

'The work undertaken on the Arch has assured its future for at least the next 50 years'

to Buckingham Palace. And I promise you that it won't sway in the wind...'

It's unlikely to collapse, either, which could not have been guaranteed until English Heritage put it at the top of its Buildings at Risk register. Care and attention for the Arch have been in short supply since the early 1950s when it housed the smallest police station in London, with a staff of 10 constables, two sergeants and a cat. Repairs, of a sort, were carried out in 1955 when the stone garlands in front of the windows on the south side were replaced. In the same year, temporary supports were installed beneath the Quadriga and elements of the original steel framing, which had corroded, were cut out and new ones inserted. The Quadriga was given its last cleaning in 1957.

'Overall, I would say the Arch was in better condition than we feared and in worse condition than we hoped,' says Glass. 'The original fabric has held up remarkably well but there were some problems to sort out where patching and repairs had been carried out during the 1950s. What we have done is assure its future for at least the next 50 years.'

The object has been to secure the safety of the structure, remove and replace irrevocably damaged sections of the stonework, strip the Quadriga of its blackened wax and return it to its original bronze finish and allow the public access to the interior. But first, there was the small matter of cleaning the entire

building to ascertain the extent of damage. So thick was the coating of grime that many of the cracks in the Portland stone were conveniently hidden.

But even after the cleaning was finished, much of the analysis was guesswork. No records exist about how the Arch was rebuilt when it was moved in 1882 from its original position facing the Hyde Park Screen to its present spot as an entrance to Constitution Hill. Although cast iron would have been used when it was first built, this might have been replaced by steel when it was moved – and steel does not last as long. Another problem was that cement mortar was used in the repositioned structure rather than the lime mortar used in the original.

This meant that huge saws had to cut through the stone joints, increasing the risk of causing extra damage. 'This job has been all about making educated assumptions and then redressing those assumptions once we actually started the work,' says Stephen Wells, English Heritage's Manager of the Wellington Arch project. 'I am pleased that no original stone has been damaged or cracked during the whole of the past 12 months – such was the care we took in the dismantling operation.'

Most of the cleaning was achieved through a simple water wash, but in more detailed areas or where the stone was badly stained a cleaning system known as a Jox was used. This involved blowing a fine powder onto the stone in such a



way that it brushed the surface rather than hitting it straight on. The danger with using water is that the stone is saturated to such a degree that natural salts are drawn out, creating new staining.

The outside temperature was important during the cleaning. When it drops below 4C small particles of water will start to crystallise. But, fortunately, London enjoyed a mild winter and the

