

# Hanger Lane underpass

Case study 2015

**Focus products:** Intercrete® 4870, Intercrete® 4840

**Location:** London

**Client:** Transport for London (TfL)

**Contractor:** Forest Environmental

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



## 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 Intercrete 4870 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. Intercrete 4840, 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 Intercrete 4840 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. Intercrete 4840 is CE marked in accordance with the demands of BS EN 1504, so it can be relied upon with confidence.