

Case Study

The Plaza

FINALIST



Project: The Plaza, Wokingham

Five levels of a multifunctional car park have been refurbished using WestWood Liquid Technologies' products, requiring meticulous planning.



Key Statistics



Specialist Roofing Contractor: Cemplas Waterproofing & Concrete Repairs

Project size: Top deck: 3300 sq. m / Inter-decks: 3450 sq. m/

Main ramp: 360 sq. m

Completion date: October 2023

WestWood products:

- Wecryl Surface Protection System OS 10 - 2.0
- Wecryl 821 ultra-low viscosity substrate stabilizer
- Wecryl 171 primer
- Wecryl 279 waterproofing membrane
- Wecryl 333 wearing layer with quartz sand broadcast
- Wecryl 488 sealer coat
- Wecryl 842 rapid curing mortar
- Wecryl 230 Thix waterproofing



A comprehensive refurbishment



Located in the heart of Wokingham town centre, the Plaza shopping centre has a **multifunctional car park** that also serves a Nuffield Heath Fitness and Wellbeing gym and provides permit parking for local residents.

The car park's roof deck, inter-decks, and the main entrance and exit ramp all had to be refurbished ensuring **robust waterproofing**.



Specialist removals



To address **concrete substrate** issues, the car park roof deck underwent significant repairs. The existing waterproofing system had failed and was **expertly removed** using a specialised 'ride on' planing plant, designed for multi-storey car parks. This method ensured complete removal of the coating without damaging the concrete roof slab.

Operating in a **live environment** required additional considerations, including noise and dust suppression. Water drums on the plant and water bowzers were used to dampen the deck, suppressing dust during operation. The disposed tonnes of failed coating were carefully managed using dedicated skips from Cemplas's waste management partners to avoid mixing with recyclable materials.

More than 200 sq. m (25 tonnes) of defective concrete was also removed and **responsibly disposed** of in a dedicated skip for concrete recycling. The transportation of both coating and concrete to the secure site compound was executed with forklifts and tipping skips, operated by trained drivers and banksman to prioritise the safety of car park patrons.

Problem solving



Before the installation of WestWood Liquid Technologies' **PMMA system**, defective concrete areas were reinstated using specialised repair mortars. Sacrificial anodes were added to reinforce longevity and **address ongoing corrosion concerns**. Trials were conducted using Westwood's primer to validate the bond to the existing and repaired concrete substrate, with results recorded by a calibrated Elcometer adhesion tester. Despite a strong bond, trials identified significant outgassing likely caused by moisture ingress through the existing failed coating.

Specialist captive blasting techniques were employed for preparation, followed by the application of Westwood's 821 **ultra-low viscosity** substrate stabiliser to seal the concrete slab, **eliminating the out-gassing issue**. Subsequently, WestWood Liquid Technologies certified OS 10-2.0 protection system comprising of Wecryl 279 waterproofing, Wecryl 333 wearing layer with quarts sand broadcast, and final coloured Wecryl 488 sealer coats were applied..



Maximising durability and safety

The waterproofing of the car park roof deck **facilitated enhancements** throughout the structure. Concrete repairs, resin injection crack repairs, and anti-carbonation paint coatings were applied, **protecting the structure** from both the top and underside. A new lighting system on the roof deck and inter-decks further enhanced safety and brightness for patrons.

Inter-decks received resin deck coating enhancements, **addressing numerous defects** in the existing waterproofing. The lower car park deck, serving as the roof to the shopping centre, underwent asphalt preparation, repair, enhancement, and waterproofing using Westwood materials.

Minimising disruption

A waterproofing solution was also provided for the main entrance and exit ramp, using a buried Westwood system finished with a tarmac wearing layer. Throughout these works, Cemplas **maintained live functionality** by implementing a Highways-approved traffic management system, creating a safe one-way flow.

The challenging removal of failing asphalt, repairs, and levelling were met with efficiency through Westwood's material technology and Cemplas's on-site expertise, ensuring **completion within the two weeks** granted by Highways.

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