



*Typical terrace area shows a dividing wall and parapet wall*



*3m high parapets required structural strengthening*



*Typical terrace after demolition and installation of the membrane*

## PRESERVATION TECHNOLOGIES

## CASEFILES

### Exclusive apartments undergo big terrace upgrade

**The problem:** This heritage building (old wool store) overlooking Darling Harbour, with magnificent views of Sydney, was re-developed in the 90s. Subsequent investigation work by Izzat Consulting Engineers discovered major waterproofing and tiling issues with the penthouse terraces of the building. In addition, the brick parapet wall, over 3m high in places, required structural strengthening.

**The constraints:** The building has over 500 apartments/rooms. All access to the work area had to be from within the building complex, with special emphasis on limiting noise and dust, maintaining public safety and minimising impact on the residents. The project involved work to 13 terraces separated by other terraces not part of the contract.

**The solution:** The project was successfully delivered by a combination of a well defined specification, co-operation between the site and property management teams, and skilled tradesmen undertaking the well planned works.

**The methodology:** All internal areas were protected and a materials hoist was erected inside the building. The team demolished terrace dividing walls to allow continuous access. They removed tiles, screeds and membranes to ground level and hoisted and installed new bedding materials, tiles and torch-on membrane materials. The team strengthened parapet walls using Helifix Helibars (double layer) and, where required, constructed new brick piers tied into the existing walls. This whole process was then repeated at the other end of the building.

**The result:** Project successfully delivered with no safety issues. Terraces are now waterproofed and the tiled terraces are fit for purpose allowing the owners to sit and view the wonderful cityscape before them.

**Project engineer:** Tony Dockrill

**Contact:** 02 4940 0090

**Completed:** September 2006



*New piers being built and Helifix installed*



*Terraces were opened up for continuous work*



*Terraces have been restored and protected*

## Goldsbrough Stage 2: apartment terraces upgrade

**The problem:** This heritage building overlooking Darling Harbour was redeveloped in the '90s to become the Goldsbrough Apartments. Subsequent investigation discovered major waterproofing and tiling issues with the penthouse terraces of the building. In addition, the brick parapet wall required structural strengthening. Stage 2 finished off the Stage 1 upgrade to approximately 50 per cent of the terraces.

**The constraints:** The building has over 500 apartments/rooms. All access to the work area had to be from within the building complex, with special emphasis on limiting noise and dust, maintaining public safety and minimising impact on the residents.

**The solution:** The project was successfully delivered by a combination of a well defined specification, co-operation between the site and property management teams, and skilled tradesmen undertaking the well planned works. Lessons learnt in Stage 1 were applied to avoid

repeat issues in this follow-up stage.

**The methodology:** All internal areas were protected and a materials hoist erected inside the building. The team demolished dividing walls to allow continuous access to terraces. The team removed tiles, screeds and membranes to ground level and hoisted and installed new bedding materials, tiles and torch-on membrane materials. The team strengthened parapet walls using Helifix Helibars (double layer) and, where needed, built new brick piers tied into the existing walls.

**The result:** The Stage 2 works have ensured that the full terrace area is fully restored, protected and upgraded.

**Project consultant:** Izzat Consulting

**Contact:** Tony Dockrill (02) 4940 0090

**Completed:** July 2008



29 July 2008

Reference for Preservation Technologies Pty Ltd

To whom it may concern,

Izzat Consulting Engineers acting as diagnostic and specifying engineers then project managers for The Oaks Group investigated, then specified and tendered a large rectification project at The Goldsbrough Apartments at Darling Harbour. The Goldsbrough Apartments is a residential and commercial complex of 500 apartments that has historical significance in Darling Harbour. The rectification works consisted of waterproofing, tiling and structural strengthening of the penthouse terraces. The contract was awarded to Preservation Technologies Pty Ltd.

The Owners Corporation had decided to divide the rectification works into two stages. Working with Preservation Technologies we further developed solutions to repair details to allow for the first stage of the works which was approximately half of the penthouse apartment terraces.

Upon completion of the first stage of the rectification works the tender process was undertaken again for the second stage of works. Due to the competitive price schedule and quality of workmanship on the first stage of works Preservation Technologies Pty Ltd were awarded the second stage of the work.

In working with Preservation Technologies Pty Ltd we were able to provide our clients with the best possible outcome for the rectification works on the penthouse terrace. We are happy to acknowledge the professional management and in particular the technical and building experience of Preservation Technologies Pty Ltd. We found that Preservation Technologies Pty Ltd achieved the expected high standard of workmanship by utilisation of appropriately skilled trade's people delivering quality work in a safe work environment. The rectification works were all completed to our satisfaction inclusive of materials handling whilst The Goldsbrough Apartments maintained its standard high occupancy level.

We are delighted to provide this reference for Preservation Technologies Pty Ltd.

Yours faithfully,

A handwritten signature in blue ink that reads "A. H. Dockrill".

Tony Dockrill B.E.(Civil)(Hons), M.I.E. Aust. C.P.Eng.(NPER), Grad.Dip.Man.  
Partner