



CASE
STUDY

THE
OCTAGON



Triflex
Delivering solutions together.

CAR PARK REFURBISHMENT AND
CONCRETE REPAIRS

MIDDLEBOROUGH CAR PARK

Authorised Contractor:

Makers Construction Limited

Area:

12,000m²

Systems

- Triflex DeckFloor
- Triflex DeckDefence
- Triflex DeckCoat
- Triflex Preco Line 300
- Triflex Cold Plastic

📞 01785 819119

🌐 triflex.co.uk

✉ info@triflex.co.uk

📄 [Triflex \(UK\) Ltd](#)

🐦 [@TriflexUK](#)

Triflex (UK) Ltd. | Whitebridge Way | Stone | Staffordshire | ST15 8JS

Introduction

Middleborough car park, Colchester is located on the River Colne. The multi-storey car park serves The Octagon Centre office suites with parking over 5 floors. Built in 1979, the reinforced concrete structure is of lift slab construction. The brick cladding with precast concrete panels compliments The Octagon Centre across the road. The car park is linked to The Octagon Centre office block via an enclosed footbridge from the upper floors.

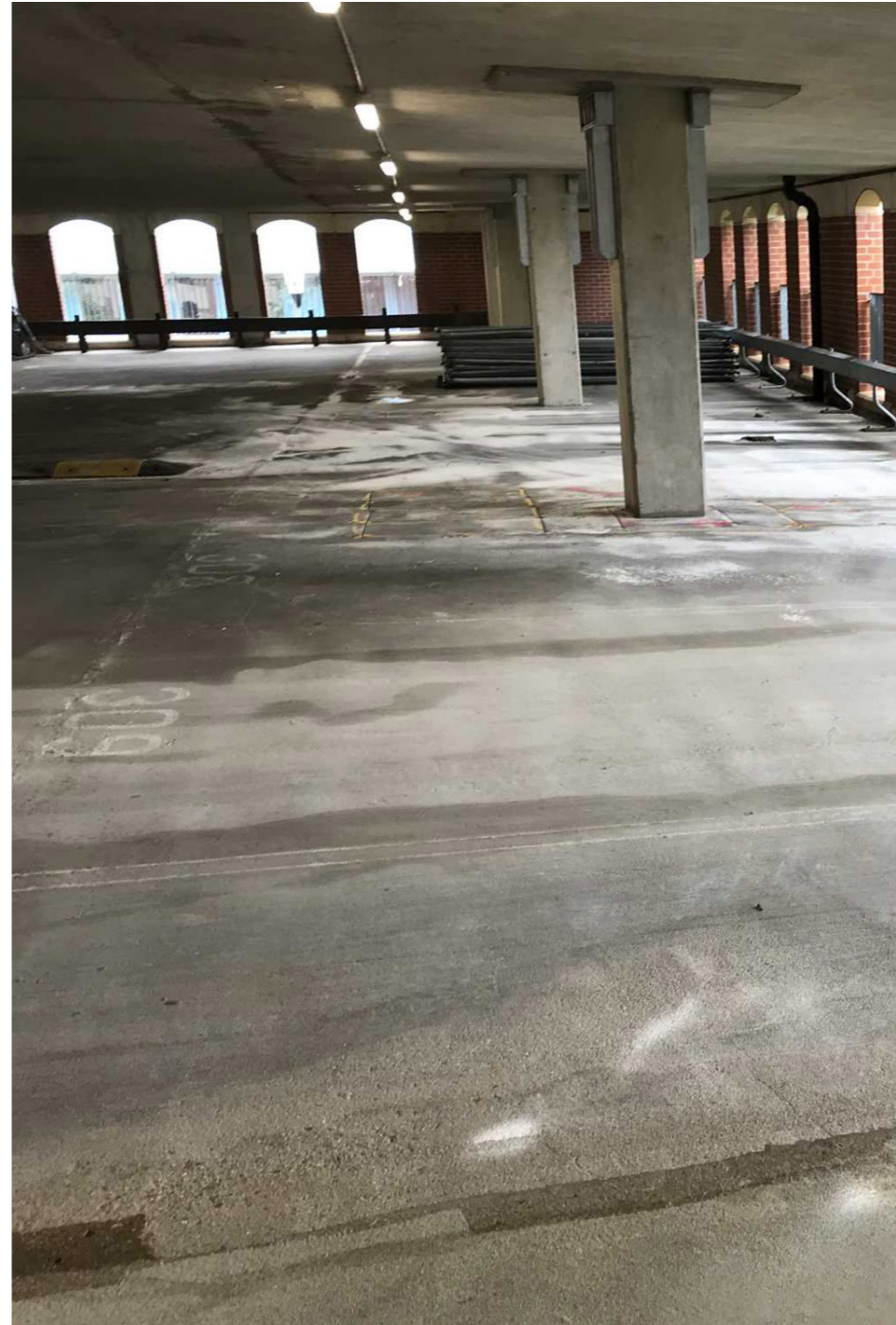


The challenge

Showing signs of age, the car park required full refurbishment with works undertaken by Triflex authorised contractor, Makers Construction Limited. This included extensive concrete repairs and treatment to steel reinforcement corrosion. In addition, the support columns required supplementary strengthening support with engineered fail safe brackets.

The top deck coating had also debonded with signs of wear. Water ingress was evident into the levels below, with cracks in soffits together with leaking gulleys contributing to the poor state.

The car park upper decks provide parking to the busy offices and so there was a requirement to keep external car park areas open during the works.





The solution

After extensive concrete repairs and steps to maintain structural integrity, it was important to fully waterproof the structure. The provision of a waterproofing, surfacing and protection system will safeguard the structure and ensure its use for decades to come.

Triflex worked closely with Makers Construction Limited to provide a project specification proposal that met all requirements for a solution that could deliver outstanding waterproofing and enable car park areas to remain open during the works. The site survey undertaken by the Triflex team ensured a bespoke solution that was fitting for the different needs of the external and internal decks, as well as access requirements and minimal disruption to the car park daily usage.

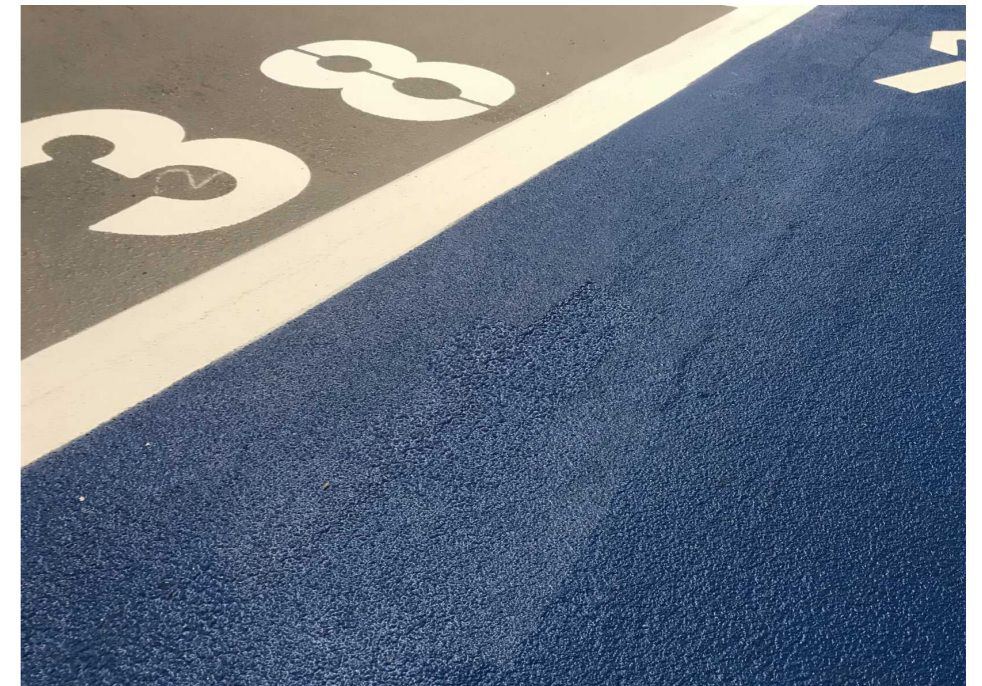
For the upper external car park decks and ramps, the locally reinforced, Triflex DeckFloor system was proposed. The heavy duty, flexible system utilises technologically advanced PMMA resins that cure exceptionally quickly. This meant that the system could be trafficked soon after installation, meaning that external ramps could be used during the programme of works with minimal closure.

The solution

For the ground bearing deck and intermediate concrete decks, the system Triflex DeckDefence met project requirements. These areas are generally not exposed to the same extreme environmental factors as the external decks. However, the design of the car park means that driving rain can enter through the open sides of the car park decks. Consequently, the need to protect the concrete with a waterproof system was paramount to long term structural integrity. The cost-effective hybrid epoxy waterproofing system incorporated quartz to deliver a tough anti-skid property with high retention of PTV over time. The system build up is completed with a PMMA based resin finish for a rapidly cured and highly resilient surface. The Triflex DeckDefence system is tough and durable, and delivers some time benefits over complete epoxy based systems through utilising the ultra-rapidly curing PMMA resin. To provide continual access to car parking spaces a rolling programme of closures was implemented by the authorised contractor to accommodate the installation programme.

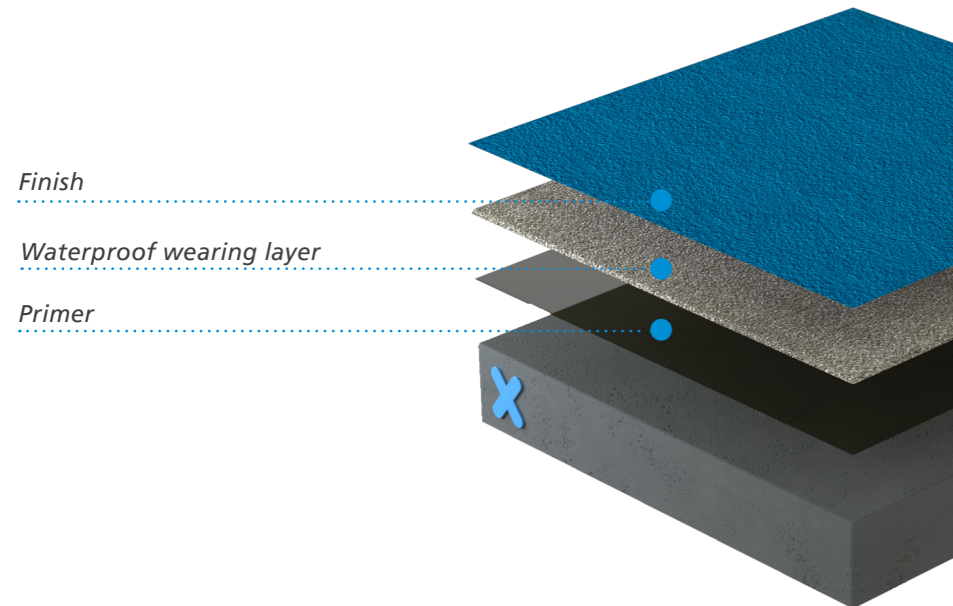
As the internal concrete ramps between these decks were required for vehicular access, the Triflex DeckCoat system with Emery provided the best solution. The ultra rapid curing PMMA based system means that it can be very quickly trafficked, ensuring minimal disruption to the car park users. Not only does it offer anti-skid with high PTV resistance over time, but it is highly abrasion resistant to cope with repeated vehicular forces for years to come.

In addition, line markings were installed with Triflex Preco Line 300 and Triflex Cold Plastic systems providing clear demarcation of vehicle movement, parking bays, walkways and signage. The systems are tough durable, cold applied and quick to cure. With a wide range of colours to choose from, the owner's design aesthetic was quickly and effectively achieved. Fully certified to the highest UK and European standards and classifications they can be confident they will stay looking good for the long term too.



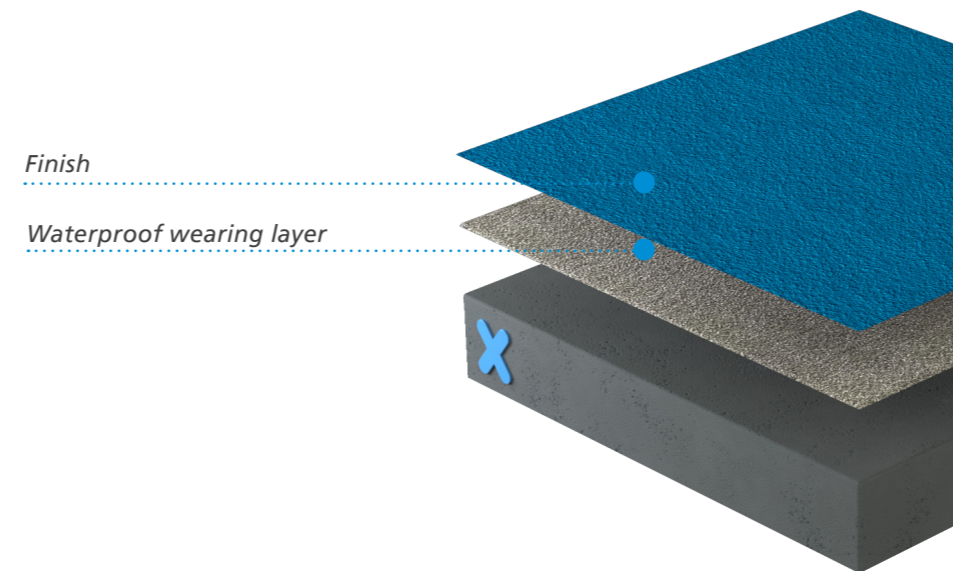
System benefits Triflex DeckFloor

- PMMA system for internal and external decks and ramps
- Compatible with a wide range of substrates, including asphalt and concrete
- Locally reinforced with dynamic crack bridging membrane
- High levels of long term skid resistance
- Exceptionally rapid curing, even at low temperatures
- Solvent and isocyanate free
- Totally cold applied, with no risk from hot works



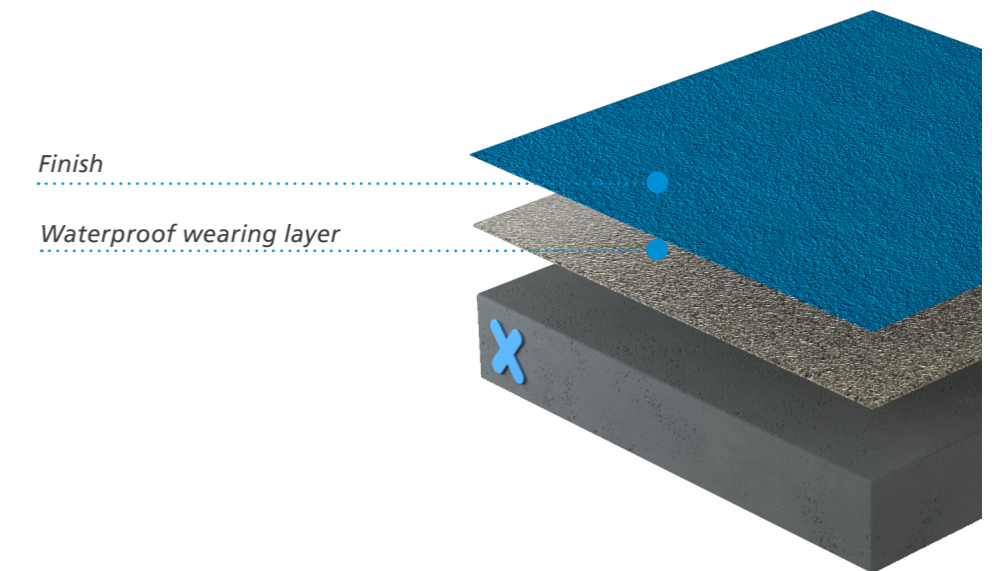
System benefits Triflex DeckCoat

- Durable, protective PMMA coating for internal decks
- Compatible with concrete substrates
- Locally reinforced with dynamic crack bridging membrane
- High levels of long term skid resistance
- Exceptionally rapid curing, even at low temperatures
- Solvent and isocyanate free
- Totally cold applied, with no risk from hot works



System benefits Triflex DeckDefence

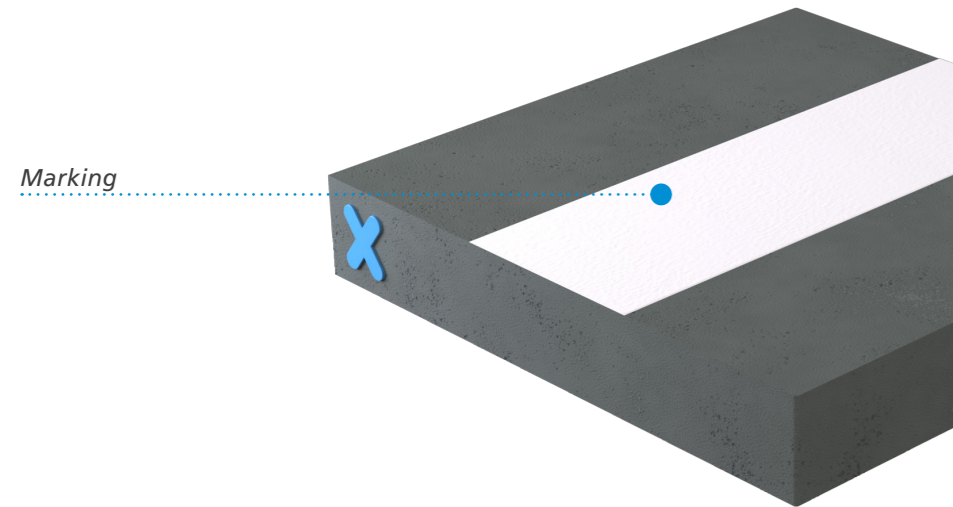
- Cost effective hybrid system with fast installation
- Compatible with concrete substrates
- Can be applied in a simple, two process application
- Available in a wide range of colours for versatile design aesthetic
- Solvent and isocyanate free
- Totally cold applied, with no risk from hot works



System benefits

Triflex Preco Line 300

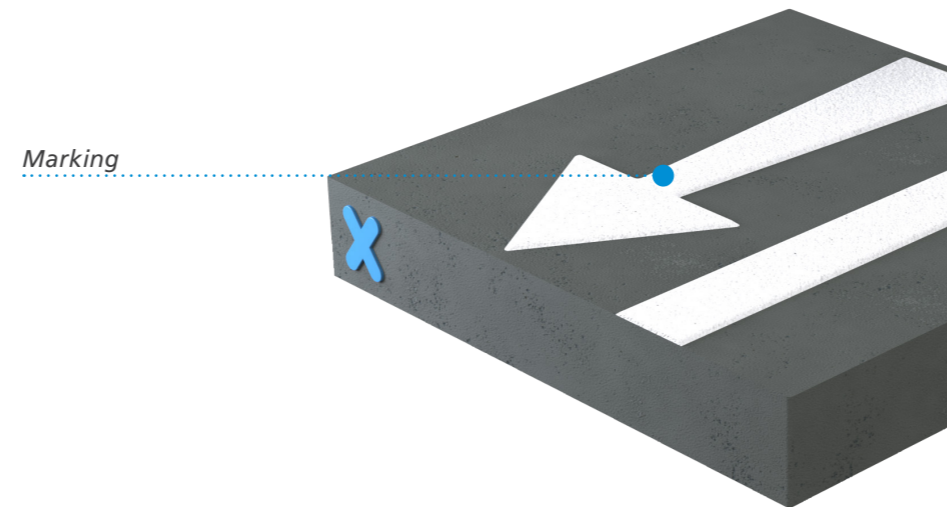
- Compatible with a wide range of substrates
- Excellent adhesion to substrate
- Rapid single process application
- Totally cold applied with no risk from hot works
- Fast drying
- Weather and UV resistant
- Toluene and xylene free
- Available in a wide range of colours
- Tested and approved by the German Federal Highway Research Institute (BAST)



System benefits

Triflex Cold Plastic

- Our toughest and most durable marking system
- Withstands high mechanical loads including HGV traffic on service yards
- Totally cold applied, with no risk from hot works
- Exceptionally fast curing, even at low temperatures
- Anti-skid
- Weather and UV resistant
- Toluene and xylene free
- Available in a wide range of colours
- Tested and approved by BSI UK Road Trials - BS EN 1436
- Tested and approved by the German Federal Highway Research Institute (BAST)



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, Triflex delivers the highest standards.

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.

☎ 01785 819119

🌐 triflex.co.uk

✉ info@triflex.co.uk

 Triflex (UK) Ltd

 @TriflexUK

Triflex (UK) Ltd. | Whitebridge Way | Stone | Staffordshire | ST15 8JS