



# Three Sites in One

A large area in the centre of Levallois, in France, gets a facelift

**PHOTO 1.** An aerial view of the site.

**PHOTO 2.** The Courcellor II Tower while work was being carried out: the structure of the building was completely rebuilt.

**PHOTO 3.** The building once work had been completed.

In Levallois, to the north-west of Paris, a large urban area of around 100,000 m<sup>2</sup> has had a facelift. A large building (the Courcellor II Tower) has been restructured and a new shopping centre and underground car-park have been built. Three complex sites in one, a technical feat successfully completed thanks to Mapei products. In this area, known as SoOuest, green parks and modern buildings live in perfect harmony.

## A 24-Storey Facelift

The Courcellor II Tower, 24 floors including 3 below ground level, is a building typical of the 60's and 70's. Because there was asbestos in the load-bearing structure, it had to be completely restructured: the structure of the building was rebuilt in concrete and the top four floors were demolished and rebuilt, just like the floors from the third floor below ground level up to the fifth floor, all rebuilt with





reinforced cement. The central body of the building was also involved, with the lift shaft and stair well rebuilt to comply with current legislation. To repair the deteriorated concrete, the compensated-shrinkage thixotropic mortars PLANITOP 400 F, PLANITOP 450 and MAPEGROUT T60F were applied on the piles, beams and stairs. These products comply with CE EN 1504-3 standards and are marketed in France by Mapei France.



### IN THE SPOTLIGHT

#### ULTRAPLAN MAXI

It is an ultra-fast drying self-levelling compound for leveling and smoothing differences in thicknesses from 3 to 30 mm on new or existing substrates, preparing them to receive all kinds of flooring. ULTRAPLAN MAXI is for interior use only and it is especially suitable for areas subject to wheeled chairs. It can contribute up to **2 points** to obtain the **LEED** certification.





The corresponding products on the Italian market are PLANITOP 400 and MAPE-GROUT T60. The light cracks in the concrete were then filled by injecting EPOJET epoxy resin, while the larger cracks were filled with EPORIP epoxy adhesive. In some areas where steel and concrete elements needed to be sealed, MAPEFILL F fluid expansive anchoring mortar compliant with CE EN 1504-6 standards was used (its corresponding product on the Italian market is MAPEFILL). To make the internal and external walls flat and guarantee a perfectly smooth surface, the levelling mortars NIVOPLAN and NIVOPATE in powder and paste form were applied (the latter product is produced and distributed in France by Mapei France). The floor slab was then levelled off with MAPECEM PRONTO rapid-drying and setting mortar, applied over a layer of slurry made from PLANICRETE LATEX and P4S ULTRAPLAN MAXI (both produced and sold in France by Mapei France). The substrate had previously been treated with PRIMER G synthetic resin-based primer.



## INTERVIEW

### A SUCCESSFUL PARTNERSHIP

***Courcellor is a splendid project. How did you choose the right partners for such a large site?***

Benoit Laurent, GCC Works Director: «I had already used Mapei products with great success on different sites and so, for SoOuest, I immediately thought of you».

Michel de Freitas, GCC Site Manager: «I had used Mapei products on my previous site: to already have contacts and know the products and working systems is a great advantage and allows you to save time».

Antonio Marcal, GCC: «Every time Mapei and Triomat guarantee a service that meets all needs from a technical and logistics point of view».

***You have had to face a number of challenges on this site!***

Michel de Freitas: «It was a technically complex site.

Also, its urban context was one of the main stumbling blocks, because supplying and sourcing material to the centre of a city is always complicated. We managed three different sites at the same time, each one with its own characteristics and problems. It was quite a challenge in terms of organisation and ability, but also regarding health and safety and risk prevention. We can all remember the first time we had to apply MAPEFILL at more than 100 metres

above the ground!».

Benoit Laurent: «Mapei was the only company that offered us a complete range of innovative products that complied with all the technical requirements.

PLANITOP 400 F, for example, is the only NF-certified repair mortar (*a French standard that certifies the quality of products, Editor's note*) that sets extremely rapidly, a fundamental characteristic for site productivity, and above all that generates a lot less dust compared with other products, and this is very important for a project right in the centre of a city or in confined spaces, such as underground car-parks».





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### SoOuest: the New “Urban Chic” Shopping Centre

Next to the Courcellor II Tower, today there is the new SoOuest shopping centre, one of the largest to the west of Paris (53,000 m<sup>2</sup>). There are 102 boutiques and a Leclerc hypermarket covering an area of 15,300 m<sup>2</sup>. In the access area for the fork-lifts, the flooring was made using ULTRATOP STANDARD self-levelling, ultra rapid-hardening mortar (available on the French market). It was chosen for its high resistance to abrasion, which makes it particularly suitable for the intense traffic encountered in industrial and commercial areas. Some of the structures under the esca-

**PHOTOS 4-5.** The SoOuest shopping centre while work was underway and once it had been completed.

**PHOTOS 6-7.** The car-park under the shopping centre: 1,750 parking spaces on three floors.

#### How important was the daily support of Mapei’s Technical Services on site?

Benoit Laurent: «Firstly, we try to find a partner we can trust to give us the support we need, especially on such a large site as this. Mapei’s day to day assistance, both commercial and technical, is a guarantee of quality!».

Nader Zouaoui, Triomat (Mapei distributor): «I have been working with Mapei for 6 years and I immediately appreciated the quality of their products, but also the availability and dynamism of the Technical Services department. And so Mapei has become a partner».

lators also had to be strengthened, and the choice went to Mapei’s carbon fibre-based systems (FRP). Light and resistant to corrosion and tensile forces, these systems are an efficient substitute for traditional metal reinforcement. The intervention started by applying MAPEWRAP PRIMER 1 two-component epoxy primer followed by MAPEWRAP 11 epoxy grout, thanks to which the porosity of the concrete substrate was evened out any imperfections in the surface were smoothed over. MAPEWRAP C UNI A X300 mono-directional carbon fibre fabric was then overlaid and the various layers were bonded using MAPEWRAP 31 adhesive. To withstand the supplementary flexural stresses, CARBOPLATE pultruded carbon fibre sheets were also applied.

#### Underground Car-Park

A three-storey underground car-park was built under the shopping centre. To cover the lift well and waterproof the structure IDROSILEX PRONTO cementitious mortar was chosen, while LAMPOSILEX ultra rapid-setting and hardening hydraulic binder was used to instantaneously block infiltrations of water which are often found in walls below ground level. Lastly, to guarantee the flatness and create a perfect finish, the compensated-shrinkage thixotropic mortars PLANITOP 400 F and PLANITOP 450 were applied.

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#### Technical Data

**Courcellor II project,** Levallois-Perret (France)

**Period of Intervention:** September 2011-April 2012

**Intervention by Mapei:** supply of products to repair and smoothing concrete, reinforce structures, make seals, waterproofing, block water infiltrations and level off substrates.

**Clients:** Semalrep (Levallois, France) and Nexity (Paris)

**Works Management:** SNC Lavalin SAS, (Paris)

**Architects and General Works**

**Management:** Calq Architecture (Paris), Epstein and Glaiman (Levallois, France) and Recevki Architecture (Levallois)

**Executing Company:** GCC, (Paris)

**Mapei Distributor:** Triomat (Villeneuve le Roi, France)

**Mapei Co-ordinators:** Benoit Le Coz and Cédric Le Page, Mapei France

**Photos:** Stéphane Levy and JM. Giraudeau for GCC

#### Mapei Products

**Filling cracks:** Epojet, Eporip

**Repairing concrete:** Planitop 400 F\*, Planitop 450\*, Mapegrout T60 F\*

**Sealing:** Mapefill F\*

**Preparing substrates:** Nivopate F\*, Nivopate G\*, Nivoplan F\*, Nivoplan G\*, Mapecem Pronto, Planicrete Latex\*, Primer G, Ultraplan Maxi

**Waterproofing:** Idrosilex Pronto, Lamposilex

**Structural reinforcement:** Carboplate, Mapewrap

**Flooring:** Ultratop standard

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