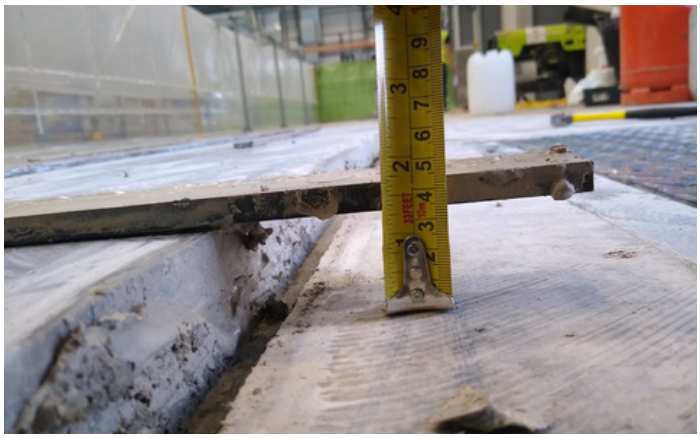
Steel Armour Joint Repairs
The first step was for CG Flooring to remove the steel angle - used to protect the slab arris edge at the floor slab, at the interface with the dock levellers. A joint arris repair was performed, using CoGri Arris Repair Mortar to remove the pronounced step at the joint interface. Further joints were repaired within the designated area. Using our standard repair detail to remove the steel top section of the armour joint the void was filled with our repair mortar before reinstating the joint using our CoGri Rapid Seal 75 joint sealant. Our repair materials are durable and ductile, designed to stand up to the heavy traffic movements of the materials handling equipment (MHE) that pass over the floor.

In-filled Floor Slab Voids
With the joint repairs complete, essential for ensuring the planing and grinding work could be executed efficiently with a minimum of fuss, the next step was to fill any voids underneath the slab.

20mm diameter holes were drilled at pre-determined centres in the floor slab along the full length of the loading bay area. Next, a cement-based grout was used to infill any voids between the underside of the floor slab and the sub-base, providing further support and load transfer capability.

Inter-Group Collaboration
To ensure we provided the best solution for our client, we engaged our sister company, Face Consultants, to carry out a flatness survey and control the reduction in level work to the floor area. The survey results enabled the Face surveyor to identify the areas to be prepared by planing and grinding.

With these areas marked, the team carried out the work under strict dust-control protocols. Under the watchful eye of the Face surveyor, the required floor levelness and flatness to best support warehouse operations were achieved.



As demonstrated in the images above, there was a significant amount of mechanical planing / scabbling to be completed.

The Results:

The Finishing Touches

A further process of vacuum enhanced grinding was carried out to provide a smooth finish to the concrete. CoGri High Build solvent-free epoxy resin floor coating was then applied in the clients' preferred colour. Resin floor coatings not only deliver an aesthetically pleasing finish but also offer protection where needed, such as chemical resistance, anti-slip surfaces, and abrasion resistance. Surfaces are hygienic, easy to clean and maintain, and available in a gloss or matt finish.

Where projects involve working to demanding floor flatness and levelness requirements, CG Flooring Systems will work closely with Face Consultants. As two specialists who understand each other, they can interpret and execute methods to bring floors into compliance with any specified international standard, quickly and efficiently. Demonstrating the benefits of working with the CoGri Group of companies.

Is your warehouse floor flat and level?

To find out more about our concrete floor repair, refurbishment, and resin coating services, see the contact details below.

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FREE ADVICE

For a site visit or advice on the best solution, contact the experts.

Get In Touch Today

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