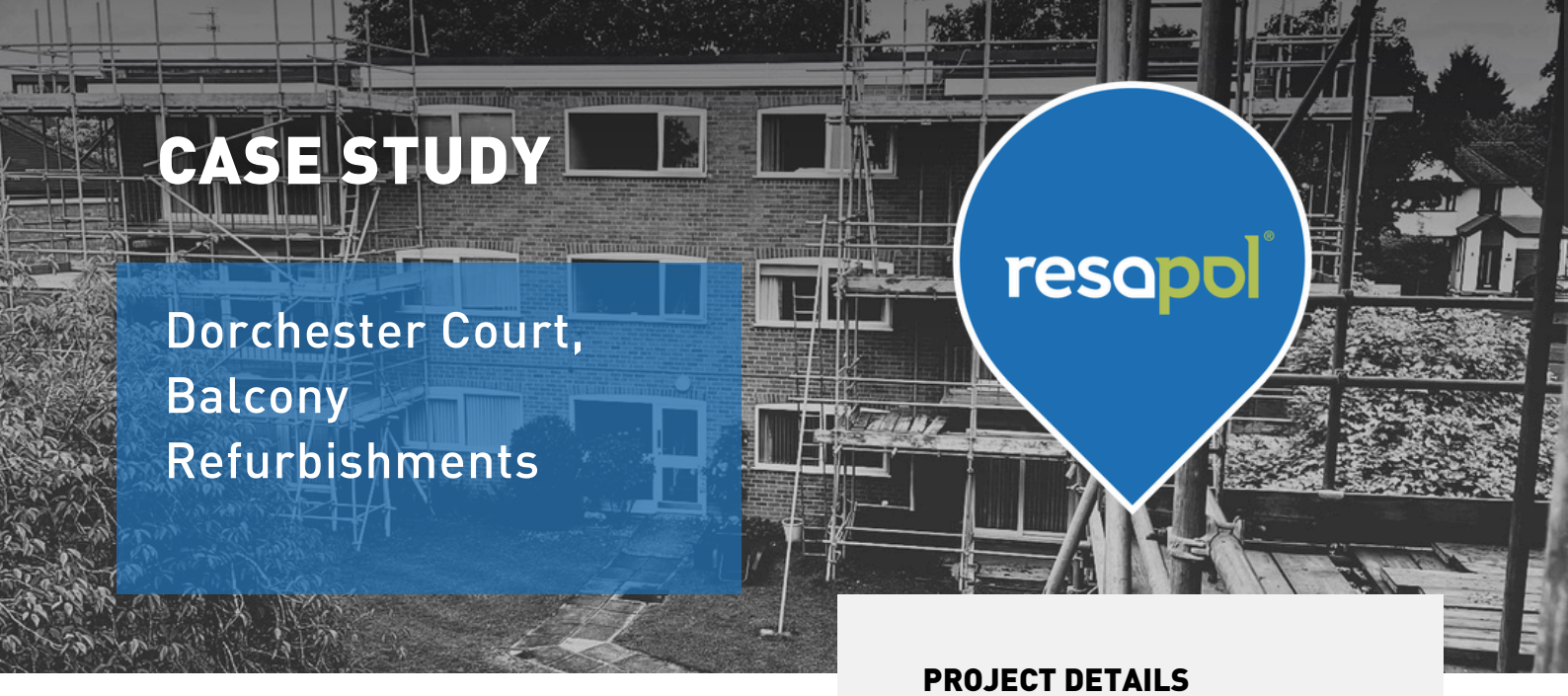


CASE STUDY

Dorchester Court, Balcony Refurbishments

PROJECT OUTLINE

Dorchester Court is a development featuring three blocks of flats built around 1960, located in Solihull, B91 1LL.

Each block stands three storeys tall. The construction includes load-bearing brickwork and concrete floors topped with flat roofs that have bitumen waterproof coverings. Cantilevered concrete balconies are present on the rear elevation; which were the focus of this project.

The balconies extend from the floor, creating external terraces equipped with metal balustrades and handrails. These terraces were finished with screed and quarry tiles, which were in a state of significant deterioration. There were signs of carbonation in the concrete and degradation of the screed.

The project outline was to retain the metal balustrade in place while replacing the screed and tile finish with a new Vulkem waterproofing system. The project also addressed repairs to any defective concrete elements, including faces, decks, and soffits. Additionally, the flat roof above each top-floor balcony was recovered as part of the work.

PROJECT DETAILS

Project Name:	Dorchester Court
Location:	Solihill
Start Date:	3rd March 2025
End Date:	5th July 2025
Contractor:	Chestnutwolf Ltd David Coleman and Company
Contract Admin:	Pennycuick Collins

Products Used

It was important that all products used were compatible with the Vulkem System

- Paveroc
- Renderoc FC
- Renderoc GP
- Nitobond EP
- Vulkem Quick

THE SOLUTION

The team commenced by mechanically removing tiles and screed that had already become fully detached from the substrate. The underlying surface was found to be retaining moisture, contributing to ongoing deterioration. In addition, a pre-existing bitumen primer was found to be present on the substrate and required complete removal prior to the continuation of works.

Once the bitumen primer was stripped away, exposing a scabbled surface down to bare concrete, they identified the necessary repairs on the balconies. Most of the repairs were situated in the corners, which they would shutter and pour with Paveroc GP to facilitate faster setting.

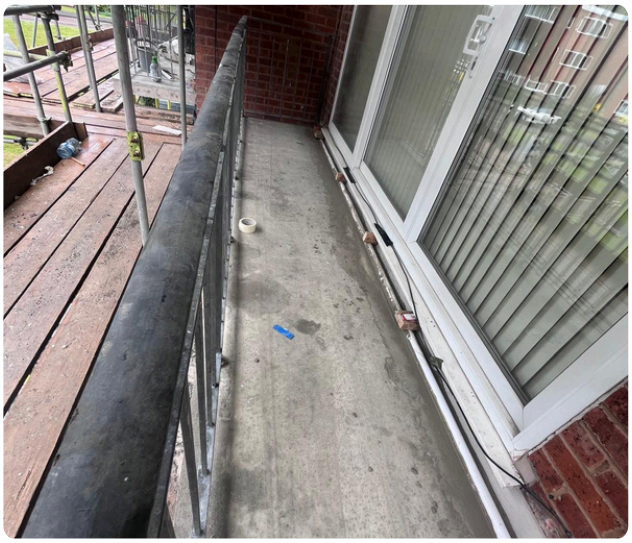
This approach would allow them to apply the Vulkem system sooner without having to wait several days for curing. There were only a few minor hand repairs, for which they used Renderoc GP on the soffit. Additionally, the soffit and toe of the balcony required the old paint to be removed mechanically, followed by the application of a Renderoc FC leveling coat.

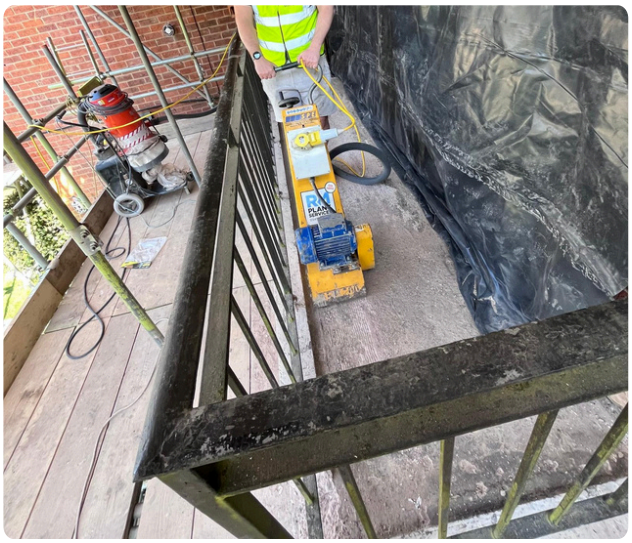
After all balconies were repaired and scabbled back, Vulkem would inspect the work to approve it before they poured Paveroc to create the necessary falls towards the channel for effective water drainage into a gully. They would form this channel separately, utilising Paveroc GP.

Once all balconies were poured to the correct floor height, slopes, and gully placements, Vulkem would conduct a pull test on the Paveroc and take a Tramex reading. Once satisfied with the results, they would clear the balconies for waterproofing.

- Apply Vulkem Quick Primer to all concrete balcony areas requiring the system.
- Using a brush, apply Vulkem® Quick THIX Membrane (2mm thickness) to the upstands and edges of the balcony, ensuring the matting is embedded, and allow it to cure.

Finally, apply Vulkem® Quick Topcoat to all edges and upstands.





THE STEPS

External Facing Facade

1. Apply to the external façade up and to and including the bell drip Vulkem® Quick Coloured Topcoat @ 0.3kg/m². (In colour white/beige).

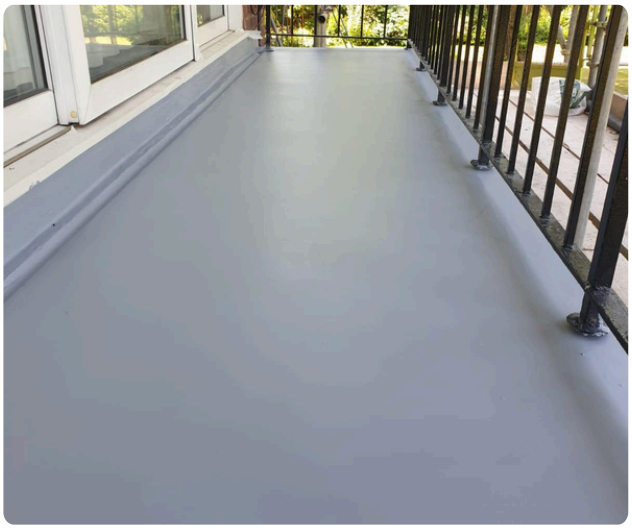
Balcony Areas

2. Apply (using a roller) Vulkem® Quick Concrete/Tile Primer @ 0.4kg/m² to the whole area and lightly broadcast with natural quartz 0.3 – 0.8mm and allow to cure.

3. Apply (using a notched trowel/squeegee) a full layer of Vulkem® Quick Membrane @ 2.6kgs/m² (minimum 2mm thickness) over the full concrete Balcony and allow to cure.

4. Apply (using a neoprene foam rubber squeegee) Vulkem® Quick Coloured Topcoat @ 0.4kg/m² in grey to all areas including upstands/skirtings and back roll to remove any squeegee lines.

5. Fully blind the Topcoat (Item 3 above) with natural quartz 0.3-0.8mm. Sweep off the excess sand after cure of the Topcoat and apply a second coat of Vulkem® Quick Coloured Topcoat @ 0.65kg/m² in grey.



PRODUCTS IN FOCUS

FOSROC PAVEROC

READY TO USE, HIGH PERFORMANCE REINSTATEMENT MORTAR FOR LARGE AREAS OF CONCRETE PAVEMENTS AND FLOORS

- Long open time - suitable for large areas
- High strength, abrasion and weather resistance
- Excellent bond to the concrete substrate
- Shrinkage compensated

FOSROC RENDEROC FC

CEMENTITIOUS, POLYMER MODIFIED, FAIRING COAT DESIGNED FOR VERTICAL AND OVERHEAD USE

- Polymer modification provides extremely low permeability to water, carbon dioxide and chlorides
- Excellent bond to concrete
- Can be applied quickly and efficiently
- Use to infill honeycombing and voids up to 3mm deep in the surface of concrete which is not trafficked

FOSROC RENDEROC GP

GENERAL PURPOSE CEMENTITIOUS REPAIR MORTAR (R3) SPECIFICALLY ENGINEERED FOR VERTICAL REPAIR WORK

- Exceptional system of shrinkage compensation provides long-term dimensional stability
- Frequently obviates the need for formwork
- Extremely low permeability to water, carbon dioxide and chlorides

PRODUCTS IN FOCUS

FOSROC NITOBOND EP

SOLVENT FREE EPOXY RESINS CONTAINING PIGMENTS AND FINE FILLERS

- Can be applied to dry or damp surfaces
- High mechanical strength
- Good positive adhesion
- Can be applied where a substrate/ repair barrier is required
- Available in standard and slow set grades

VULKEM QUICK

A UNIQUE FAST CURING, SOLVENT FREE, PUMA LIQUID WATERPROOFING SYSTEM FOR PEDESTRIAN TRAFFIC

- Very fast curing: ± 30 minutes per layer and short curing time between layers
- Non temperature dependent application
- High mechanical resistance
- Crack bridging, even below 0°C
- Easy application
- Quick resistance to rain