



Triflex

Delivering solutions together.

FLOOR REFURBISHMENT

AIRPORT FIRE STATION

Authorised Contractor:

DH Liquid Coatings Ltd

Systems

Triflex DeckFloor

Triflex Friction Plastic

Area

325m²

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CASE STUDY

Overview

An airport fire station in constant state of readiness required a rapid floor refurbishment, as the existing coating was failing.

The challenge

The airport fire station is located to directly serve any emergency, either on the airfield, or the associated buildings and airport infrastructure. The state-of-the-art fire and rescue vehicles it houses are typically heavier than the standard 13 tonne fire engines. And with repeated rapid exits from the fire station, the floor is subject to high levels of shear forces.

The 325m² floor showed signs of extensive wear, with failures evident in the existing coating. A refurbishment was required to protect the concrete floor from degradation, water ingress or chemical damage, which may weaken the underlying structure. Clear demarcation areas were also required to keep personnel safe in this environment.

To maintain the airport's emergency response and perpetual state of readiness, the shortest installation time for the project was critical.





The solution

Working together, the Triflex Authorised Contractor, DH Liquid Coatings Ltd and the Triflex Technical Team performed a number of tests on the existing floor. This was to determine the quality and suitability of the concrete substrate for overlay. In addition, two 1m² sample areas were created, incorporating different quartz sizes for client review.

The on site tests also helped to determine the surface preparation and priming requirements for the proposed Triflex solution. This ensured that the system could withstand the vehicle sizes, loads and tensile forces of the setting. Following testing, the cold applied Triflex DeckFloor system was selected for a highly durable, robust and hard-working surface protection system.

The Triflex DeckFloor system utilises market leading PMMA technology, and with rapid curing properties, was ideally suited to deliver the project in the quickest time. The EN 1504-2 certified Triflex DeckFloor system consists of a primer, impact and load resistant wearing layer with quartz, and a coloured, abrasion-resistant surface finish. As the system is also resistant to petrol, diesel, brake fluid, engine oil, battery acid, as well as de-icing and chemical cleaning products, it will provide long lasting protection in this highly demanding environment.

Preparation, installation, demarcation and handover within 3 days

The Triflex PMMA based systems offer exceptionally fast curing times with each seamless and continual layer rapidly ready for the next. This meant that the Triflex DeckFloor system was quickly installed, minimising the impact of the project on the fire station's activities. Due to the experience of the Triflex Authorised Contractor, the extensive Risk Assessment Method Statements required for a live and active setting were effortlessly accommodated.

Day 1.

Surface preparation and movement joints protected

The existing surface coating was removed by planing, followed by enclosed shot blasting. The concrete substrate floor was examined and found to be sound, so no repairs were required. The PMMA Triflex ProPark crack bridging reinforcement was used to overband joints in the floor for added long lasting protection.

Day 2.

Application of primer, load resistant wearing layer with quartz, and Traffic Grey surface finish

The specified PMMA primer is designed to percolate and consolidate the concrete surface, improving the tensile strength of this often tricky substrate. This improved the surface's ability to cope with the forces exerted by vehicles where concrete is typically most vulnerable, in the top few millimetres of the concrete floor.

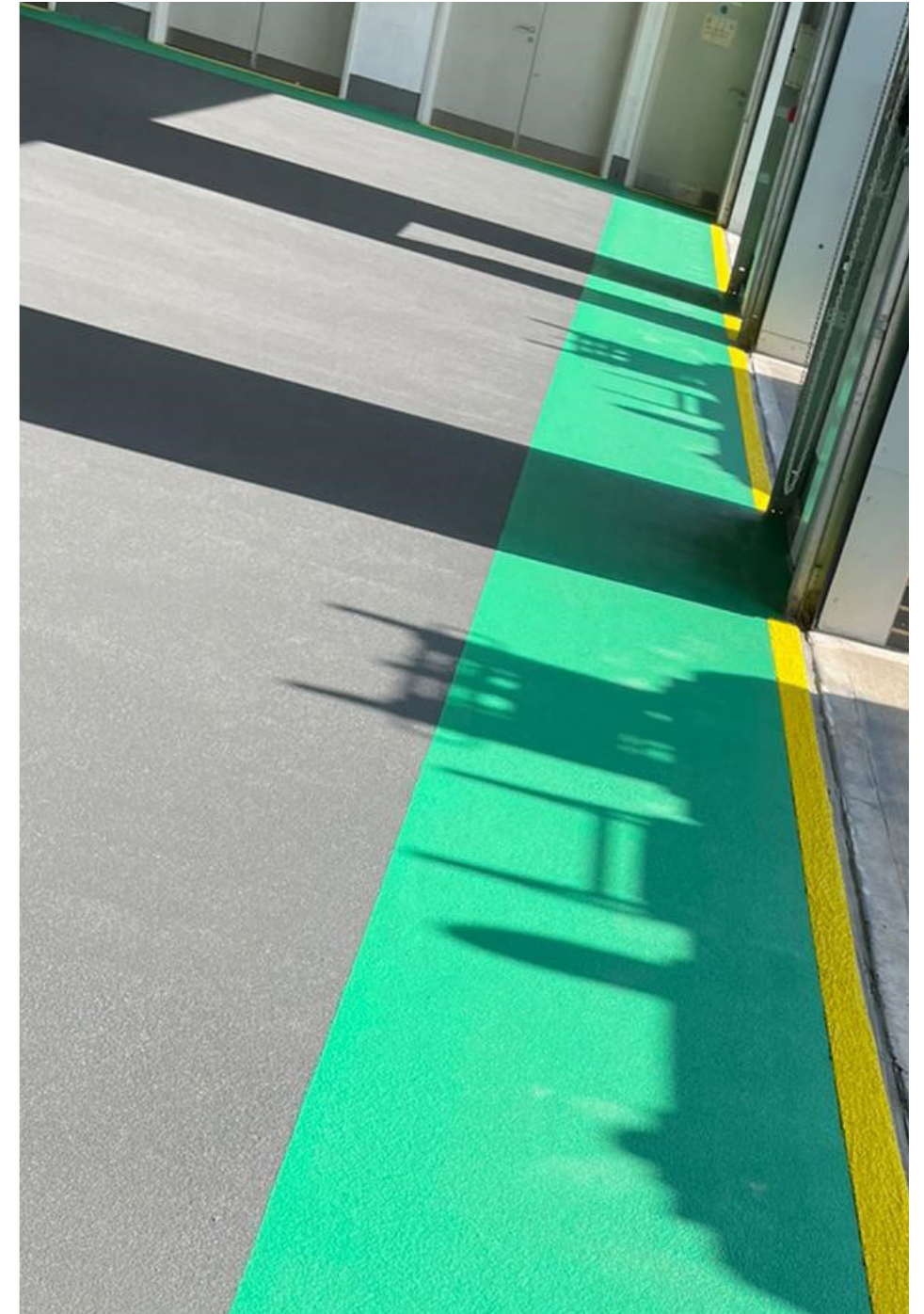
Following priming, the Triflex DeckFloor impact and resistant wearing layer was applied and fully filled with 0.7 to 1.2mm Triflex Quartz. This provided an anti-skid surface with high retention of PTV over time. Quickly cured, the floor was then coated with the ultra-hard wearing Traffic Grey PMMA based finish. By the end of Day 2, the floor was fully protected and waterproofed to a high standard.

Day 3.

Rapid curing demarcation for customised zoning

To ensure the safety of personnel, long lasting, robust demarcation and wayfinding were required. The Triflex DeckFloor finishes in Traffic Green were used to designate the safe zones, allowing secure access to the adjoining offices. Similarly, Triflex DeckFloor finish in Traffic Red was used to designate the no walk zone. As this zone is subject to the engines' automated exhaust release, often heavy equipment presents a moving hazard. With a proven long lasting surface finish, this tough system will help ensure safety for years to come. In addition, Triflex Friction Plastic anti-skid marking in Traffic yellow was applied to create the vehicular stop and parking markings.

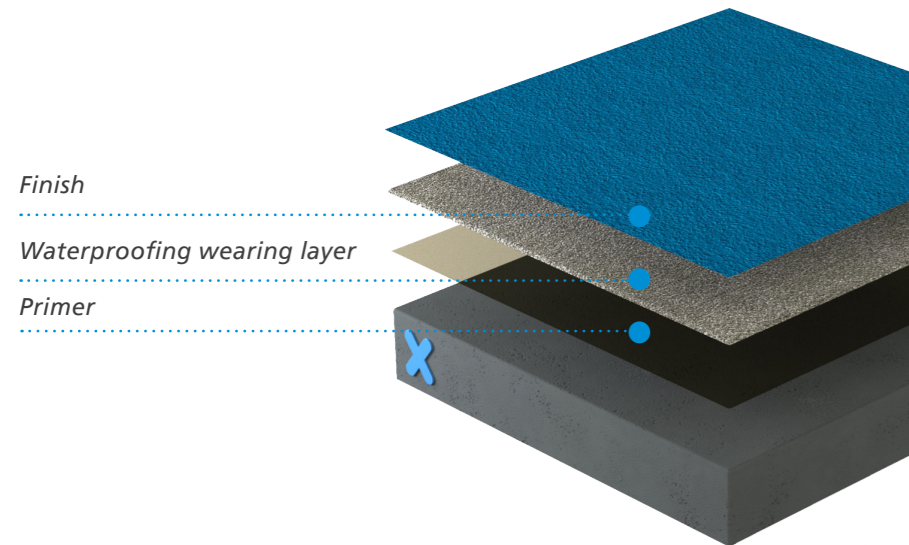
Thanks to the ultra-fast curing markings, DH Liquid Coatings even had time to add a complimentary 20m bleep test marking, much to the delight of their clients. With a handover mid-afternoon on Day 3, the fire station was rapidly back to normal use.



System benefits

Triflex DeckFloor

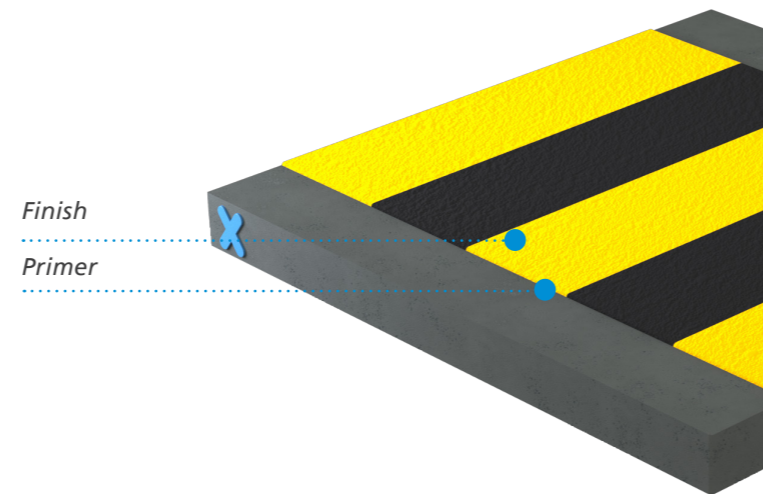
- Dynamic crack bridging, fully reinforced, cold applied system
- Tough and durable protection
- Anti-static variant featuring resins with unique conductive properties
- Tried and tested, proven to last for years to come
- Rapid curing, cold applied system
- High levels of long-term skid resistance
- Solvent and isocyanate free
- Available in a wide range of standard and bespoke colours and finishes



System benefits

Triflex Friction Plastic

- Maximum design possibilities
- Tough and durable protection
- Tried and tested, proven to last for years to come
- Rapid curing, cold applied system
- Highest levels of anti-skid resistance
- Single process application
- Solvent and isocyanate free
- Weather, UV and IR resistant



Triflex

Delivering solutions together.

Triflex is the leading European specialist in cold liquid applied waterproofing, surfacing and marking resins. Our high-quality systems provide reliable and lasting waterproofing, surfacing, protection and markings for roofs, walkways, balconies, terraces, car parks, roads and infrastructure.

We are a family owned and operated company that provides tailored solutions worldwide. From our production facilities based in Minden, Germany, we have been researching and developing solutions designed to protect and repair the built environment for more than 40 years.

From our UK and Ireland headquarters based in Stone, Staffordshire we pride ourselves on providing our clients with tailored solutions and exceptional levels of service and support throughout all stages of their project. From conducting in-depth site surveys to our comprehensive testing and off-site and on-site support, we ensure that your project is completed on time, expertly. Triflex solutions are certified to the highest standards and are backed up by long-term meaningful warranties, ensuring peace of mind for years to come.

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