



# SIKA AT WORK

## CROSSRAIL PROJECT C430

### FARRINGDON, LONDON

CONCRETE: SikaProof® A-12, Sika® Tricosal Metal Waterstop, SikaSwell® A-2010  
and SikaFuko® VT 1

BUILDING TRUST

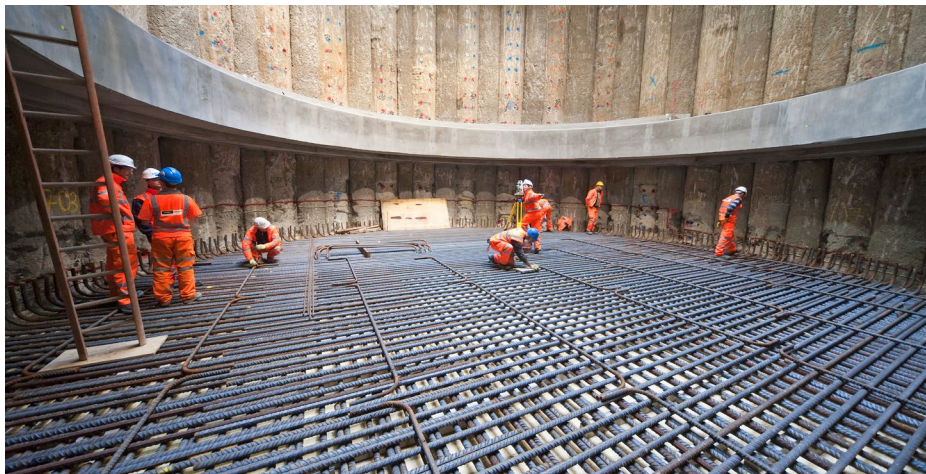




# CROSSRAIL PROJECT C430 FARRINGDON, LONDON



Fully bonded SikaProof®A-12 waterproof membrane system



Steel reinforcement fitted over SikaProof®A-12 membrane

## Project Description

This access shaft at the new Farringdon Underground Station, is part of the new Crossrail project, which will link Maidenhead and Heathrow in the west to Shenfield and Abbey Wood in the east, via 21km twin-bore tunnels running under central London. On completion, the Farringdon Interchange will link with London Underground and Thameslink and will become one of Britain's busiest train stations.

The shaft was formed by the construction of concrete piles around the perimeter, followed by the excavation of the enclosed earth from within. The pile rings and base slab were then constructed.

## Project Requirements

A safe and reliable waterproofing solution was required to prevent any water ingress through and around the base slab, which is of circular section, approximately 200m<sup>2</sup> in area, and situated 20 metres below ground level. Dense steel reinforcement within the base slab and the complicated detail at the intersection between the cast slab and the sprayed concrete lining, meant that traditional rear-guard waterbars were not an option to seal the joint.

## Sika Solution

The new, innovative, fully bonded waterproofing membrane system SikaProof® A-12 was selected to prevent water ingress

through the base slab. It is a completely engineered solution, which produces a mechanical bond with the concrete, and incorporates a unique grid pattern of sealant that prevents any lateral water underflow and migration between the membrane and concrete.

SikaProof® A-12 is easy and simple to install and complies with BS 8102-2009 Type A construction. Sika® Tricosal Metal Waterstop, SikaSwell® A-2010 and SikaFuko® VT 1 jointing solutions were installed around the perimeter of the slab to protect against any water ingress at the interception of the slab and the walls.

## Project Participants

Owner:	Crossrail Limited
Main Contractor:	Laing O'Rourke
Engineers:	Mott MacDonald
Concrete Supplier:	Cemex
Sika Company:	Sika Limited

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