HOLDEN CONSERVATION LTD

Treatment Report for the Terracotta Walls
Greenzone Restaurant
Natural History Museum

by
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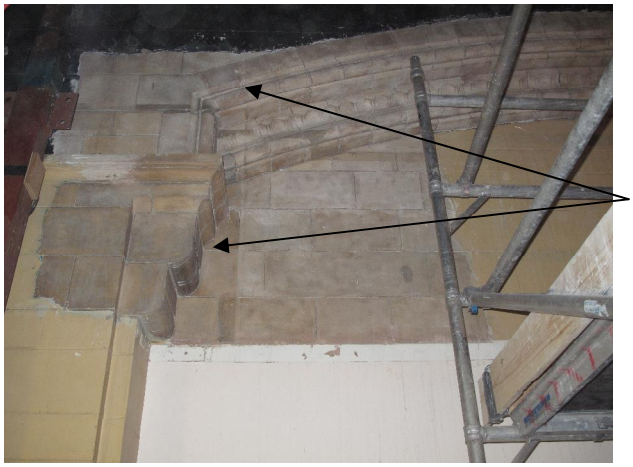
Investigations

Investigative trials were carried out into the removal of the paint layers covering the terracotta walls in the Greenzone restaurant of the Natural History Museum.

Two products were tested;

1) Peelway 1
2) Peelway 7

It was determined that one application of Peelway 7 stripped all of the paint layers back to the terracotta. This could be seen in both the area with the black top-coat paint and the cream top-coat paint.



1

The test sample after one application of Peelway 7.

The paint has been stripped, back to the terracotta from both the black and the cream painted sections.

One application of Peelway 1 did not strip all the paint layers back to the terracotta. It could be seen that the paint stripper only partially removed the paint on the area with the cream top-coat. There was very little softening on the area with the black paint top-coat and so even less paint was able to be removed.



2

The test sample after one application of Peelway 1.

The paint has only been partially stripped from both the black and the cream painted sections.

From the results of the tests it was decided to use the Peelway 7 paint stripping system as this worked well after one application on all the areas of paint.

Treatment

Paint Removal

The Peelway 7 paint stripping paste was applied in an even coat to the painted terracotta, with spatulas. The paste was then covered and left for 48 hours.

After 48 hours the paste and softened paint were removed with spatulas. The terracotta was then manually cleaned to remove all residues with bristle brushes, bronze brushes and water.

Any remaining paint spots were then immediately treated with Nitromors paint stripper and cleaned with bristle brushes, bronze brushes and water.

Previous Repairs and Fixings

The old plaster and cement repairs in the terracotta were removed using a hammer and chisels.

The large metal fixings in the terracotta were carefully removed with the use of a drill and hammer and chisel.

The number of large metal fixings removed was;
3 no. - E wall, column 1
3 no. - E wall, column 4
3 no. - W wall, column 2
9 no. – W wall, column 5

The wooden, lead and plastic plugs were also removed from the terracotta.

Mortar Repairs – the positions of the large repairs are illustrated on the drawings on p.9 & 10

The screw holes were filled with a hydraulic lime mortar to match the basic colour of the terracotta blocks.

The mortar used was;
1 part – hydraulic lime (St. Astier 3.5)
1 part – building sand
1 part – silver sand
1 part – Bath stone dust (sieved to 300µm)
¼ part – Brick dust (sieved to 300µm)
¼ part – Slate dust

Once the old repair mortar had been removed the larger repairs were back filled with a hydraulic lime mortar (3 parts fine sharp sand to 1 part St. Astier hydraulic lime 3.5) to within in 5mm of the face of the terracotta block.



3.

A large repair filled with backing mortar to within 5mm of the face of the terracotta.

The repairs were then filled with a hydraulic lime mortar to match the basic colour of the terracotta blocks.

The mortar used was;
1 part – hydraulic lime (St. Astier 3.5)
1 part – building sand
1 part – silver sand
1 part – Bath stone dust (sieved to 300µm)
¼ part – Brick dust (sieved to 300µm)
¼ part – Slate dust

The large repairs on the cornice were cut back with a hammer and chisel to provide a square edge to the repair.

The repairs were then built up using 6mm threaded stainless steel armatures (adhered to the terracotta with polyester resin) and a hydraulic lime backing mortar (3 parts fine sharp sand to 1 part St. Astier hydraulic lime 3.5)

A hydraulic lime mortar was applied as the top coat and the mortar shaped to match the surrounding cornice.

The mortar used was;
1 part – hydraulic lime (St. Astier 3.5)
1 part – building sand
1 part – silver sand
1 part – Bath stone dust (sieved to 300µm)
¼ part – Brick dust (sieved to 300µm)
¼ part – Slate dust

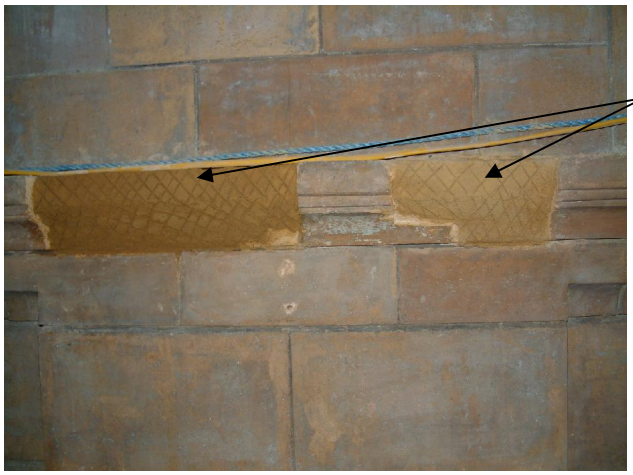
The mortar repairs were toned with acrylic paints to match the terracotta blocks.



4. W wall, column 2

6mm threaded stainless steel armatures adhered to the terracotta with polyester resin.

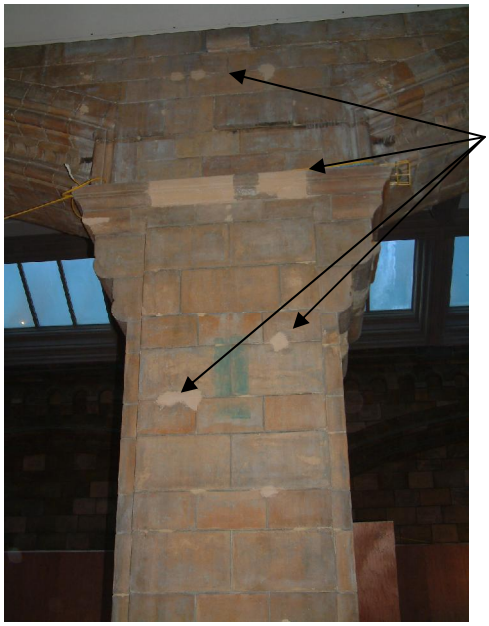
The edges have been cut back with a hammer and chisel to provide a square edge to the repairs.



5. W wall, column 2

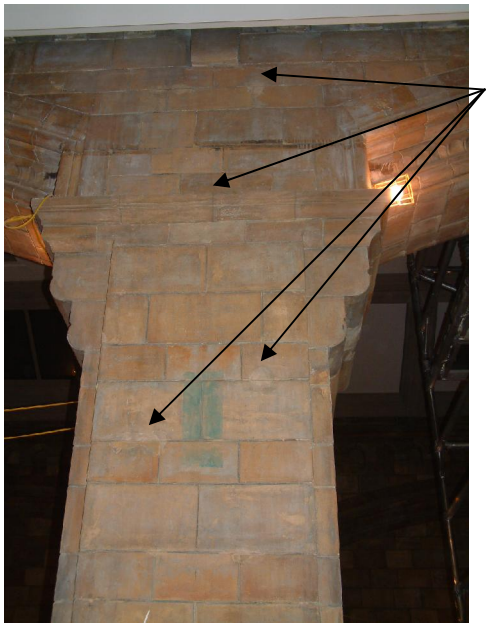
The repairs have been built up with hydraulic lime backing mortar to within 5mm of the face of the terracotta.

The mortar has been scored in preparation for the top coat mortar.



6. W wall, column 2

All the large repairs have been filled with the hydraulic lime top coat mortar to match the basic colour of the terracotta.



7. W wall, column 2

The mortar repairs have been toned with acrylic paints to match the terracotta blocks.

Pointing

All the areas where plugs had been removed from the pointing between the terracotta blocks were re-pointed with a hydraulic lime mortar (3 parts building sand to 1 part St Astier hydraulic lime 3.5)

The pointing was then toned with acrylic paints to match the original pointing.

Re-touching with paints



8. W wall, column 5

The remains of black and blue paint that could not be removed were touched out with acrylic paints.

The new terracotta blocks were toned with acrylic paints to match the original terracotta.



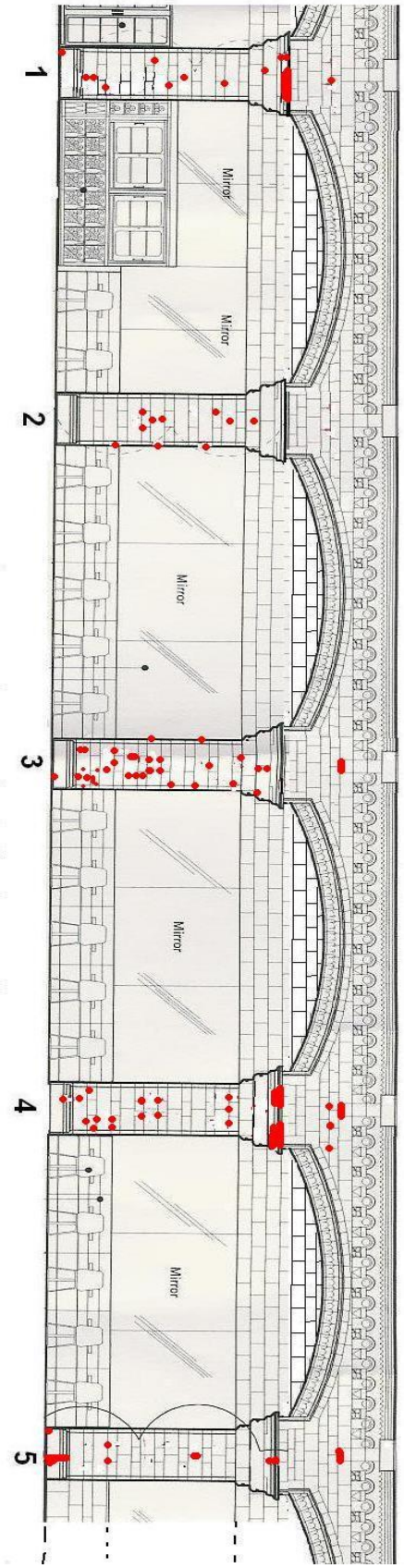
9.

The new terracotta blocks before being toned to match the original terracotta.

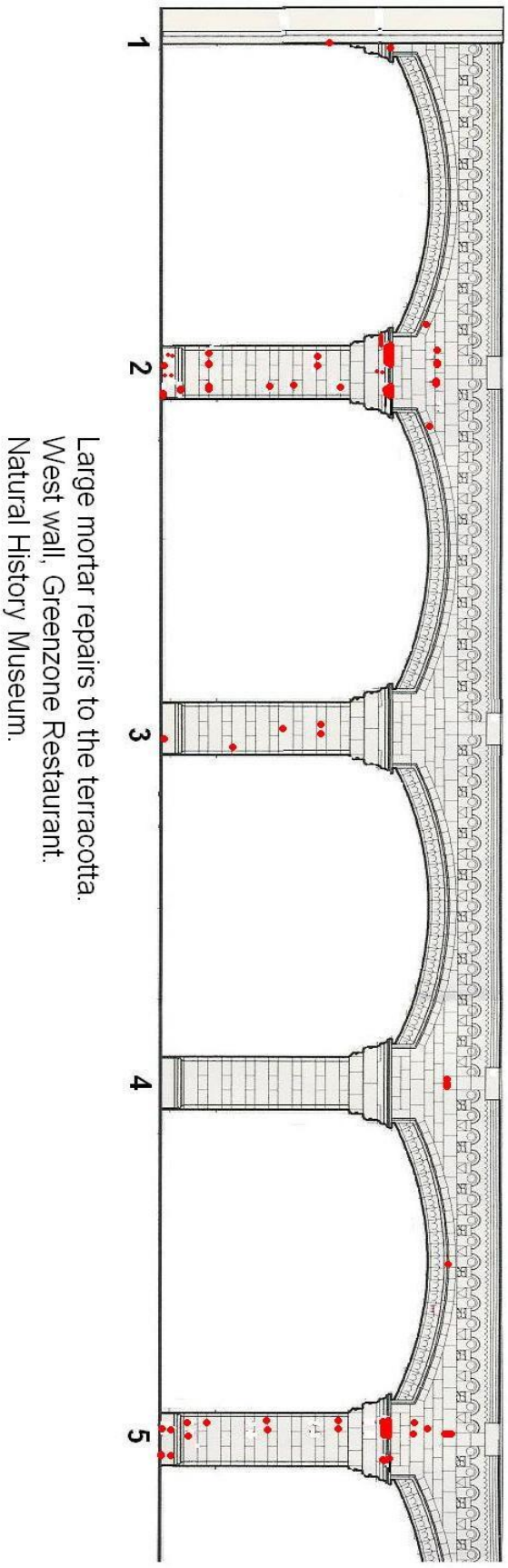


10.

The new terracotta blocks after being toned to match the original terracotta.



Large mortar repairs to the terracotta.
East wall, Greenzone Restaurant.
Natural History Museum.



Large mortar repairs to the terracotta.
West wall, Greenzone Restaurant.
Natural History Museum.