

## Project Profile - Civil Engineering & Infrastructure



### PROJECT

**Hanger Lane Underpass,  
West London**

### SUMMARY

Encapsulation of asbestos-caulked joints and coating of precast concrete segments totalling 4,000m<sup>2</sup>

### PRODUCTS

**Curing Membrane WB,  
Cemprotec E942**

### CLIENT

Transport for London (TfL)

### MAIN CONTRACTOR

Forest Environmental

### BACKGROUND ►

The Hanger Lane Underpass is situated in one of the most congested areas of west London. Comprising a dual two-lane road tunnel, it carries the A40 beneath the A406, otherwise known as the North Circular Road which crosses north London, linking the outer areas of west and east London. The underpass is approximately 240m in length and was originally opened in 1960. Almost 22 million vehicles pass through the road tunnel on an annual basis.

The tunnel soffits are constructed from precast concrete segments with joints every 400mm. The joints were sealed with a caulking material found to contain asbestos. Over time, water ingress and general contamination had affected the integrity, causing breakdown within the joint. An effective asbestos encapsulation and waterproofing system was required, which would be safe to apply in the working environment. Work was being carried out overnight, with tunnel closures from 23:00 until 05:30 in the week and slightly extended hours at weekends, so it was crucial that the chosen coating system was user friendly and quick to apply.

### THE SOLUTION ►

Under strict conditions, the areas under repair were prepared before **Curing Membrane WB** was applied to seal the substrate and consolidate any loose material before coating. As it is water-based, it is completely safe to use in confined areas. **Cemprotec E942**, an epoxy and polymer modified, waterborne cementitious coating, was then spray applied in two coats to 'lock in' any asbestos fibres and provide a permanent, durable, waterproof seal over the surface of the joints.

A unique method of access was used for this application. Due to the height of the tunnel, it was difficult to access and coat a sizeable area of the concrete segments. A double decker bus was found to be the ideal height, so the roofs of two buses were removed and operatives from Forest Environmental could store materials in the vehicles and coat large areas at a time from the top deck. This was critical due to the time constraints involved. The non-hazardous nature of **Cemprotec E942** was another crucial factor in the material selection, as it is waterborne, ultra-low VOC and releases no hazardous solvents or strong odour during application. **Cemprotec E942** is CE marked in accordance with the demands of BS EN 1504, so it can be relied upon with confidence.



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OHS 597351

Quality  
Environmental  
Health & Safety

**Flexcrete Technologies Limited**  
Tomlinson Road • Leyland  
Lancashire • United Kingdom  
PR25 2DY

**Tel:** +44 (0) 845 260 7005 • **Fax:** +44 (0) 845 260 7006  
**Email:** web@flexcrete.com • **Web:** www.flexcrete.com

