

# Historic Home Restoration

## MARDINI CONSTRUCTIONS PROJECT IN BELLEVUE HILL

The existing two-storey Bellevue Hill home was originally built in 1914 and perched on a fragile steeply sloped natural mountain-like rock formation, over 18 metres above street level.

The ambitious design brief from the Architects, Collins and Turner and the Designer, Donald Campbell, required an extensive renovation and remodelling of the existing house, including a roof attic addition, as well as the complete restructuring of the steep front landscape, to create a new garage/entry at street level and a new level midway, involving the construction of a cabana, gardens and suspended concrete lap pool, all linked to a new glazed passenger lift set in the cliff face. Another key feature of the design was the 12 metre high sandstone wall extending from the cabana level. Ultimately, the aim was to provide maximum use of space, amenity and views, with state-of-the-art features, while blending in to the surrounding environment, to the point of appearing to have been built many years earlier, yet being energy efficient.

The daunting job of bringing this project to life was entrusted to multi award winning master builders, Mardini Constructions, led by Managing Director and Chief Foreman, Elvis Mardini.

The house, being almost a century old, was found to be in a quite dilapidated condition, with major structural deterioration throughout, including extensive dry rot and termite damage.

The first, of many extraordinary and unprecedented challenges to contend with, during the construction phase, was the enormous task of excavating the solid sandstone mountain and cutting the whole rock face.

Initially, due to the sheer height and lack of access, the team needed to abseil down from the 18 metre high

base, with jackhammers, to manually excavate the sandstone rock cliff face, to create a small platform. An excavator was then craned up to this platform, to excavate further, to allow a larger 22 tonne machine to be craned up. Both excavators worked until the rock face was saw-cut all the way back, to create an accurately profiled 18 metre high vertical rock wall, down to street level.

This resulted in 2,500 tonnes of rock and soil being removed from site. Of this, 1,000 tonnes of sandstone was cut to specific sizes for re-use, based on the detailed 'random-look' design. On site, the sandstone blocks were taken up and individually detailed by hand by Mardini's stonemasons. Other areas of the cut rock face in the entry and cabana levels that were left exposed, were then specially carved and detailed by hand.

Another unique challenge was the construction of the 18 metre high

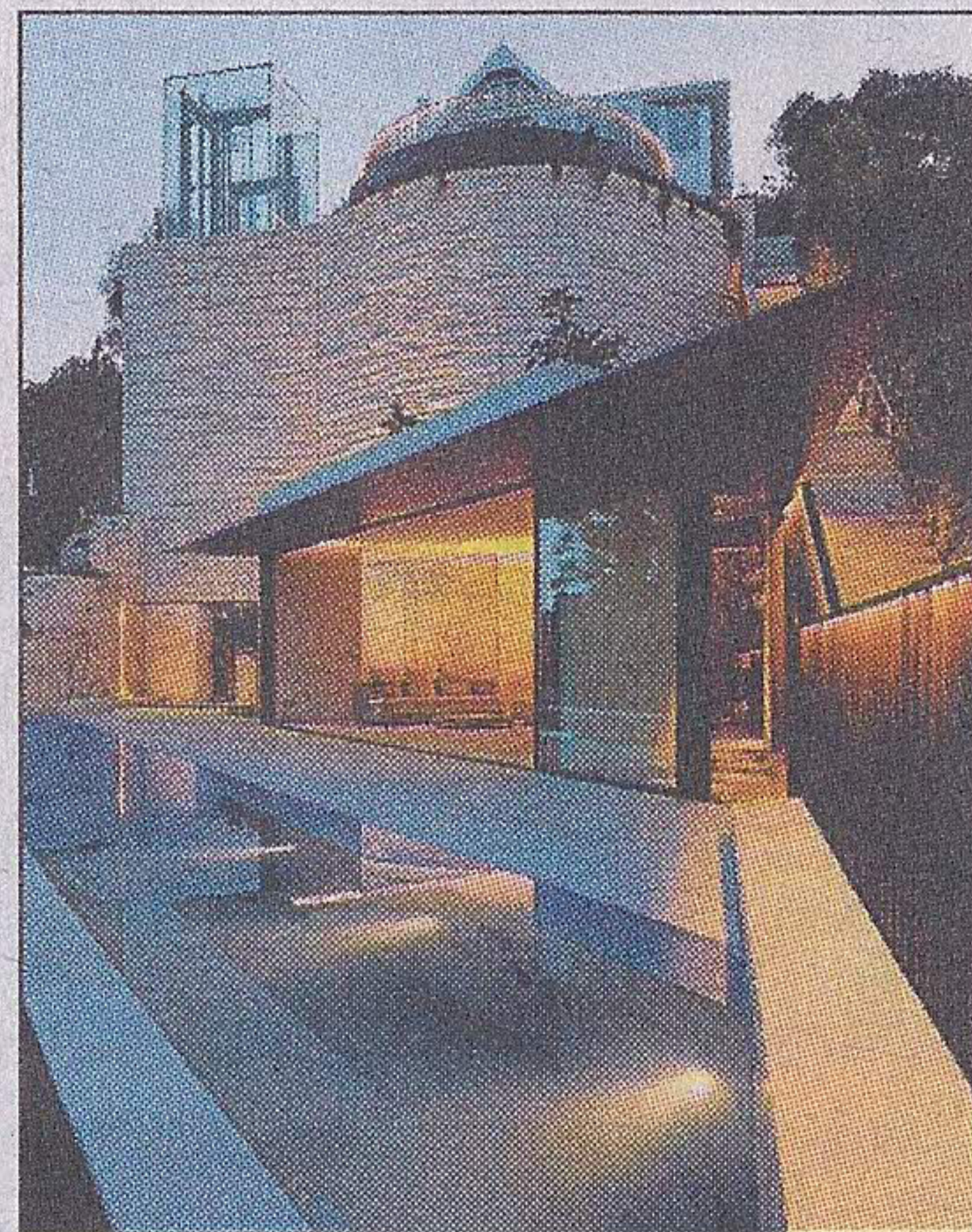


Photo: Richard Glover

concrete lift shaft, within the rock face profile. After installation of the custom lift system, a glass lift box was installed at the top, to minimise the visual impact.

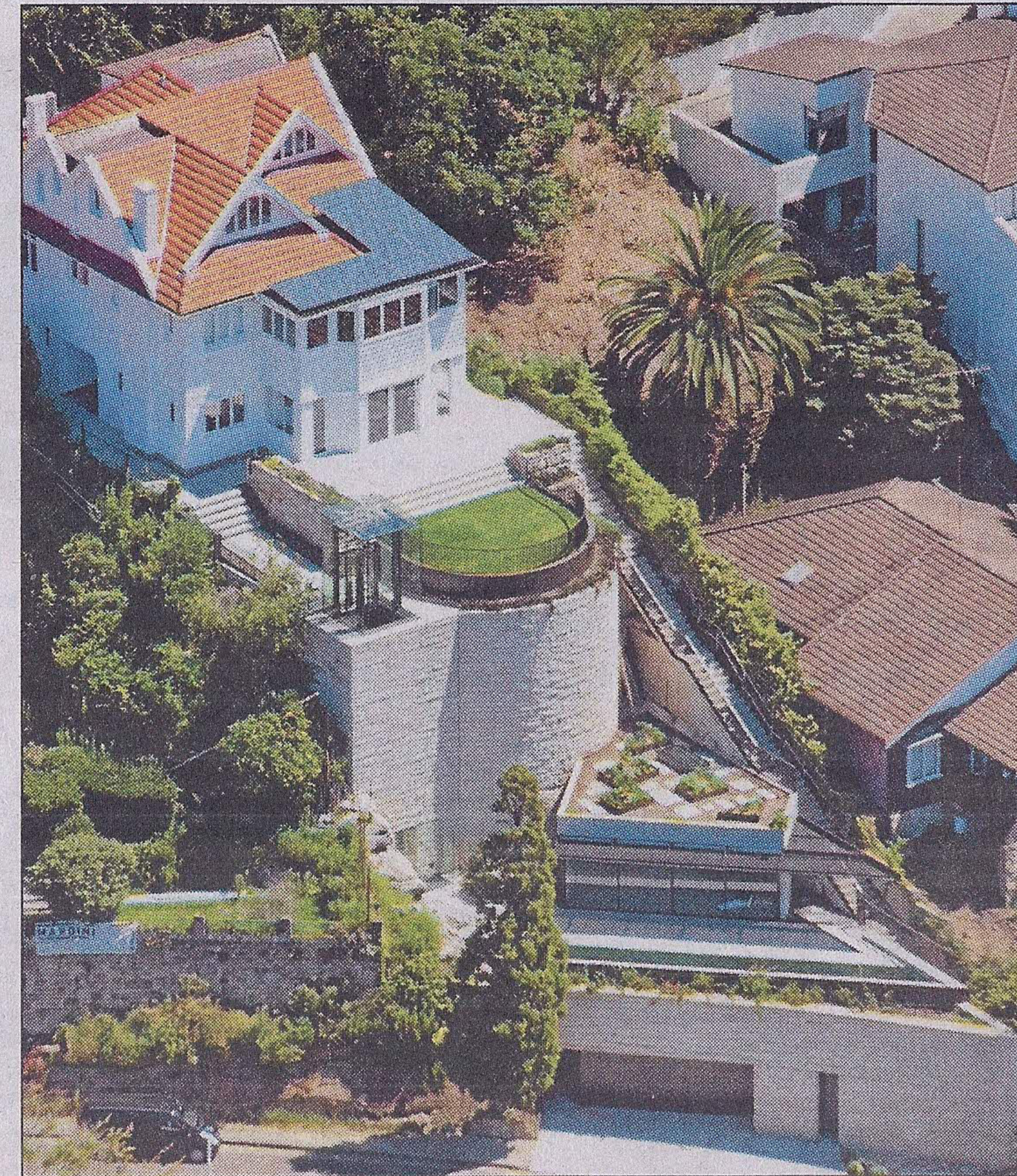
Due to the large and complex layout, a total of 35 separate concrete pours were done, covering more than 300 cubic metres of concrete, including areas featuring exposed Class 1 finish.

Meanwhile, for the existing house, virtually the whole interior was demolished, to make way for the painstakingly detailed restoration and alteration work that was undertaken, which firstly necessitated the addition of steel beams to support the remaining fragile structures above.

All existing floorboards, walls and ceilings were restored and new timber windows and doors were made to appear as original. New marble for the bathroom tiling, as well as for all benchtops and vanities, were custom-made for the project. One of the many changes even involved converting the existing chimney/fireplace structure into a shower for the ensuite.

The addition of a new roof attic level, for two new bedrooms and a bathroom, was seamlessly built while meeting requirements such as maintaining height limitations and the need to keep the original terracotta roof tiles. This involved careful removal of each roof tile, for later refitment. New steel beams were added to support the new roof and floor structures. For this additional level, a new staircase was constructed on site, featuring custom-made carved timber balustrades that replicated the existing original type.

For greater energy efficiency, thermal insulation was installed in all external walls and underside of roof. Also, an array of 18 high efficiency multi-crystalline photovoltaic solar panels were installed on the roof for the solar



Winner of the Renovations Over \$5 Million category, in the MBA NSW 2012 Excellence in Housing Awards.

Photo: Ethan Rolhoff

heating system, which is connected to the grid system, for the hot water and for heating of the lap pool.

Landscaping involved the addition of a new lawn area, various plants and trees, a vegetable garden and the installation of concealed rainwater tanks.

*This home has also just been honoured by being included in the exclusive Historic Houses Trust visit listing, which is scheduled for 3 November 2012. Please visit their website for further details.*

# MARDINI

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