

1. PARTHENON FRIEZE

1.3 SCULPTURE COURT LOWER GALLERY SOUTH WALL

PANEL 1



Panel before conservation



Panel after conservation

1.3.1.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 1

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 3 metal fixings

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: Possibly 1807

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1800mm D: 50mm

Weight (approx):

1.3.1.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open crack running alongside joint on sinister side of the panel; crack running from dexter side towards centre of the cast, and from the top towards centre of the panel on its sinister side; small cracks around fixings at lower edge.

SURFACE DUST AND DIRT: Severe, 100% coverage

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on lower part of the panel probably by strip of lights which used to run just under the Frieze alongside the South and North walls on the Ground Floor Gallery; small spots of paint splash mainly at dexter and at lower edge of the panel; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSS: Missing areas associated with the cracks and around screws at lower edge of the panel.

ABRASIONS: Not significant

Cracks

Ferrous items under plaster

Chips, abrasions, missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



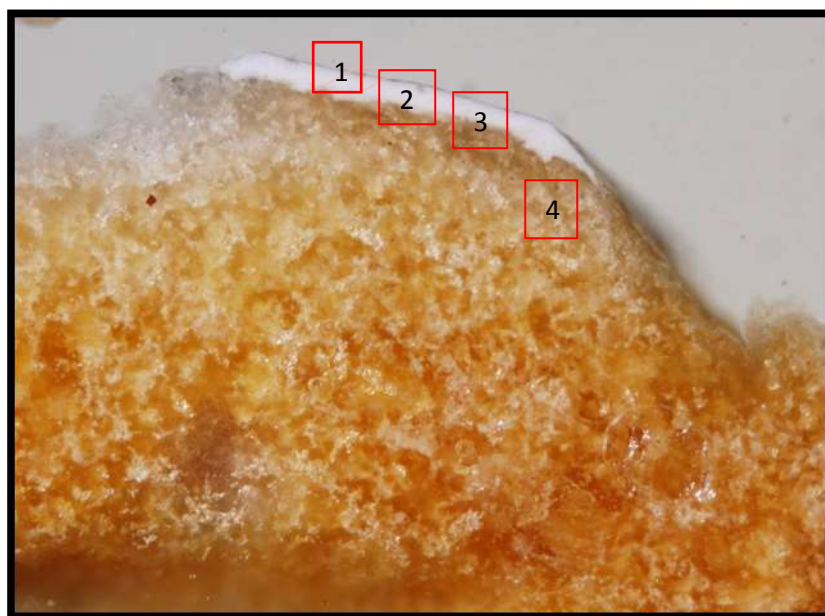
Samples of mortar were taken for analysis

1.3.1.3 ORIGINAL MATERIALS AND TECHNIQUES

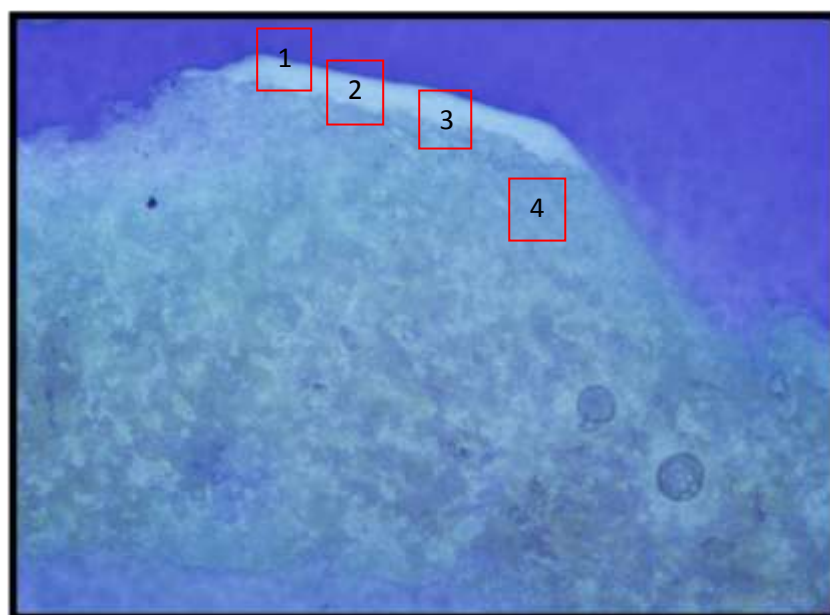
The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. In order to find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from the cast and sent to the University of Northumbria for analysis.

**Investigation of coating samples from ECA Plaster Cast Collection, Edinburgh.
Consultant: Brian W Singer.**

Parthenon Frieze, Lower Gallery South Wall, Panel 1 – Cross-section 1



Photograph of the Cross-section 1, paint sample from Panel 1



Photograph of Cross-section 1, paint sample from Panel 1 in UV light

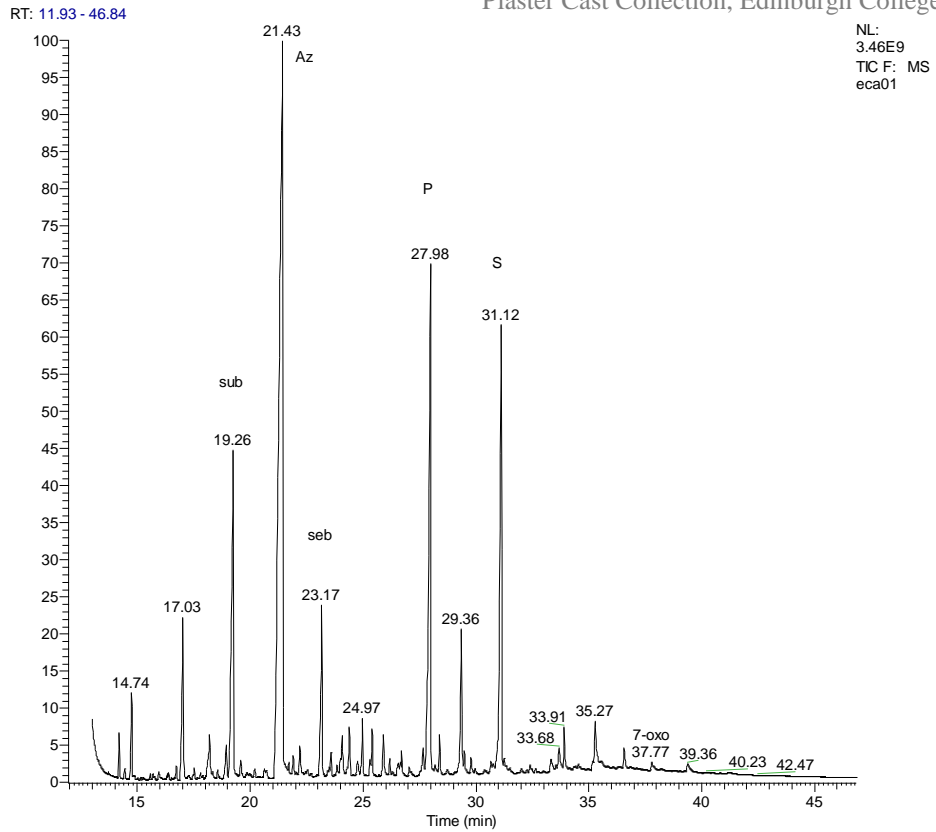
The cross-section showed a thin black dirt layer on a bright white layer on top of a slightly more creamy white paint layer. Below this is a thick layer of orange coloured plaster. Both paint layers fluoresced blue-white in UV light indicating lead white. The orange material appeared to have a yellowish fluorescence hence GC-MS was carried out in order to look for shellac.

GC-MS Analysis

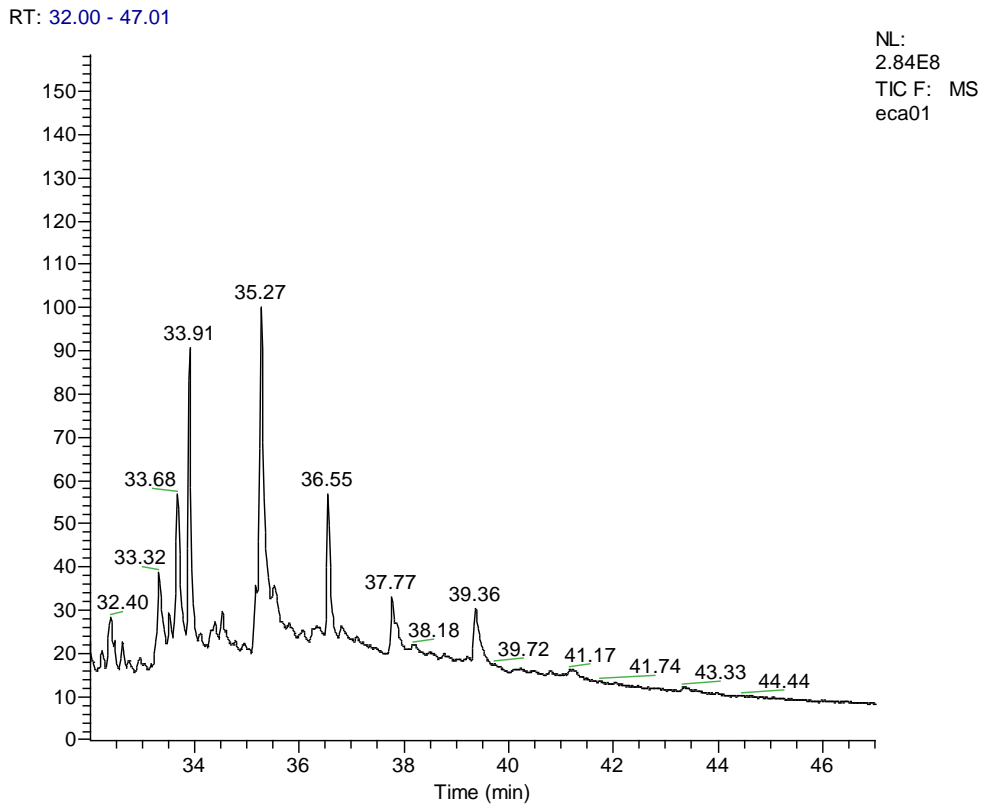
An aliquot of sample ECA 01 PF 1 of 2 Satir was treated with trifluoromethylphenyl trimethyl ammonium hydroxide (5% in methanol) and the mixture separated by GC-MS the chromatogram (Figure 16) which showed a strong peak for the methyl ester of nonandioic acid (azelic acid) with an azelate to palmitate ratio of 2.6 indicating a drying oil¹. The ratio of palmitic acid (hexadecanoic acid) to stearic acid (octadecanoic acid) (as their methyl esters) is 1.3, which is within the range for linseed oil¹. The azelate to suberate ratio is 3.9 and the azelate to sebacate ratio is 9.7 which together indicate that the oil has been heat bodied². There is also a peak at 37.77 minutes (Figure 17) which was recognised by its mass spectrum as methyl 7-oxodehydroabietate, which is an indicator of the presence of coniferous resin probably pine resin.

An attempt was made to find indicative components for shellac by displaying single ion chromatographs (Figure 18). Mills and White report³ that shellac can be identified by characteristic, but unidentified compounds, showing a 276 ion and a 308 ion. Compounds containing a 155 ion are also abundant in shellac. However this sample did not yield compounds peaks at similar retention times with a mass 276 ion (Figure 18) and also with a mass 308 ion (Figure 18). There are abundant peaks with a 155 ion count (Figure 18) but these were found to be due to epoxy-carboxylic acids, these, being oxidation products of the oil.

Thus there is no evidence to indicate that sample ECA 01 PF 1 of 2 Satir contains shellac, though it does contain some coniferous resin such as pine resin and it also contains, mainly, heat bodied linseed oil, probably in the paint layers and possibly also in the organic material within the plaster.



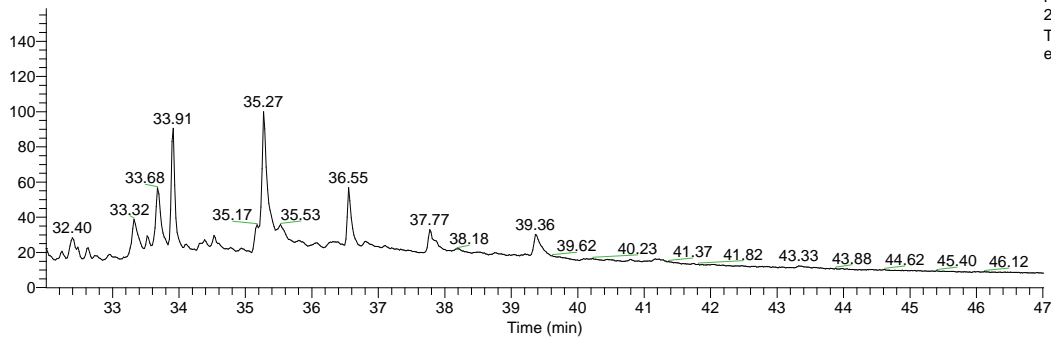
Chromatogram of sample 1 from Panel 1, showing oil/resin analysis; seb = dimethyl sebacate, Az = dimethyl azelate, sub = dimethyl suberate, P = methyl palmitate, S = methyl stearate



Chromatogram of sample 1 from Panel 1, detail; 33 - 46 minutes

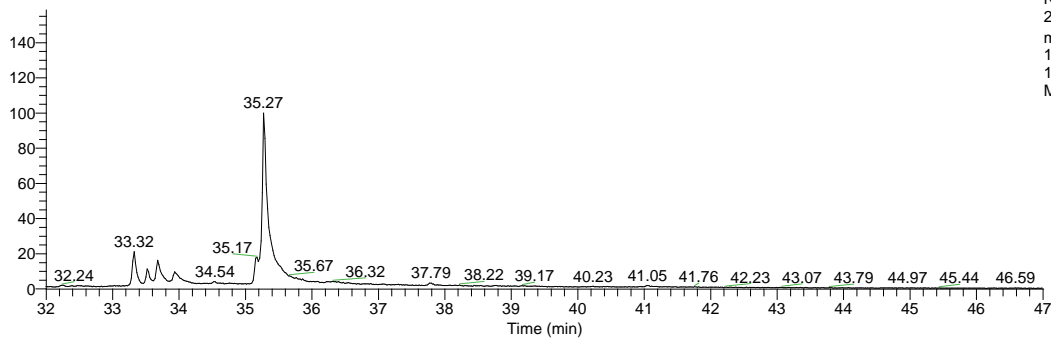
C:\Xcalibur\Data\brian\eca01
Parthenon Frieze 1 of 2 satir
RT: 32.00 - 47.01

1/8/2010 1:20:33 PM



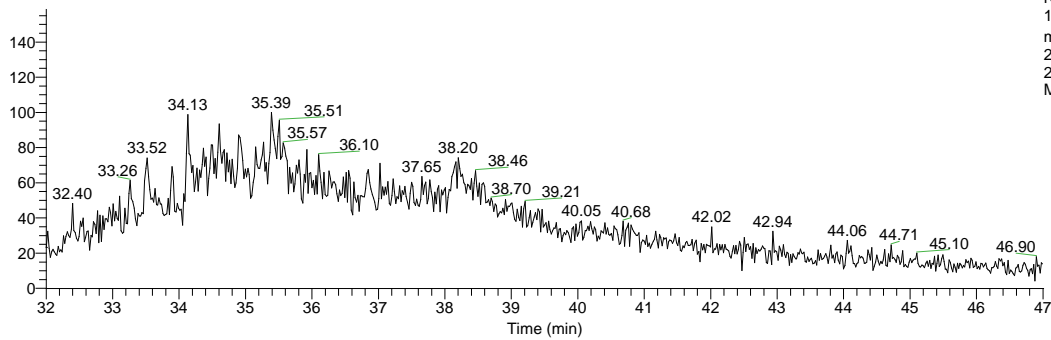
NL:
2.84E8
TIC F: MS
eca01

RT: 32.00 - 47.01



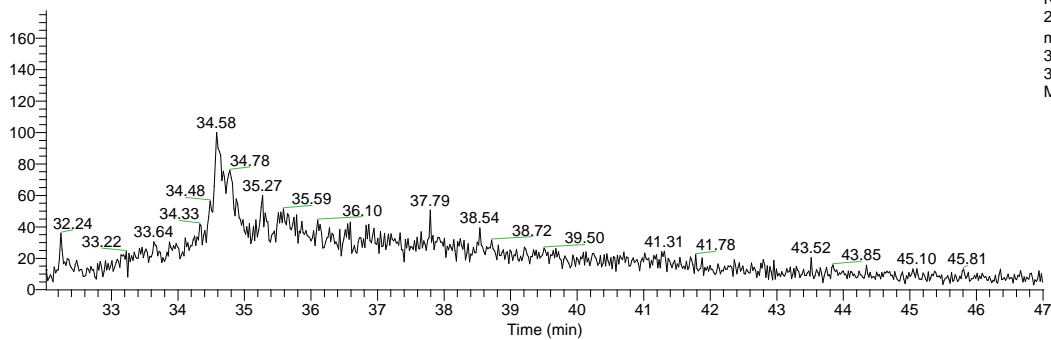
NL:
2.24E7
m/z=
154.5-
155.5 F:
MS eca01

RT: 32.00 - 47.01



NL:
1.95E5
m/z=
275.5-
276.5 F:
MS eca01

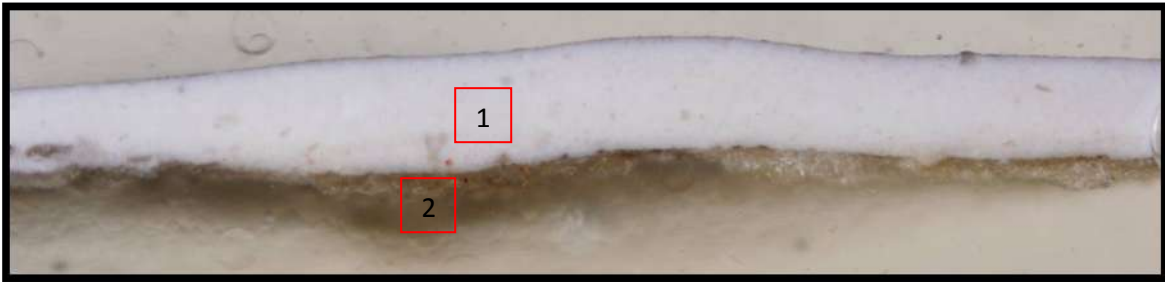
RT: 32.02 - 47.01



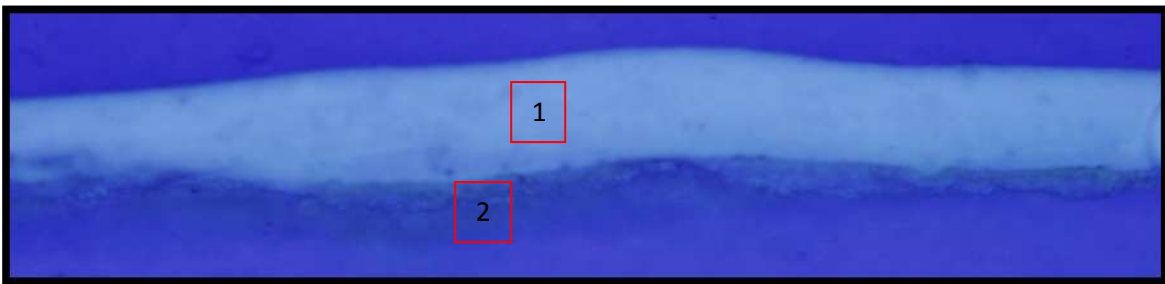
NL:
2.09E5
m/z=
307.5-
308.5 F:
MS eca01

Single ion chromatographs from sample 1 from Panel 1.

Parthenon Frieze, Lower Gallery South Wall, Panel 1 – Cross-section 2



Photograph of the Cross-section 2, paint sample from Panel 1



Photograph of Cross-section 2, paint sample from Panel 1 in UV light

This cross-section showed a trace of the plaster layer and what appears to be a single layer of white paint, which gives a blue-white fluorescence under UV and therefore probably contains lead white.

1.3.1.4 TREATMENT REPORT

- Prior to any conservation treatment, the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up the loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Cast during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.1.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 2



Panel before conservation



Panel after conservation

1.3.2.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 2

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, most likely attached to the wall with metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF.
Main Building, Sculpture Court, Lower Gallery South Wall

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 470mm D: 50mm

Weight (approx):

1.3.2.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by strip of lights which used to run just under Frieze alongside South and North walls on Ground Floor Gallery; small spots of paint splash on upper section of the panel; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSS: Missing areas associated with the cracks.

ABRASIONS: Not significant

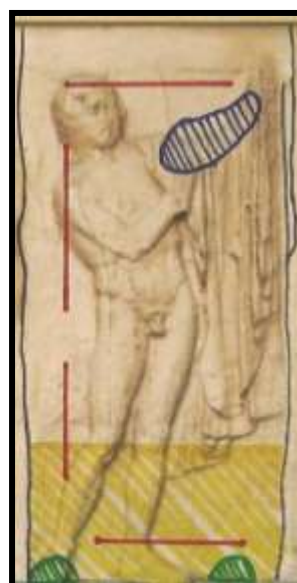
Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.2.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.2.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with inert filler to provide extra strength.



Details of fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.2.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 3



Panel before conservation



Panel after conservation

1.3.3.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 3

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 5 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1500mm D: 50mm
Weight (approx):

1.3.3.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable. Open cracks running alongside joints on both sides of the panel and in middle section of dexter side of the cast; cracks around fixings in top sinister corner of the panel.

SURFACE DUST AND DIRT: Severe, 100% coverage

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by strip of lights which used to run just under Frieze alongside South and North walls of the Ground Floor Gallery; small spots of paint splash on lower section of the panel; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSSES: Missing areas associated with the cracks.

ABRASIONS: Not significant

Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.3.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.3.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Details of fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.3.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 4



Panel before conservation



Panel after conservation

1.3.4.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Upper Gallery South Wall, Panel 4

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 7 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1500mm D: 50mm
Weight (approx):

1.3.4.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable. Open cracks running alongside joints on both sides of the panel and from dexter edge towards middle of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on surface of the panel; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSS: Missing areas associated with the cracks.

ABRASIONS: Not significant

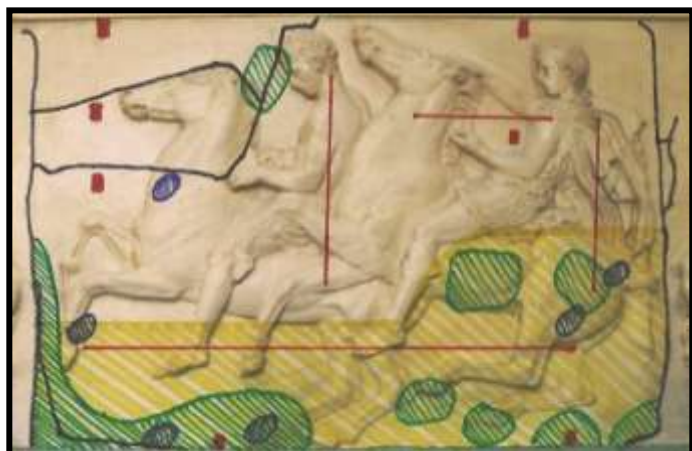
Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.4.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.4.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Details of fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.4.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 5



Panel before conservation



Panel after conservation

1.3.5.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 5

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh EH3 9DF.
Main Building, Sculpture Court, Lower Gallery South Wall

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1500mm D: 50mm

Weight (approx):

1.3.5.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel; small cracks around fixings by top and lower edge of the panel

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by the strip of lights which used to run just under Frieze along the South and North walls of the Ground Floor Gallery; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSSES: Missing areas associated with the cracks.

ABRASIONS: Not significant

Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.5.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.5.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Details of fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.5.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 6



Panel before conservation



Panel after conservation

1.3.6.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 6.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1250mm D: 50mm

Weight (approx):

1.3.6.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel and alongside top edge; small cracks around fixings at top and lower edges of the panel

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by the strip of lights which used to run just under Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel mainly on its sinister side; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSS: Missing areas associated with the cracks.

ABRASIONS: Not significant

Cracks

Ferrous items inside plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.6.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.6.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.6.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 7



Panel before conservation



Panel after conservation

1.3.7.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 7

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 3 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF.
Main Building, Sculpture Court, Lower Gallery South Wall

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1440mm D: 50mm

Weight (approx):

1.3.7.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable. Open cracks running alongside joints on both sides of the panel and from dexter edge towards middle of the cast in upper part; small cracks around fixings by lower edge of panel.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on surface of the panel; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSSES: Missing areas associated with the cracks; top of the figure's head loose;

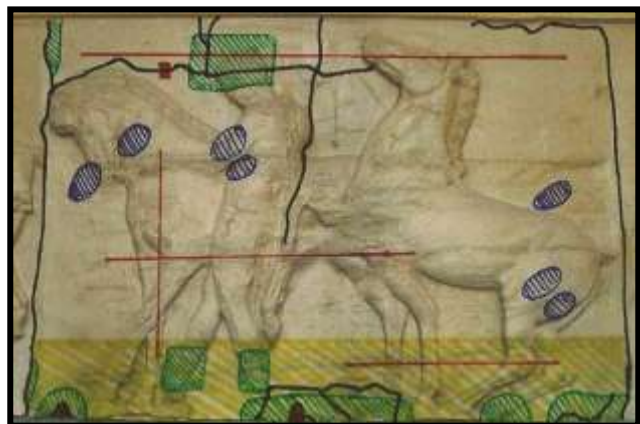
ABRASIONS: Not significant

Cracks

Ferrous items inside plaster

Chips, abrasions and missing surfaces

Paint splashes



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.7.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.7.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- The loose top of the figure's head was reattached with polyester resin.



Details of repair

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 8



Panel before conservation



Panel after conservation

1.3.8.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lowe Gallery South Wall, Panel 8

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 6 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1470mm D: 50mm

Weight (approx):

1.3.8.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel and alongside middle section of the top edge; small cracks around fixings by top and lower edges of the panel.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on surface of the cast; surface polychrome is discoloured and damaged on lower part of the panel probably by the strip of lights which used to run just under Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on surface of the panel and alongside the lower edge; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSS: Missing areas associated with the cracks.

ABRASIONS: Not significant

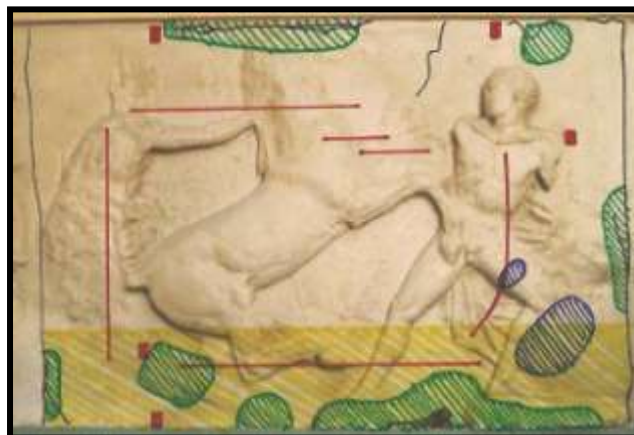
Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.8.4 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.8.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.8.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 9



Panel before conservation



Panel after conservation

1.3.9.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 9.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: Unknown

SIGNATURE/INSCRIPTION: None

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 1470mm D: 50mm

Weight (approx):

1.3.9.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel; small cracks around fixing by top and lower edge of the panel.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint/varnish on the surface of the cast; the surface polychrome is discoloured and damaged on lower part of the panel probably by the strip of lights which used to run just under Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel; flaking and missing paint area on lower part of the panel.

CHIPS AND LOSS: Missing areas associated with the cracks.

ABRASIONS: Not significant

Cracks

Ferrous items inside plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.9.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.9.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in-deionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were field with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.9.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 10



Panel before conservation



Panel after conservation

1.3.10.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 10.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 3 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mmm W: 1480mmm D: 50mmm

Weight (approx):

1.3.10.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel; small cracks around fixing by top and lower edges of the panel

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on surface of the panel.

CHIPS AND LOSSES: missing areas associated with the cracks; flaking and missing paint area on lower part of the panel

ABRASIONS: not significant

Cracks

Ferrous items inside plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.10.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.10.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber hosed vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 in Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Details of fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.10.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 11



Panel before conservation



Panel after conservation

1.3.11.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 11

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 5 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1410mm W: 1230mm D: 50mm

Weight (approx):

1.3.11.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel, alongside top edge and in lower sinister corner; small cracks around fixing in three corner areas of the panel.

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel; large splash mark, from unknown substance, possibly food, at middle lower part of the cast.

CHIPS AND LOSSES: missing areas associated with the cracks; area of flaking and missing paint on lower part of the panel.

ABRASIONS: not significant

Cracks

Ferrous items inside plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.11.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.11.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber hosed vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 in Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.11.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 12



Panel before conservation



Panel after conservation

1.3.12.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 12.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mmm W: 1400mmm D: 50mmm
Weight (approx):

1.3.12.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel and alongside top edge; small cracks around fixing in corners of the panel.

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel; large splash mark, from unknown substance, possibly food, in middle lower part of the cast.

CHIPS AND LOSSES: missing areas associated with the cracks; flaking and missing paint in lower area of the panel.

ABRASIONS: not significant

Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



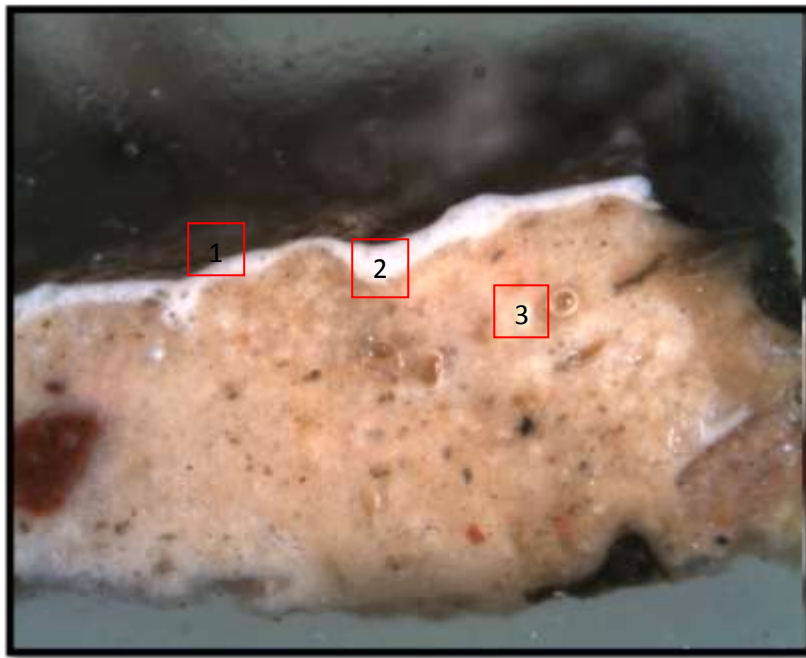
Samples of mortar were taken for analysis

1.3.12.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is polychromed with cream-yellow colour. In order to find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from the cast and sent to the University of Northumbria for analysis.

**Investigation of coating samples from ECA Plaster Cast Collection, Edinburgh.
Consultant: Brian W Singer.**

Parthenon Frieze, Lower Gallery South Wall, Panel 12 – Cross section



Photograph of a Cross-section of Sample from Panel 12

The sample seems to consist largely of one orange-cream layer containing white and pale orange/brown and black particles. There is a thin bright white paint layer at the top of the section, as photographed, covered in dirt and possibly blackened lead white. Also at the left, as photographed, is a large brown inclusion. The brown inclusion appeared completely black under UV, showing no fluorescence, whereas the bright white paint layer fluoresced a yellow colour indicating that it may contain zinc white.

1.3.12.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.

- Following wet cleaning spot tests on **Panel 1 in Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.12.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 13



Panel before conservation



Panel after conservation

1.3.13.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 13.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mmm W: 1500mmm D: 50mmm
Weight (approx):

1.3.13.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel and alongside top edge; small cracks around fixing by the upper edge of the panel.

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on the surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel.

CHIPS AND LOSSES: missing areas associated with the cracks; area of flaking and missing paint in lower part of the panel

ABRASIONS: not significant

Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.13.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.13.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.
- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.13.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 14



Panel before conservation



Panel after conservation

1.3.14.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 14.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 2 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mm W: 870mm D: 50mm
Weight (approx):

1.3.14.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Fair. Open cracks running alongside joints on both sides of the panel and alongside top edge; small cracks around fixing by top and lower edge of the panel.

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel.

CHIPS AND LOSSES: missing areas associated with the cracks; area of flaking and missing paint in lower part of the panel.

ABRASIONS: not significant

Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.14.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.14.1 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber hosed vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 on Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Panel during works on fills

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.14.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 15



Panel before conservation



Panel after conservation

1.3.15.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 15.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mmm W: 1790mmm D: 50mmm
Weight (approx):

1.3.15.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable. Open cracks running alongside joints on both sides of the panel, and alongside top edge, small cracks around fixings by top and lower edge of the cast.

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel.

CHIPS AND LOSSES: missing areas associated with the cracks; area of flaking and missing paint in lower part of the panel.

ABRASIONS: not significant

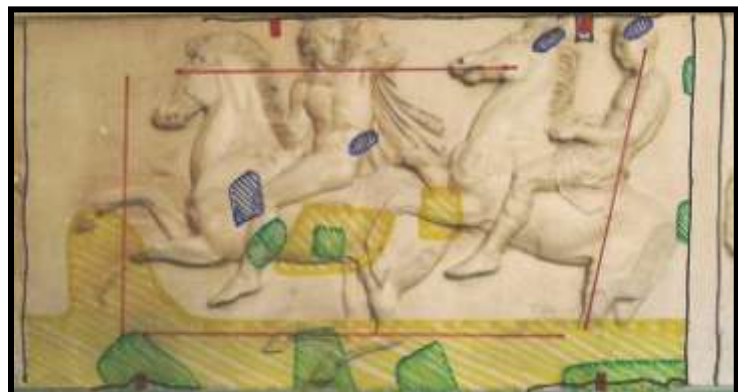
Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.15.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.15.4 **TREATMENT REPORT**

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 in Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Panel during fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.15.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.

PANEL 16



Panel before conservation



Panel after conservation

1.3.16.1 DESCRIPTION OF THE OBJECT

TITLE: Parthenon Frieze

NUMBER(S): Sculpture Court, Lower Gallery South Wall, Panel 16.

TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with 4 metal fixings.

MAKER: unknown

SIGNATURE/INSCRIPTION: none

DATE: 1837

OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, Sculpture Court, Lower Gallery South Wall.

DIMENSIONS/WEIGHT (APPROX): H: 1040mmm W: 1,250mmm D: 50mmm
Weight (approx):

1.3.16.2 CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable. Open cracks running alongside joints on both sides of the panel; small crack around fixings by the top and lower edge of the cast.

SURFACE DUST AND DIRT: Severe. 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: layer of cream-yellow paint/varnish on surface of the cast; the surface polychrome is discoloured and damaged on the lower part of the panel probably by the strip of lights which used to run just under the Frieze along the South and North walls of the Ground Floor Gallery; small spots of paint splash scattered on the surface of the panel, mainly by its sinister edge.

CHIPS AND LOSSES: missing areas associated with the cracks; area of flaking and missing paint in lower part of the panel.

ABRASIONS: not significant

Cracks

Ferrous items under plaster

Chips, abrasions and missing surfaces

Paint splashes

Flaking paint



PREVIOUS REPAIRS:

At the time of re-siting the cast collection from the Royal Scottish Academy building on Princes Street to the Edinburgh College of Art in 1913, the Parthenon Frieze panels were installed with metal fixings set into the wall. The open joints between the panels were filled with a mortar that was smeared over the adjacent edges of the panels.

A mortar analysis was carried out by Mr Bill Revie of CMC on samples of the pointing material found between the Panel 10 and 11 on Ground Floor Galley North Wall. The mortar was found to be a thick layer of lime putty, gypsum plaster and fine sand and hair, followed by a thin layer of gypsum plaster and lime putty; and finally a layer of varnish. This final layer of varnish is found over the entire two floors of the North and South Walls and yet, interestingly, for some unknown reason, it was not applied to the slabs on the East Wall.



Samples of mortar were taken for analysis

1.3.16.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-yellow. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken and sent to the University of Northumbria for analysis. Photograph of a cross-section of sample taken from **Panel 1 and 12** shows two white paint layers.

1.3.16.4 TREATMENT REPORT

- Prior to any conservation treatment the cast was photographed. This photographic documentation was continued throughout all conservation processes.
- Initially, the cast was dry cleaned with soft brushes and Wishab Sponges with a rubber-nozzled vacuum to pick up loose dust and dirt.
- Following wet cleaning spot tests on **Panel 1 in Upper Gallery South Wall**, the surface of the cast was cleaned with 5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.



Panel during wet cleaning

- Areas of flaking paint were consolidated with 5% Primal B60A in de-ionised water.
- All areas of raw plaster were given an application of 10% Paraloid B72 in acetone to provide an isolating layer between the original plaster and the repairs.
- Exposed metal fixings were treated with 5% Tannic Acid so as to stabilise the corrosion, and covered with a protective layer of 20% Paraloid B72 in acetone.
- Areas of loss, open joints and cracks were filled with white micro-balloons with 12% Paraloid B72 in acetone. Larger areas of loss around the screws were filled with an inert filler to provide extra strength.



Panel during fill repairs

- All the fills and areas of discoloured paint were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.
- Finally, the entire cast was given an application of micro-crystalline wax so as to protect the surface.

1.3.16.5 MAINTENANCE PROGRAMME

Maintenance of the Parthenon Frieze requires to be undertaken from a scaffold. As a result, any cleaning needs to be carried out by operatives that are trained to: a) construct, move and dismantle a portable scaffold tower; and b) clean the Frieze in an appropriate manner.

Graciela Ainsworth Sculpture Conservation could train staff to undertake such cleaning. The training for the use of scaffold would require organising by the Edinburgh College of Art.

The cleaning programme would involve the trained operatives, wearing the appropriate PPE, removing the loose dust using soft brushes and a vacuum cleaner with a rubber nozzle that would have muslin attached to its end. The muslin prevents any potential damage to the plaster from being lost in the vacuum cleaner. Any fragments that are dislodged, and their locations on the Frieze, should be documented and wrapped carefully in acid free tissue prior to being stored in a safe location. A trained conservator should be contacted immediately in order to repair the damage.

NB At no time should cleaning products or any liquid (including water) be used.

We would recommend that this cleaning programme for the Parthenon Frieze should be undertaken on an annual basis (at minimum). Ease of access would mean that the free standing casts could be cleaned, with the same method, on a more regular basis.