

EXCLUSIVE This photo taken just months before the death wall collapse reveals major flaws

DECEMBER 12, 2012



Probe: Cracks are clearly visible in the wall and (below) an inspector checks the scene yesterday. Picture: JES RICHARDSON



BRIDGET JONES



ALEXANDER JONES



MARIE-FAITH FLAWOO

CRACKED

THE brick wall that collapsed killing three people was riddled with cracks, photographs taken just four months before the tragedy reveal.

Photographs obtained by the *Herald Sun* are now expected to form a crucial part of investigations into last week's tragedy.

Engineering experts have said the "significant" cracking would have made the wall unable to resist Thursday's

Stephen Drill
 strong winds. The photographs, taken on December 12 last year, are the only images in the public domain that show the condition of the wall before its collapse.

The tragedy claimed the lives of three pedestrians on Swanston St — Melbourne siblings Bridget and Alexander Jones and French woman Dr Marie-Faith Flawoo. Grocon knocked down the

remaining sections of the wall under instruction from authorities in the hours after the incident.

WorkSafe also confirmed it had visited the Grocon building site in 2011 to monitor work practices, but could not say whether the wall was inspected.

Dr Con Adam, senior research fellow in the school of civil engineering at Monash University, said the cracks caused the wall's collapse.

"That picture tells us a lot about the wall. The wall as a whole was under sheer failure, this renders the wall unable to resist wind loads," he said.

"The wall, if it was designed properly, should flex with the wind and go back without collapsing.

"If there is a crack in the bottom of the wall it just couldn't resist the wind load. That crack at the base of the wall was the weakest point."

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Cracks begin to



Photos reveal flaws in wall

Jes Richardson, 25, a self-described "urban explorer", was taking pictures of graffiti on December 12 last year when she captured the image of the griffitted Grocon wall.

She said a bluestone wall at the other end of the site near Bouverie St was propped up with metal beams.

"If that fell, it would fall on the footpath," she said. The *Herald Sun* understands investigations have now turned to the brickwork and foundations of the wall, and foundations of the wall, after a wooden hoarding acting like a wall was initially blamed for the collapse.

Ms Richardson said she hoped the photographs would help the investigation into the fatal collapse.

The Bureau of Meteorology confirmed that westerly winds of 102km/h were recorded at the St Kilda beacon, the nearest accurate weather station, at 2:59pm last Thursday, moments before the wall fell. Richard Eckhaus, chairman of the Structural College of Engineers Australia, said the crack at the base of the vertical part of the brickwork, known as a pier, was a serious problem.

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below," he said. "That tells you the wall is not in a good condition."

He said the wooden hoarding should have been checked by an engineer before it was approved. A makeshift attempt had also been made to shore up a wooden section of the advertising board.

Vegetation had also grown through parts of the wall and the concrete foundation had been chipped. Worksafe's acting general manager of health and safety, Shane Gillard, said the authority attended the site on October 12, 2011.

But he could not say if the wall was inspected.

"The request related to concerns over the safety of workers who were using A-frame ladders to erect the hoarding on the site and the lack of a pedestrian management system while the work was being carried out," he said.



Show in sad tale



YESTERDAY

School family gathers for a tragic farewell

Rebekah Cavanagh

THE Montmorency community will gather today to remember the Jones siblings — a week after a freak wall collapse claimed their lives.

Montmorency Secondary College will open its doors to students, friends and family of former students Alexander and Bridget Jones between 11am and 3pm.

Alex, 19, and Bridget, 18, were walking along Swanson St in Carlton when a brick wall came crashing down on top of them last Thursday.

Talented French researcher Marie-Faith Flawoo, 33, was also killed in the tragedy.

The school memorial comes as investigations into the triple fatality began at the site yesterday.

Grocon inspectors scoured the former Carlton United Brewery site, taking photos, collecting soil and rock samples, and measuring remaining foundations of the wall.

An excavator was also used to dig a 1m-deep hole adjacent to the wall, directly where it weakened and fell.

WorkSafe, the State Coroner, Victoria Police and Grocon, which owns the site, are all conducting separate investigations.

Authorities are remaining tight-lipped about their inquiries and whether anyone had done anything wrong.

Roberto Cimino, who has been in the architecture and construction industry for 20 years, visited the site yesterday in an attempt to reach his own conclusions about what happened.

"Everyone in the industry is wondering how this happened," he said.

He added that "cutting corners" had become rife in the industry.

"No glory or triumph is worth an inch of skin," Mr Cimino said.

The tragedy has touched people around Victoria, with complete strangers visiting the scene a week on to pay their respects.

A painted wooden shelter has been erected as a tribute and is now laden with flowers, candles and other mementoes.

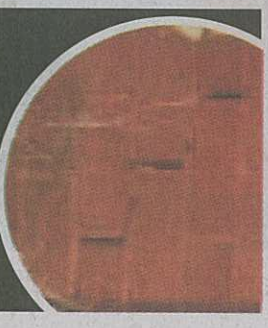
Dylan McEune, 19, had been too distraught to visit the site to say goodbye to his mate, Alexander, known to friends as "Zander", until yesterday.

"It is so hard to comprehend why this has happened, and that they are gone," Mr McEune said.

"Everyone is still in shock and trying to come to terms with this."

Friends and former colleagues of Dr Flawoo, a Monash University research fellow, were just as shocked as news of her death spread around France yesterday.

Speaking from Dr Flawoo's hometown of Paris,



WHAT WE NOW KNOW

- A significant crack in the wall would have caused it to collapse under strong winds
- Westerly gusts of 102km/h were recorded at St Kilda, the nearest accurate wind station, at 2:59pm last Thursday
- The mortar used at the time the wall was thought to have been built was lime-based, which loses strength over time
- Steel columns, or straps, could have cheaply strengthened the wall
- WorkSafe inspected workers putting up a wooden hoarding on the site on October 12, 2011
- The wooden hoarding was 300-400mm higher than the brick wall

SOURCES: WorkSafe, Dr Con Adam, Richard Eckhaus

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Triple tragedy: (clockwise from above) The scene of the Swanson St wall collapse yesterday; inspectors investigate the site; photographs of the wall, taken four months ago, reveal cracks in the lower bricks and show that the hoarding is higher than the wall. Pictures: TIM CARRAFA, JESS RICHARDSON



Alphonse Finel, the director at Onera, the French aerospace research facility where Dr Flawoo worked as a PhD student from 2004 to 2009, told of her "true kindness".

He described her as a "rigorous scientist".

"Many of us today have lost more than a colleague," he said.

"We remember her as a profound, honest and rigorous scientist, deeply involved in her research activities, yet very sensitive to the relation with her fellows and colleagues."

Dr Flawoo's family are planning to make the 22-hour flight from Paris to Melbourne later this week to bring their daughter's body home.

Dr Flawoo had been working as a postdoctoral research fellow in the materials engineering department at the university's Clayton campus since 2010.

A Monash spokeswoman said the university was "deeply saddened" by Dr Flawoo's death.

"Our thoughts and prayers go out to Dr Flawoo's family, work colleagues and friends," the spokeswoman said.