

Bond Street Station

Sprayed concrete lined tunnels using and a sprayed waterproofing membrane



Our reference in London (United Kingdom): Bond Street Station

The background

With a daily average of more than 155,000 passengers using Bond Street station, Crossrail is intended to provide better transportation to the heart of London's West End and one of the busiest shopping districts in the United Kingdom.

The new Crossrail station at Bond Street has increased capacity and improved accessibility to one of London's busiest stations. Two new ticket halls were constructed to allow step-free access to the 260m station platforms created 26m below ground level.

The challenge

The requirement was to deliver a world-class watertight structure designed to withstand a minimum 100-year life span, whilst working in the close proximities that Central London provides.

This high intensity project demanded scrupulous attention to detail throughout, both with sprayed concrete lining (SCL) and sprayed waterproofing.

Project:

Bond Street Station

Location:

London

Client:

Crossrail

Contractor:

Bam Ferrovial Kier JV (BFK)

Designer:

Mott McDonald

Market sector:

Underground Construction

Products used:

MasterRoc MSL 345

MasterRoc TSL 865

MasterFinish MPT 299

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Our solution

Master Builders Solutions underground construction experts worked closely with the main contractor, BFK (Bam Ferrovial Kier), to not only supply the sprayed waterproofing product used throughout the whole of the SCL works, but to ensure that the works were completed with minimal disruption and improved efficiency, with a high level of support and training.

MasterRoc MSL 345, an EVA polymer based sprayable membrane, was used for the simplicity of its application. MasterRoc MSL 345 is designed to create a two-sided bond to both the primary and secondary lining, allowing for a composite behaviour to take place. This fully bonded system consequently provides excellent watertightness for the Crossrail tunnels.

Unrivalled training enabled a network of sprayers to consistently achieve the high standards of quality set out by the client, with training courses allowing sprayers to master both the theoretical and practical elements of the task. In addition, with the arrival of the Meyco Logica, a fully automatic spraying robot, Master Builders Solutions technical experts were on hand to provide a smooth transition from the traditional manual method of spraying.



The customers benefit

- Simple preparation, application and curing method of waterproofing concrete and metal structures.
- MasterRoc TSL 865, a rapid-setting version of MasterRoc MSL 345, enabled continuation of works with slight water ingress.

Project facts at a glance

- Crossrail will increase central London's rail capacity by 10% – the largest increase since World War II. This will reduce congestion and allow for more comfortable journey conditions.
- Crossrail will increase the number of people who are able to access employment destinations throughout London.
- Three gangs operated 24-hour, 7-days a week, to ensure the project was met to budget and on time.
- Master Builders Solutions supplied its sprayable membrane to provide a watertight SCL.
- Full technical support from Master Builders Solutions was provided to keep the project on track.

