3. METOPES

3.1 METOPE P010 in Studio C4

Panel before conservation

Panel after conservation

3.1.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece(443-438 BC)
NUMBER(S): 025, P010 (058)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with metal fixings.
MAKER: British Museum
SIGNATURE/INSCRIPTION: Hallmark of British Museum in top dexter corner.
DATE: 1837
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF. Main Building, ground floor, Studio C4
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1330mm D: 300mm
Weight (approx):

3.1.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Good, but crack at dexter side of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; small spots of paint splash on all surface of the panel; white paint smears by the lower edge of the cast.

CHIPS AND LOSS: Areas of loss associated with cracks; small crack and loose fragment around fixing in lower sinister corner of the cast.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes
Flaking paint
Ferrous items inside plaster

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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. The Metope has the same painted finish as the sample that was taken from Panel 1 of Parthenon Frieze, Upper Gallery South Wall, (see page???) that showed several different colour layers. As a result, the same treatment was applied.

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 a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.

Cast during wet cleaning

- 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.

- The areas of flaking paint were consolidated with an application of 5% Primal B60A in de-ionised water.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

Details of fill repair

- All the fills 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.

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 cast, 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 cast 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.

3.2 METOPE P011

Panel before conservation

Panel after conservation

3.2.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece(443-438 BC)
NUMBER(S): 048, P011 (079)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with metal fixings.
MAKER: British Museum
SIGNATURE/INSCRIPTION: Hallmark of British Museum in top dexter corner.
DATE: 1837
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main Building, First floor, North wall, East side.
DIMENSIONS/WEIGHT (APPROX): H: 1320mm W: 1330mm D: 300mm
Weight (approx):

3.2.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

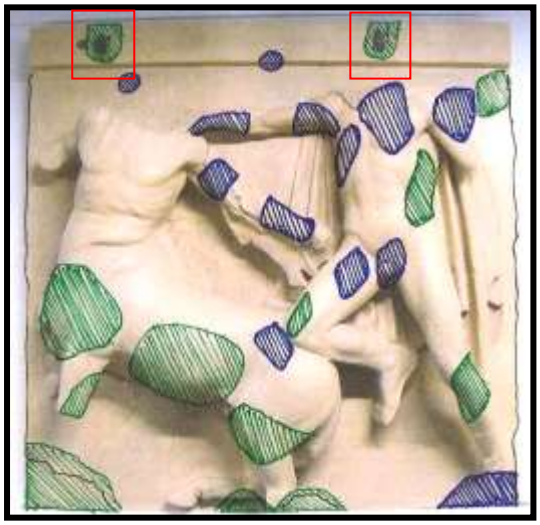
STRUCTURAL STABILITY: Good, but crack at dexter side of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; small spots of paint splash on surface of the panel; white paint smears by the lower edge of the cast.

CHIPS AND LOSSES: Areas of loss associated with cracks; small crack and loose fragment around fixing in lower sinister corner of the cast.

ABRASIONS: Not significant



Cracks
Chips, abrasions, missing surfaces
Paint splashes
Ferrous fixings

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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. The Metope has the same painted finish as the sample that was taken from Panel 1 of Parthenon Frieze, Upper Gallery South Wall, (see page???) that showed several different colour layers. As a result, the same treatment was applied.

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 the loose dust and dirt.

- Following a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.

Cast during wet cleaning

- 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

Details of fill repair

- All the fills 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.

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 cast, 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 cast 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.

3.3 METOPE P012

Panel before conservation

Panel after conservation

3.3.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC)
NUMBER(S): 056, P012 (091)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, 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, ground floor, south east corridor.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1380mm D: 290mm
Weight (approx):

3.3.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Good, but crack at sinister top corner of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-white paint on surface of the cast; spots of paint splash on projecting leg of the centaur; area of flaking paint at lower sinister area of the panel.

CHIPS AND LOSS: Areas of loss associated with crack in corner of the cast; small crack and loose fragment around fixing in lower sinister corner of the cast.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes
Flaking paint
Ferrous items under the plaster

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

3.3.3 ORIGINAL MATERIALS AND TECHNIQUES

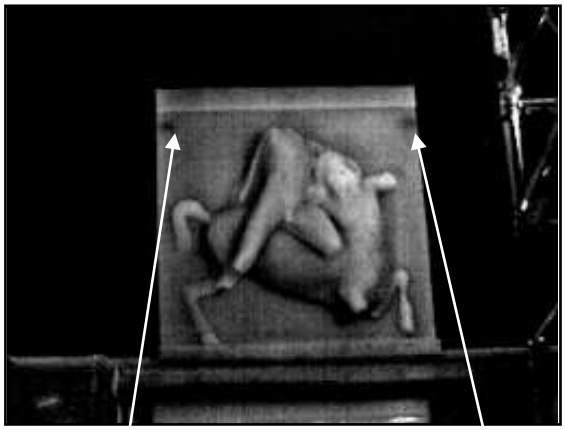
The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-white. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from a similarly painted Metope and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Metope P019** shows two white paint layers, possibly white lead with chalk.

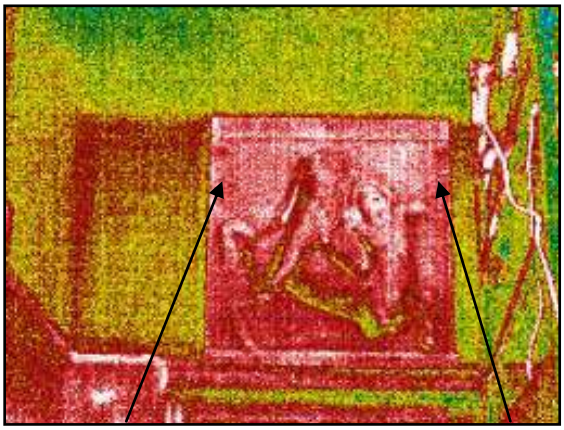
Metope P012 was examined by W. A. Revie from Construction Materials Consultants employing Infrared Thermography and cover meter. There were several differing armatures found in the plaster:

- Wire along the top
- Two large fixings at either side
- One thin bar down the sinister side
- One large flat bar running down dexter side
- One fixing that appears to run through entire length of the crack in plaster cast
- One fixing in the protruding leg of the centaur

Thermographic Inspection

Observations from the Infrared Examination





Thermogram No. 14: Recorded at 1030, note greater detail in thermogram. The two dark areas, arrowed either side of the cast, at the top of the cast is the location of fixings.

Following the Infrared Thermographic examination of the cast, both the cast and adjacent wall were examined visually and a metal detector used to scan the areas indicated to contain fixings and, possibly, past repairs. The later was carried out to establish if the fixings or straps were metallic or non-metallic in composition.
No open cracks were observed on the basis of the visual examination, however, light levels were low and very fine cracks would not be seen. However, indications of past repairs were apparent and it may be that the crack paths indicated in the Infrared were also the sites of past repairs.

The apparent ‘patch’ in the upper part of the cast was bounded by the borders of features that were stated to relate to the form that the cast mould was prepared. However, given its intensity in the infrared it is still considered that there may be a variation in thickness, or the presence of a form of reinforcement, or other backing material at this location.

The fixings were indicated from the scan with the detector to be metallic, possibly ferrous, and be connected to a wire or small diameter bar, on the left side of the cast but a flat bar on the right side of the cast. This would require further investigation to clarify the actual dimensions and the actual composition of the fixings.

Graciela Ainsworth
Edinburgh College of Art
Plaster Cast Collection

CMC

5.2 Summary of Observations

The position of fixings is highlighted on the following image. In addition the position of a possible past repair is also indicated along with the indicated position of crack paths, or past repaired crack paths, which were observed in the infrared. The indicated positions of cracks in the plaster, to the right of the cast, are also shown, for reference.

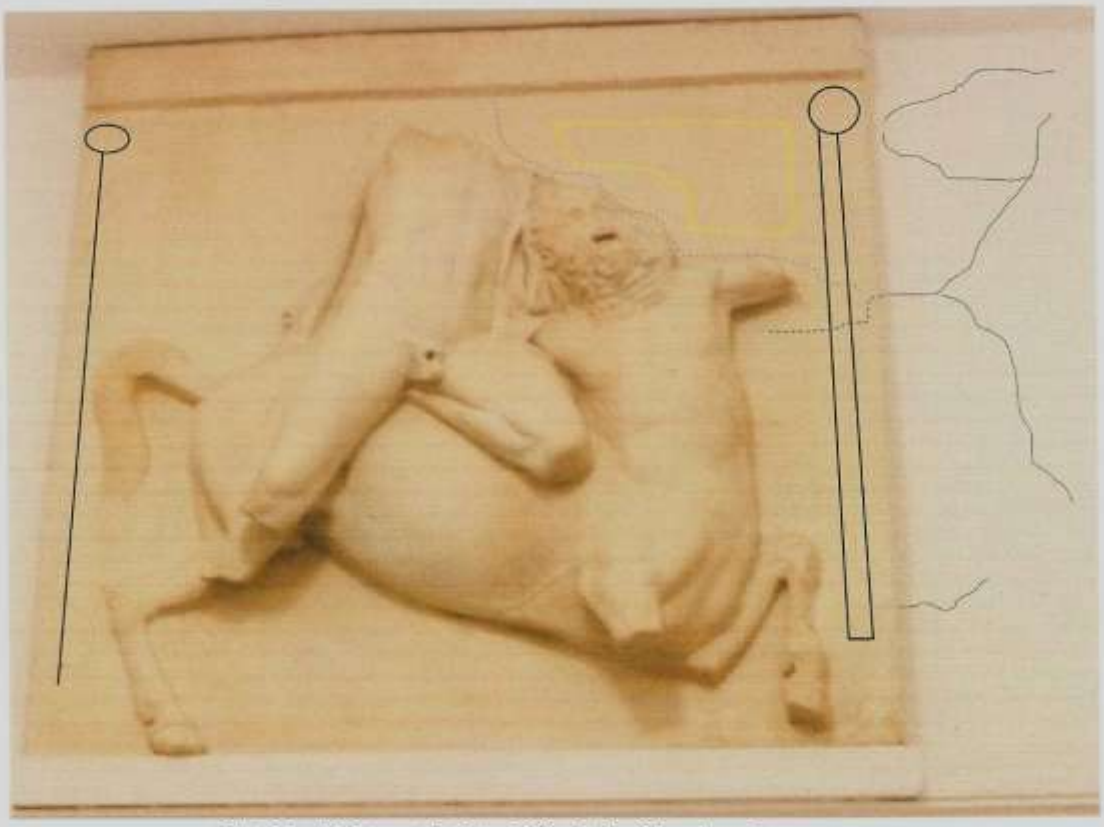


Plate No. 1: Metope, Cast No. 56, South Corridor, above doorway.

Legend

Possible past repair, or position of non-metallic support be

Position of anchors/support straps/wires

Very fine cracks in cast

Cracks in or below plaster on wall

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 the loose dust and dirt.

- The areas of flaking paint were consolidated with an application of 5% Primal B60A in de-ionised water.

- Following wet cleaning spot tests, the surface of the cast was cleaned with Anjusil. The application of Anjusil was repeated in places if necessary.

Cast during wet cleaning

- 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

- All the fills were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

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 cast, 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 cast 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.

3.4 METOPE P013 AND TRIGLYPHS

Panel before conservation

Panel after conservation

3.4.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 068, P013 (105)
TYPE OF OBJECT: Metope: relief, plaster cast with a metal structure inside, attached to the wall with metal fixings. Triglyphs: made of wood with painted plaster render.
MAKER: Unknown
SIGNATURE/INSCRIPTION: None
DATE: 1837 (plaster section only)
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main building, Sculpture Court, South wall, West end.
DIMENSIONS/WEIGHT (APPROX): H: 2855mm W: 1570mm D: 290mm
Weight (approx):

3.4.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Good, but crack at dexter side of the cast by joint with wooden triglyphs; cracks at lower corners of the triglyphs.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; spots of paint splash on male figure; smears of white paint around the edges.

CHIPS AND LOSS: Areas of loss associated with cracks; small chips on male figure.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes
Ferrous items under plaster

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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. The Metope has the same painted finish as the sample that was taken from Panel 1 of Parthenon Frieze, Upper Gallery South Wall, (see page???) that showed several different colour layers. As a result, the same treatment was applied.

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 the loose dust and dirt. .

- Following a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.

Cast during wet cleaning

- 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

- All the fills 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.

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 cast, 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 cast 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.

3.5 METOPE P014 AND TRIGLYPHS

Panel before conservation

Panel after conservation

3.5.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 069, P014 (107)
TYPE OF OBJECT: Metope: relief, plaster cast with a metal structure inside, attached to the wall with metal fixings. Triglyphs: made of wood with painted plaster render.
MAKER: Unknown
SIGNATURE/INSCRIPTION: None
DATE: 1837 (plaster part only)
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main building, Sculpture Court, North wall, West end.
DIMENSIONS/WEIGHT (APPROX): H: 2795mm W: 1570mm D: 290mm
Weight (approx):

3.5.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

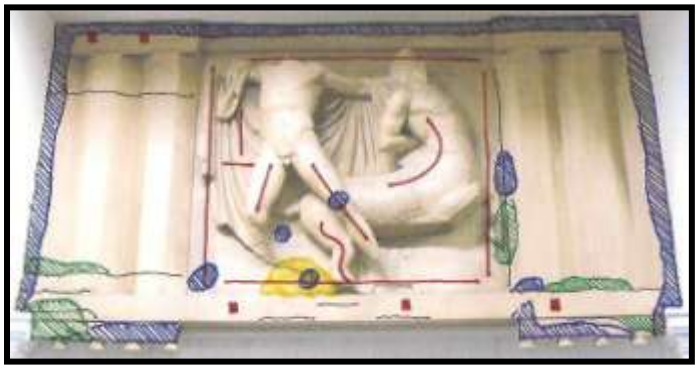
STRUCTURAL STABILITY: Good, but crack at sinister side of the cast by joint with wooden triglyphs; cracks in bottom corners of the triglyphs and on lower and upper parts on both sides.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; spots of paint splash on male figure; smears of white paint around the edges; area of flaking paint at middle of lower part of plaster panel.

CHIPS AND LOSS: Areas of loss associated with cracks.

ABRASIONS: Not significant



Cracks
Chips, abrasions, missing surfaces
Paint splashes
Flaking paint
Ferrous items under plaster

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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. The Metope has the same painted finish as the sample that was taken from Panel 1 of Parthenon Frieze, Upper Gallery South Wall, (see page???) that showed several different colour layers. As a result, the same treatment was applied.

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 the loose dust and dirt.

- Following a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.

Cast during wet cleaning

- The areas of flaking paint were consolidated with an application of 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

- All the fills 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.

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 cast, 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 cast 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.

3.6 METOPE P015

Panel before conservation

Panel after conservation

3.6.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 076, P015 (112)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with metal fixings.
MAKER: British Museum
SIGNATURE/INSCRIPTION: Hallmark of British Museum in top dexter corner
DATE: 1837
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main building, Sculpture Court, North wall, East end.
DIMENSIONS/WEIGHT (APPROX): H: 1340mm W: 1320mm D: 220mm
Weight (approx):

3.6.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Good, but crack at corners and edges of the cast.

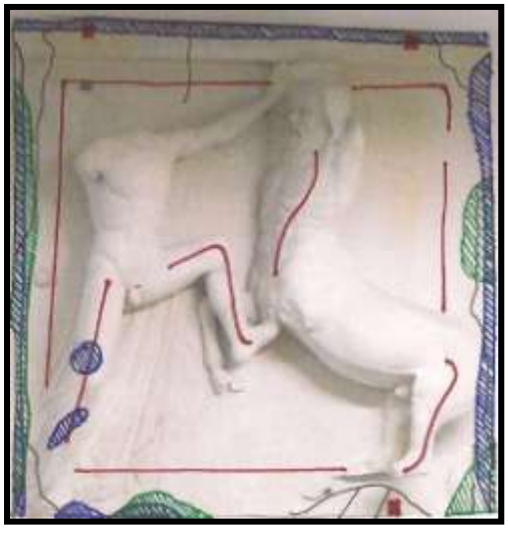
SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-white paint on surface of the cast; spots of paint splash on male figure leg and on edges of the panel.

CHIPS AND LOSS: Areas of loss and loose fragments associated with cracks.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes
Ferrous item under plaster



PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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-white. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from similar painted Metope and sent to the University of Northumbria for analysis. A photograph of a cross-section of the sample taken from **Metope P019** shows two white paint layers, possibly white lead with chalk.

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 the loose dust and dirt.

- Following wet cleaning spot tests the surface of the cast was cleaned with Anjusil. The application of Anjusil was repeated in places if necessary.

Cast during wet cleaning

- 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.

- All loose fragments were reattached with HMG adhesive.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

Details of fills repairs

- All the fills were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

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 cast, 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 cast 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.

3.7 METOPE P016

Panel before conservation

Panel after conservation

3.7.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 078, P011 (079)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with metal fixings.
MAKER: British Museum
SIGNATURE/INSCRIPTION: Hallmark of British Museum in top sinister corner.
DATE: 1837
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main Building, Ground floor, North-east corridor.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1385mm D: 290mm
Weight (approx):

3.7.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

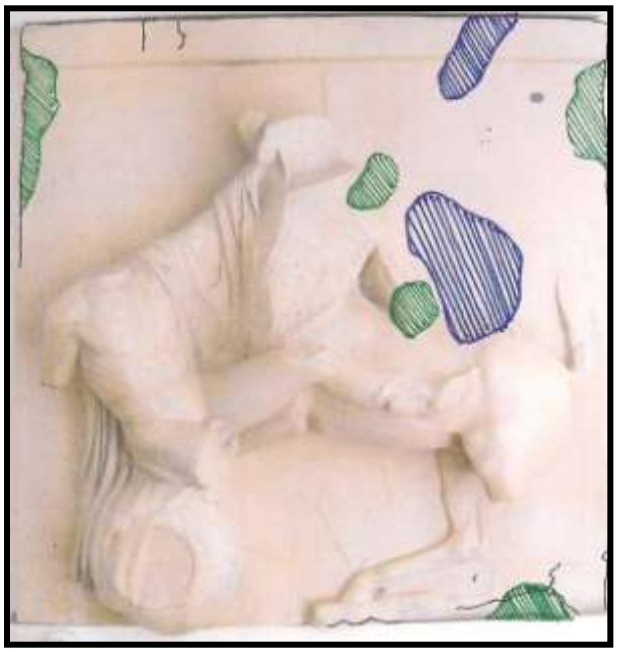
STRUCTURAL STABILITY: Good, some small cracks by fixings and on edges.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; small spots of paint splash on surface of the panel, at the upper sinister section.

CHIPS AND LOSS: Areas of loss associated with cracks and at arm of centaur.

ABRASIONS: Not significant



Cracks
Chips, abrasions, missing surfaces
Paint splashes

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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. The Metope has the same painted finish as the sample that was taken from Panel 1 of Parthenon Frieze, Upper Gallery South Wall, (see page???) that showed several different colour layers. As a result, the same treatment was applied.

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 the loose dust and dirt.
- Following a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.
- The areas of flaking paint were consolidated with an application of 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.
- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.
- All the fills 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.

3.7.5 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 cast, 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 cast 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.

3.8 METOPE P017

Panel before conservation

Panel after conservation

3.8.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 083, P017 (119)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with metal fixings.
MAKER: British Museum
SIGNATURE/INSCRIPTION: Hallmark of British Museum in top dexter corner.
DATE: 1837
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main building, Ground floor, North-east corridor.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1385mm D: 300mm
Weight (approx):

3.8.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Good; several small cracks by the fixings at the lower dexter corner of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; white paint splashes around the edges of the cast; some areas of flaking paint in middle section of the panel.

CHIPS AND LOSS: Areas of loss associated with cracks; small chip in top dexter section of the cast.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes
Flaking paint

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

3.8.3 ORIGINAL MATERIALS AND TECHNIQUES

The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-white. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from similar painted Metope and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Metope P019** shows two white paint layers, possibly white lead with chalk.

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 the loose dust and dirt.

- Following a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.

- The areas of flaking paint were consolidated with an application of 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

- All the fills 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.

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 cast, 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 cast 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.

3.9 METOPE P018

Panel before conservation

Panel after conservation

3.9.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 084, P018 (120)
TYPE OF OBJECT: Relief, plaster cast with a metal structure inside, attached to the wall with metal fixings.
MAKER: British Museum
SIGNATURE/INSCRIPTION: Hallmark of British Museum in top sinister corner.
DATE: 1837
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main Building, Sculpture Court, South wall, East end.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1385mm D: 300mm
Weight (approx):

3.9.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

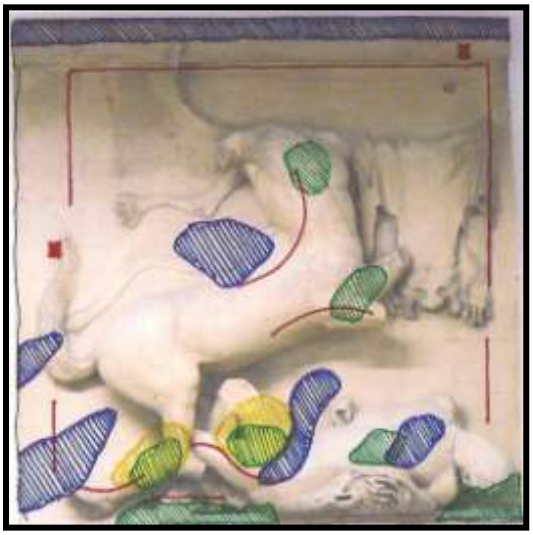
STRUCTURAL STABILITY: Good, but open crack by dexter edge of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-yellow paint on surface of the cast; splashes of paint in lower section of the panel and alongside top edge; two areas of flaking paint in lower part of the panel.

CHIPS AND LOSS: Areas of loss associated with cracks; small chips to both figures.

ABRASIONS: Not significant



Cracks
Chips, abrasions, missing surfaces
Paint splashes
Flaking paint
Ferrous items under plaster

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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. The Metope has the same painted finish as the sample that was taken from Panel 1 of Parthenon Frieze, Upper Gallery South Wall, (see page???) that showed several different colour layers. As a result, the same treatment was applied.

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 the loose dust and dirt.

- Following a variety of wet cleaning spot tests, the surface of the panel was cleaned with 2-5% Vulpex Liquid Soap in de-ionised water, using cotton wool swabs.

Cast during wet cleaning

- The areas of flaking paint were consolidated with an application of 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

- All the fills 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.

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 cast, 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 cast 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.

3.10 METOPE P019 AND TRIGLYPHS

Panel before conservation

Panel after conservation

3.10.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 087, P019 (123)
TYPE OF OBJECT: Metope: relief, plaster cast with a metal structure inside, attached to the wall with metal fixings. Triglyphs: made of wood with painted plaster render.
MAKER: Unknown
SIGNATURE/INSCRIPTION: None
DATE: 1837 (plaster part only)
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main building, Ground floor, South-east corridor.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1330mm D: 300mm
Weight (approx):

3.10.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable, crack at sinister side of the cast by joint with wooden triglyphs; cracks by the lower edge of the cast, and on its dexter edge.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-white paint on surface of the cast; spots of paint splash on centaur figure.

CHIPS AND LOSS: Areas of loss associated with cracks; same small chips on centaur figure; loose fragment by lower edge of the cast.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes
⊗ **Area of paint sample**

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

3.10.3 ORIGINAL MATERIALS AND TECHNIQUES

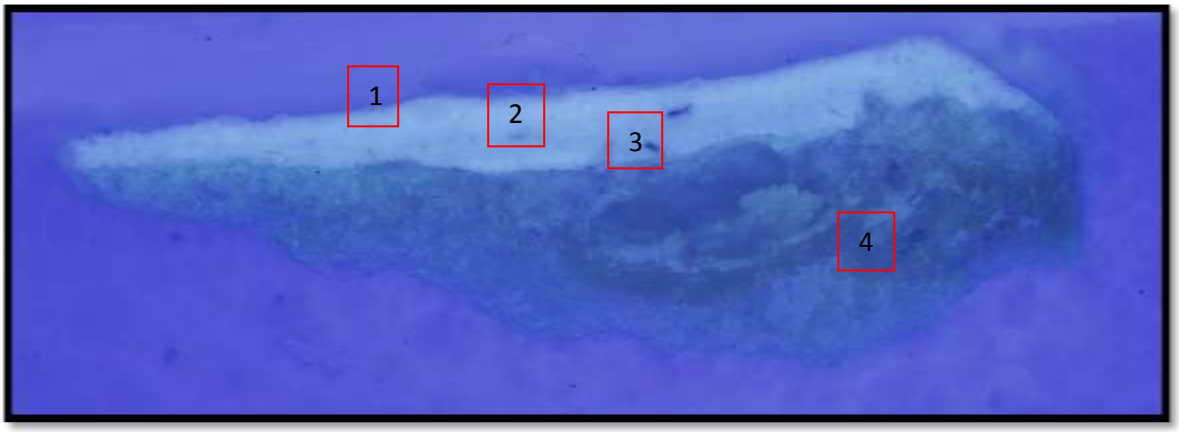
The object is a plaster cast with a metal reinforcing structure inside. The surface of the sculpture is cream-white. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from the plaster cast and wooden triglyphs, and sent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

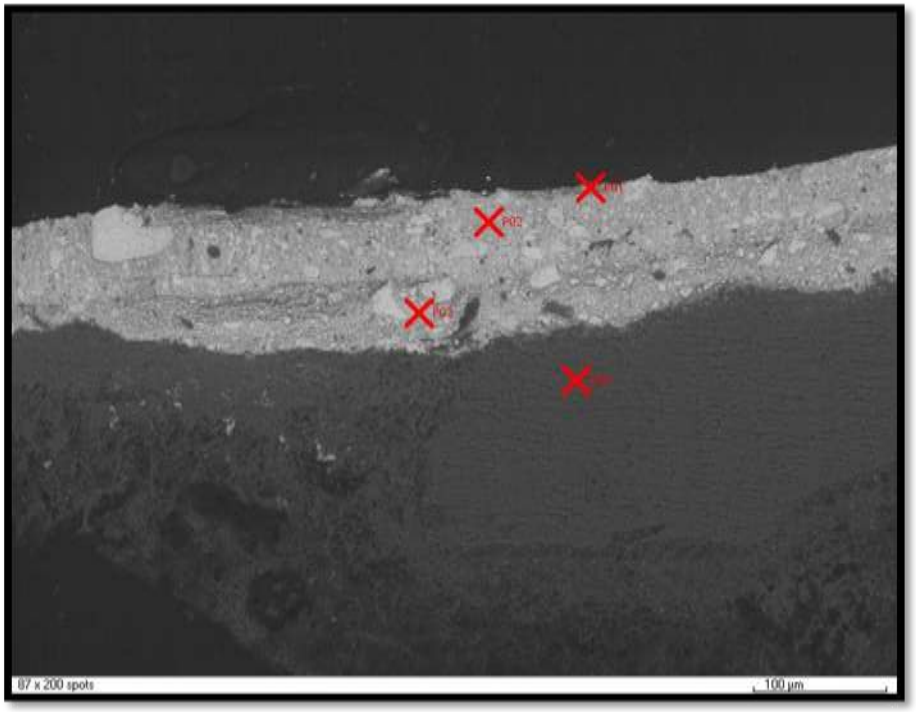
Investigation of coating samples from ECA Plaster Cast Collection, Edinburgh. Consultant: Brian W Singer.

Sample from Metope P019 – Cross-section

Photograph of the cross-section sample from Metope P019

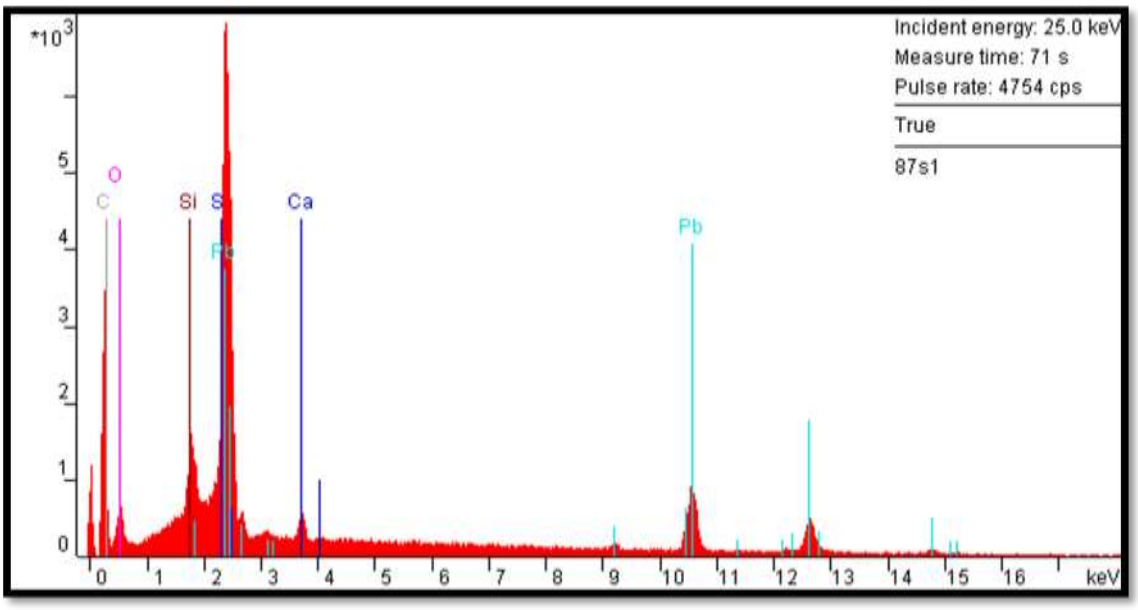
Photograph of the cross-section sample from Metope P019 – in UV





Electron micrograph of Cross-section of Metope P019

The sample from Metope P019 seems to contain a thick plaster layer containing white particles and an orange / brown substance which may be discoloured glue size or oil or resin. There are what appear to be two bright white paint layers at the top of the section, as photographed, and also towards the bottom is a large brown inclusion. The brown inclusion appeared black under UV, showing no fluorescence, unusual for old glue, or old oil or resin and may be due to an iron oxide pigment. Both the bright white paint layers fluoresced blue-white indicating that they may contain lead white. The electron micrograph indicated a thin incomplete layer on top of the two thicker white layers EDX analysis at spot 1 in this thin, uppermost upper paint layer gave a spectrum containing mainly lead (spectrum 4), indicating the presence of mostly lead white, with a trace of silicon and calcium indicting the presence of some silica, eg. quartz and chalk. Analysis of the two main layers at spots 2 and 3 gave similar spectra, indicating that these paint layers consist mainly of lead white with some chalk and silica extenders. The plaster was analysed at spot 4 (Figure 9) and gave a spectrum similar to that of spectrum 3 above, containing mainly calcium and sulphur indicating that the plaster is gypsum.

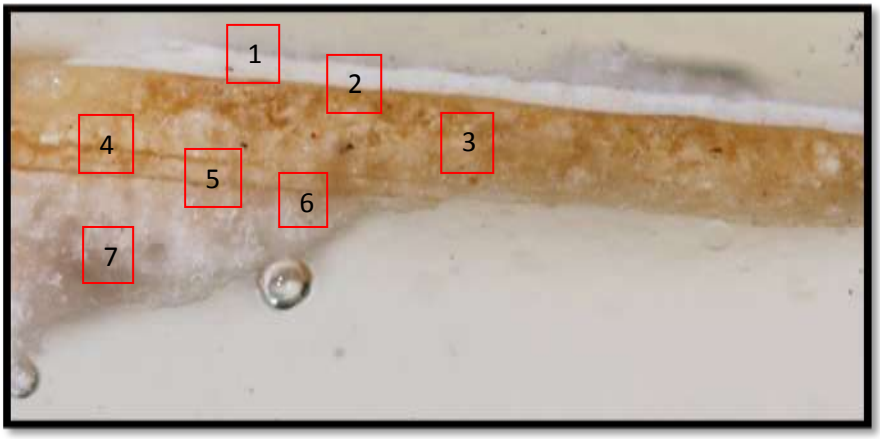


Spectrum 4 sample Metope P019 spot 1

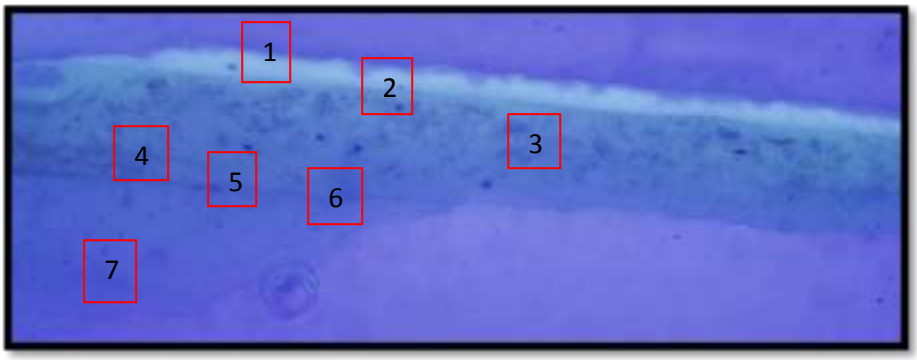
Sample from triglyphs in between Metope P019 and P020

Triglyphs in between Metope P019 and P020

⊗ *Area of paint sample*



Photograph of the cross-section sample from Triglyph in between Metope P019 and P020



Photograph of the cross-section sample from Triglyph in between Metope P019 and P020 – in UV light

In the cross-section there seem to be two layers of paint, one bright white, lacking fluorescence which may be titanium white or chalk, and the lower paint layer is a slightly creamy white which has a bright blue fluorescence which may be lead white. EDX analysis may be required here in order to identify the pigments in each layer.
The cross section also reveals an upper plaster layer which is stained brown, possibly by organic material. Beneath this there is a thin layer, possibly a varnish, and another thinner plaster layer before another thin brown layer, again, possibly a varnish. At the bottom is a white plaster layer.

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-nozzled vacuum to pick up the loose dust and dirt.

- Following wet cleaning spot tests the surface of the cast was cleaned with Anjusil. The application of Anjusil was repeated in places if necessary.

Cast during wet cleaning

- The areas of flaking paint were consolidated with an application of 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.

- The loose fragment by the bottom edge of the cast was reattached using Perspex dowels and polyester resin.

Details of the repair works

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

- All the fills were then toned out with acrylics, mixed with matting agent, to match the surrounding patina.

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 cast, 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 cast 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.

3.11 METOPE P020 AND TRIGLYPHS

Panel before conservation

Panel after conservation

3.11.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 086, P020 (122)
TYPE OF OBJECT: Metope: relief, plaster cast with a metal structure inside, attached to the wall with metal fixings. Triglyphs: made of wood with painted plaster render.
MAKER: Unknown
SIGNATURE/INSCRIPTION: None
DATE: 1837 (plaster part only)
OWNER/LOCATION: Edinburgh College of Art, Lauriston Place, Edinburgh, EH3 9DF, Main building, Ground floor, South-east corridor.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 2855mm D: 300mm
Weight (approx):

3.11.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

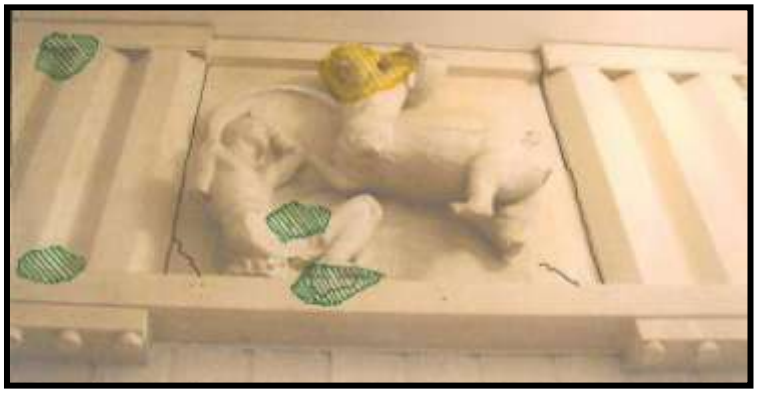
STRUCTURAL STABILITY: Stable, but cracks at both sides of the cast by joint with wooden triglyphs; small cracks at lower corners of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-white paint on surface of the cast; area of flaking paint on a head of centaur.

CHIPS AND LOSS: Areas of loss associated with cracks; some small chips on male figure.

ABRASIONS: Not significant



Cracks
Chips, abrasions, missing surfaces
Flaking paint

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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-white. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from similar painted Metope and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Metope P019** shows two white paint layers, possibly white lead with chalk.

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-nozzled vacuum to pick up the loose dust and dirt.

- Following wet cleaning spot tests the surface of the cast was cleaned with Anjusil. The application of Anjusil was repeated in places if necessary.

Cast during cleaning

- The areas of flaking paint were consolidated with an application of 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

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 cast, 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 cast 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.

3.12 METOPE P021

Panel before conservation

Panel after conservation

3.12.1 DESCRIPTION OF THE OBJECT

TITLE: Metope of Parthenon, copy of Metope from Temple of Athena – Parthenon in Acropolis in Athens, Greece (443-438 BC).
NUMBER(S): 085, P021 (121)
TYPE OF OBJECT: Metope: relief, plaster cast with a metal structure inside, 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, Ground floor, South-east corridor.
DIMENSIONS/WEIGHT (APPROX): H: 1200mm W: 1385mm D: 300mm
Weight (approx):

3.11.2 BRIEF CONDITION REPORT BEFORE CONSERVATION

STRUCTURAL STABILITY: Stable, but crack at the dexter side by joint with wooden triglyphs; crack on sinister edge of the cast.

SURFACE DUST AND DIRT: Severe, 100% coverage.

VISIBLE PAINT LAYERS/UNSIGHTLY MARKINGS: Layer of cream-white paint on surface of the cast; white paint splash in top sinister corner of the panel.

CHIPS AND LOSS: Some small chips by lower edge of the cast.

ABRASIONS: Not significant

Cracks
Chips, abrasions, missing surfaces
Paint splashes

PREVIOUS REPAIRS: From college archives we know that casts have been previously treated many times but unfortunately the documentation is not very detailed, so we don't know what treatment exactly they have received.

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 cream-white. To find out the stratigraphy, and to identify the materials of the polychromed layer, samples of the plaster with paint were taken from similar painted Metope and sent to the University of Northumbria for analysis. Photograph of a cross-section of the sample taken from **Metope P019** shows two white paint layers, possibly white lead with chalk.

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 the loose dust and dirt.

- Following wet cleaning spot tests the surface of the cast was cleaned with Anjusil. The application of Anjusil was repeated in places if necessary.

- 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.

- Areas of loss, open joints and cracks were filled with white micro-balloons mixed with 12% Paraloid B72 in acetone. Larger areas of loss and around the screws were filled with an inert filler to provide extra strength.

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 cast, 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 cast 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.