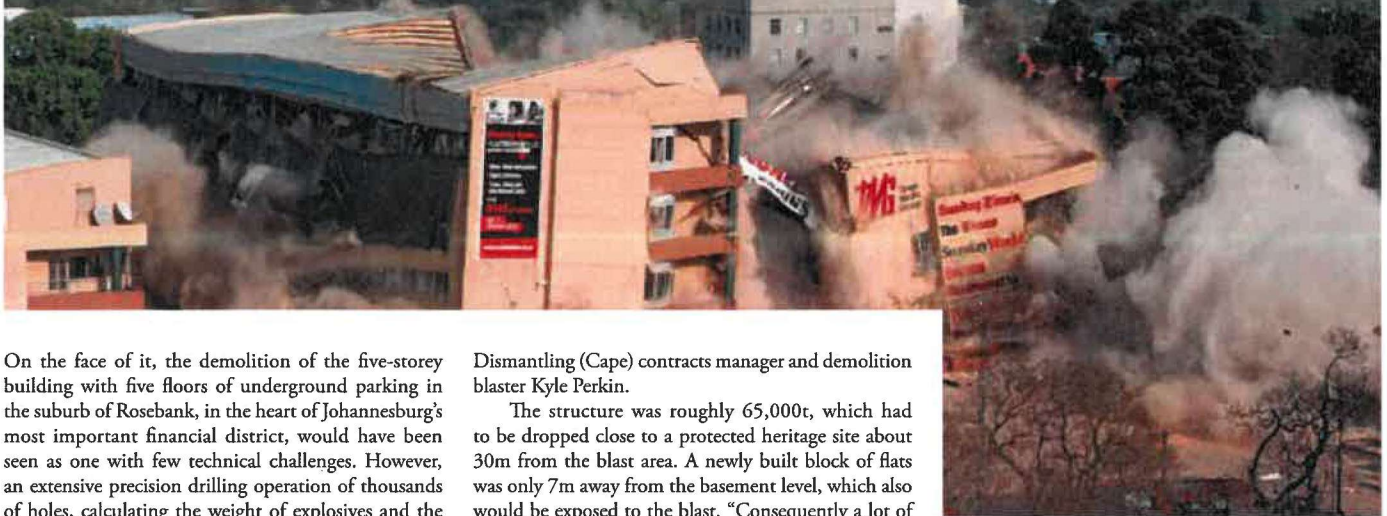


The Galleria, which was the headquarters of one of South Africa's leading media houses, was imploded on a Sunday morning in September. The successful eight-second implosion was not without its difficulties, including a month delay to stabilise an adjacent and badly cracked heritage building. PDi's Africa Editor, Kevin Mayhew reports.



On the face of it, the demolition of the five-storey building with five floors of underground parking in the suburb of Rosebank, in the heart of Johannesburg's most important financial district, would have been seen as one with few technical challenges. However, an extensive precision drilling operation of thousands of holes, calculating the weight of explosives and the protection element, were critical factors for Wreckers Dismantling (Cape), which carried out the implosion.

The demolished Galleria will make way for a mixed-use development providing office space, residential units, hotel and select retail with public open space to be built by Abland Property Development for local property giant, Redefine Properties.

A tricky implosion

"It was quite deceiving actually. Despite being relatively low in height, it was 90,000m² with five basement levels below, which made it a substantial structure, although you couldn't see it from above ground," said Wreckers

Dismantling (Cape) contracts manager and demolition blaster Kyle Perkin.

The structure was roughly 65,000t, which had to be dropped close to a protected heritage site about 30m from the blast area. A newly built block of flats was only 7m away from the basement level, which also would be exposed to the blast. "Consequently a lot of protection had to be put in place for the air blast and flying debris, apart from it being in a very built up and up-market precinct in the heartland of Johannesburg's financial area," said Perkin.

"The choice of blast time was determined by the fact that much of the business activity in the area is busy, Sunday luxury retail trading, including many restaurants, which had to be accessible and operate in a noise and dust-free environment when they opened later in the morning. It was also best to do it early so that casual pedestrian and vehicular traffic was minimal to control for the duration of the blast. All these elements of protection, preservation, safety and convenience had to be factored in."

850kg of explosives

To collapse the building about 850kg of explosive charge weight was used. Delays were sequential from the centre outwards and timed in such a manner that vibration levels were not excessive in terms of peak particle velocity.

"Control of this was important for the protected heritage building close by. It was built around 1930s and historically had ground subsidence issues, causing a portion of the building at the gable end next to the block of flats to be on the verge of collapse," said Abland Property Development development manager Laetitia Cook. "We had to delay the implosion to allow engineers to plan a way to prevent further damage to the cracked gable portion of the heritage site. It was decided that underpinning this corner was the best route. We also had a head office block and a luxury mall, which had glass facades to consider when selecting our demolition partner."

SPECTACLE AT THE GALLERIA

