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AINSWORTH

Sculpture conservation, restoration & commissions

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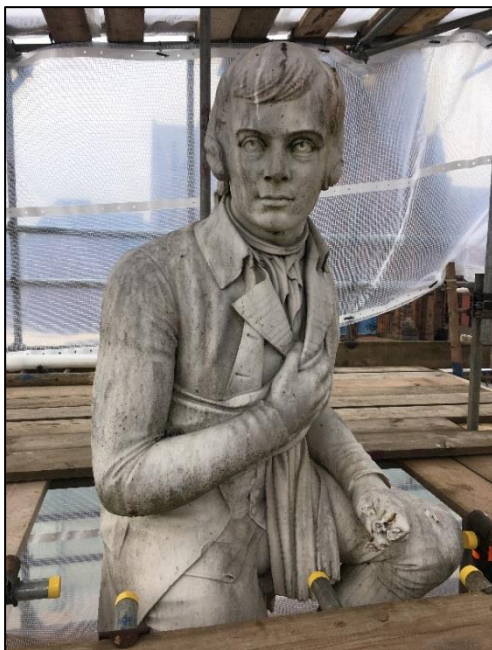
Graciela Ainsworth *B.A. Hons*
Dip. Conservation of Sculpture, ACR

Consultant: W.R. Ainsworth *OBE*
B.Arch, FRIBA, MSCD.
Newcastle upon Tyne

2nd November 2018

Dear Gillian,

**FINAL CONSERVATION REPORT FOR THE MARBLE
ROBERT BURNS STATUE IN DUMFRIES TOWN CENTRE**



Following completion of conservation works to the fine Robert Burns Statue in Dumfries town centre, I enclose the final report detailing the methods and materials used. Recommendations for future maintenance are included at the end of the report.

If you have any queries or require further information, please do not hesitate to contact us.

Yours sincerely,

Elanor King
for Graciela Ainsworth Sculpture Conservation Ltd.

Company Registration Number: SC477028

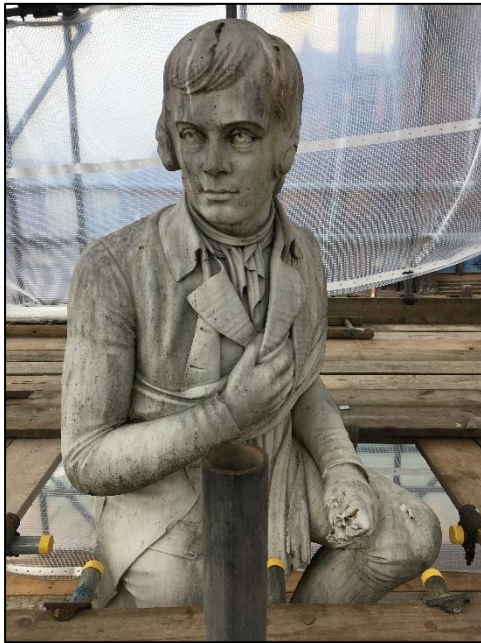


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FINAL CONSERVATION REPORT FOR THE MARBLE ROBERT BURNS STATUE IN DUMFRIES TOWN CENTRE

Documentation

Initially the statue was documented photographically. This documentation was continued throughout the project.



Robert Burns Statue, before conservation



Cleaning

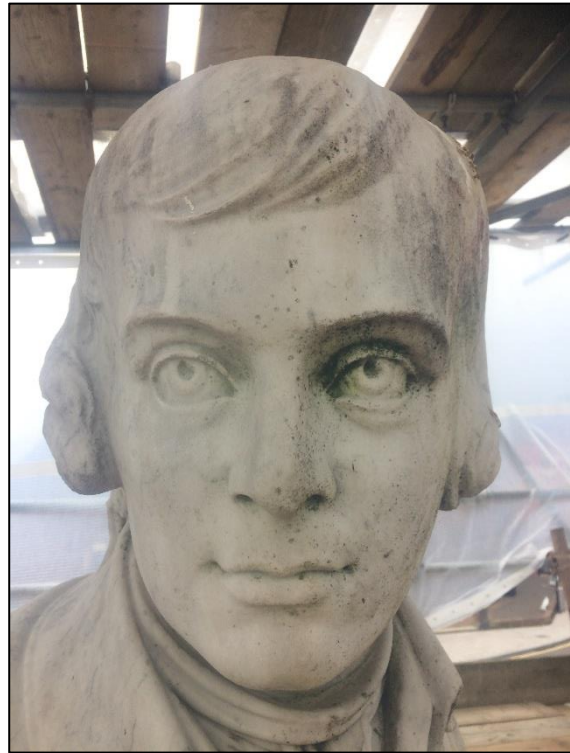
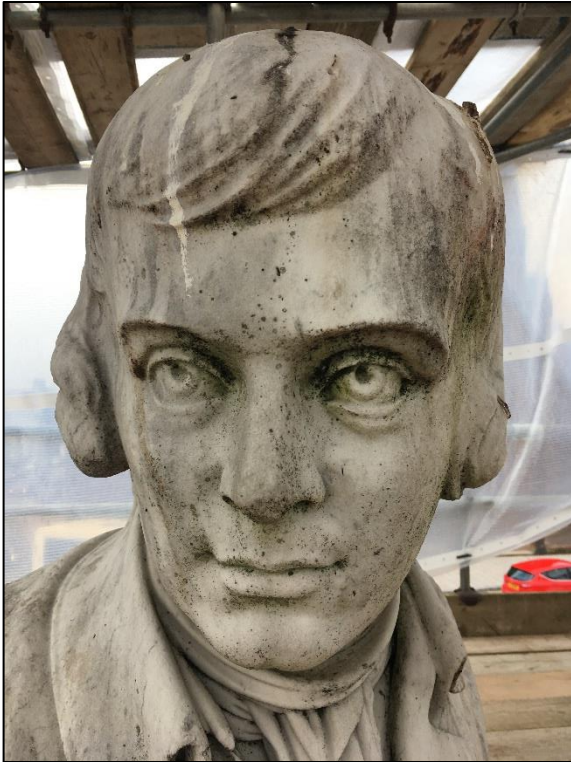
- The entire surface of the marble sculpture, marble panels and the sandstone plinth were surface cleaned from the top down using nylon brushes and clean water, together with D/2 biocide when necessary. Water was kept to a minimum, constantly changed for clean water, and the dirt lifted from the surface rather than rubbed in.
- Bird guano was dry cleaned first, followed by wet cleaning.
- Thick moss colonisations were removed using wooden hand tools.
- Localised cleaning to areas with more ingrained dirt was undertaken by using the Conservation Grade steam cleaning machine GV6.



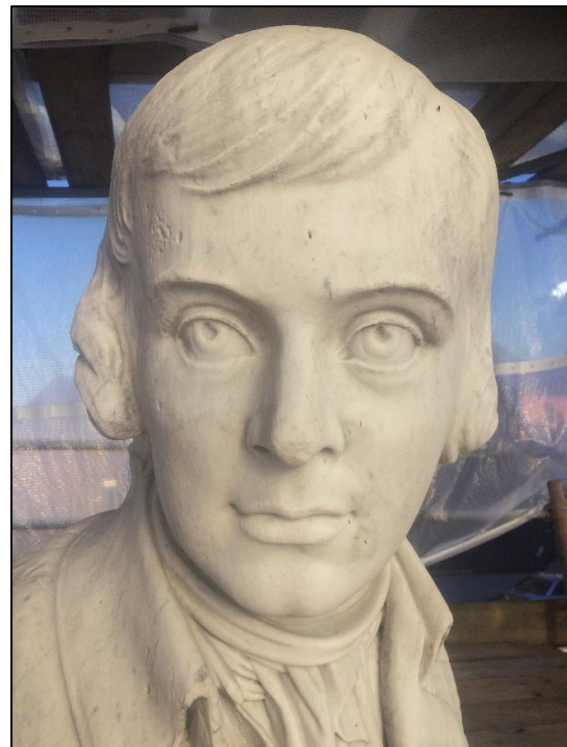
*Left: Brush cleaning with water and D/2 biocide
Right: Rinsing with clean water*



*Left: removing moss with wooden tools
Right: Steam cleaning more stubborn dirt deposits*



Left: Before cleaning, Right: During cleaning with water and D/2 biocide



Left: During steam cleaning, Right: After steam cleaning



Left: During cleaning with water and D/2 biocide. Right: During steam clean



Left: During cleaning with water and D/2 biocide. Right: During steam cleaning

Re-pointing

- All joints except for those surrounding the marble inscription panels were carefully raked out using fine tungsten chisels, and for the hardest joints an oscillating tool was used where necessary. The joints surrounding the marble inscription panels were inspected after cleaning and on balance it was decided not to re-point at this time. The mortar was sound structurally and its removal would have risked damage to the marble.
- Following raking out the joints were cleaned with water to remove mortar debris and re-pointed with lime mortar: '120 Ashlar Mix' containing linseed oil, specifically designed for use in fine joints. The joint at the base of the sculpture between the marble and the sandstone was pointed with a lime-based repair mortar, slightly stronger than the Ashlar Mix to give this more vulnerable joint greater longevity.



Above: Raking out failed mortar with an oscillating tool

Above Right: Joints in the lower courses of the plinth raked out and cleaned

Right: Joints in the lower courses re-pointed

Repairs

- The most vulnerable areas of scaling, surface loss and cracking to the marble sculpture and the sandstone base were consolidated and filled as required to prevent further water pooling and ingress. Localized consolidation was completed with Paraloid B72 6% in acetone.
- Fine fills to cracks and pits in the sculpture were completed using Paraloid B72 10% in acetone with marble dust and natural earth pigments, and the visible deep channels in the marble panels were filled with the same to deter further deterioration from dripping water.
- Fine fills and capping to cracks and laminations in the sandstone were completed with Paraloid B72 10% in acetone with fine sands and natural earth pigments to deter water penetration.
- During conservation works 8 no. metal cramps set into channels were discovered in the top of the sandstone plinth. They were not previously visible during the condition survey taken from ground level. They would have been put in during prior conservation works to halt the progression of a circular crack running around the base of the marble statue. The cramps were in a stable condition but resin fills protecting them had deteriorated. The fills were therefore topped up with polyester resin and a final layer of Paraloid B72 10% in acetone with fine sands and natural earth pigments.
- To assist in future maintenance the major cracks in the marble sculpture were measured. This will allow the severity of these cracks to be monitored during future surveys.



Crack in the dog's nose before (left) and after (right) Paraloid B72 repair

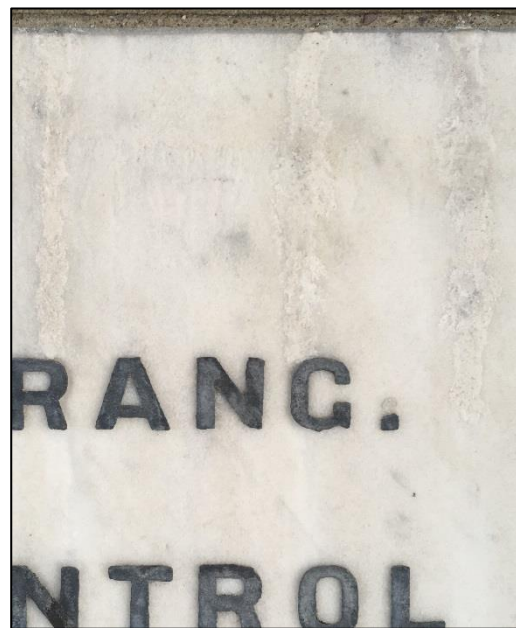
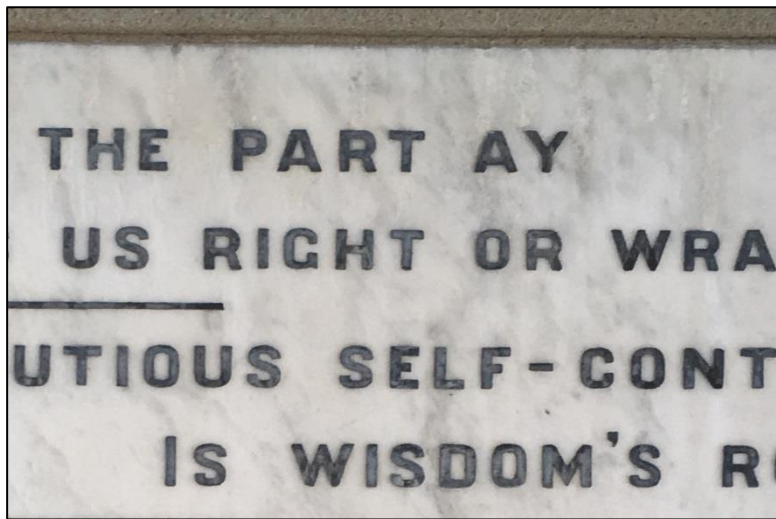
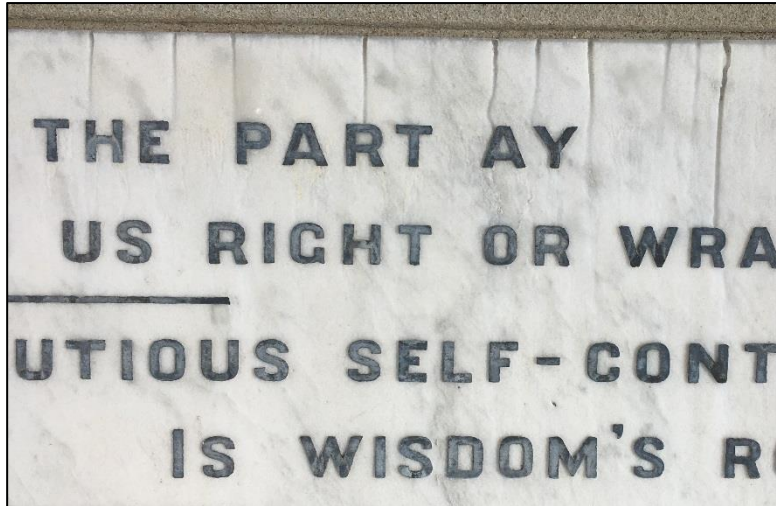


Cracks in the fly plaid before (left) and after (right) Paraloid B72 repair



Long crack adjacent to the thistle before (left) and after (right) Paraloid B72 repair

*Channels in marble panel
before (above) after
(below) Paraloid B72
repair*



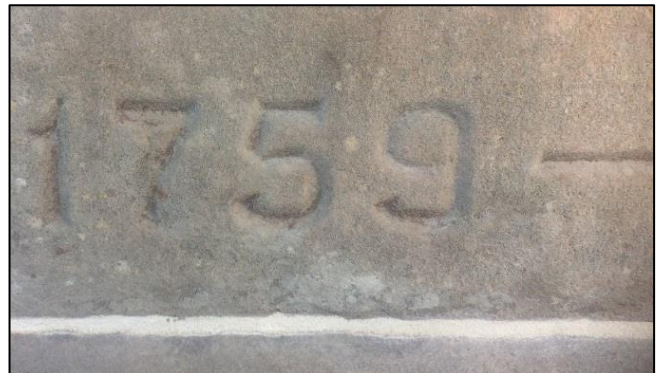
*Channels in marble before (left) after (right)
Paraloid B72 repair*



Crack and surface loss below foliage before (left) and after (right) Paraloid B72 repair



Cracks in lowest course of the plinth before (left) and after (right) Paraloid B72 repair



Cracks below the date inscription of before (left) and after (right) Paraloid B72 repair



Surface scaling to triglyph moulding before (left) and after (right) Paraloid B72 repair



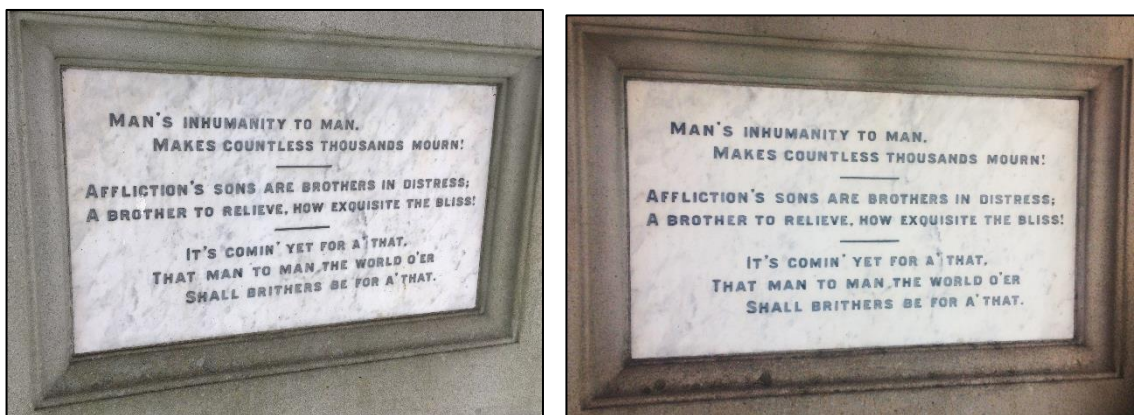
Metal cramps set into channels at the top of the sandstone plinth before (left) and after (right) polyester resin and Paraloid B72 repair



Metal cramps set into channels at the top of the sandstone plinth before (left) and after (right) polyester resin and Paraloid B72 repair. Circular loss before (left) and after (right) Paraloid B72 repair

Lead Lettering

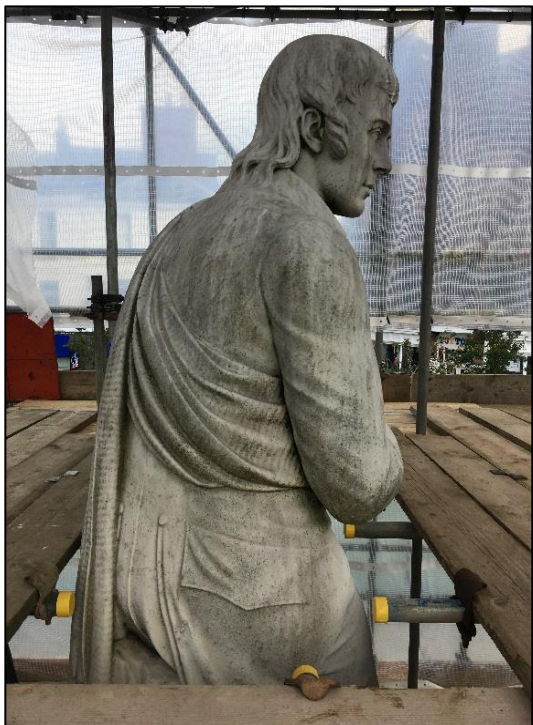
- The lead lettering was cleaned with water and nylon brushes during the cleaning of the marble inscription panels. After cleaning the letters were inspected and on balance it was decided not to treat them at this time. The lead was structurally sound and the inscriptions readable, and application of paint would add to future maintenance.



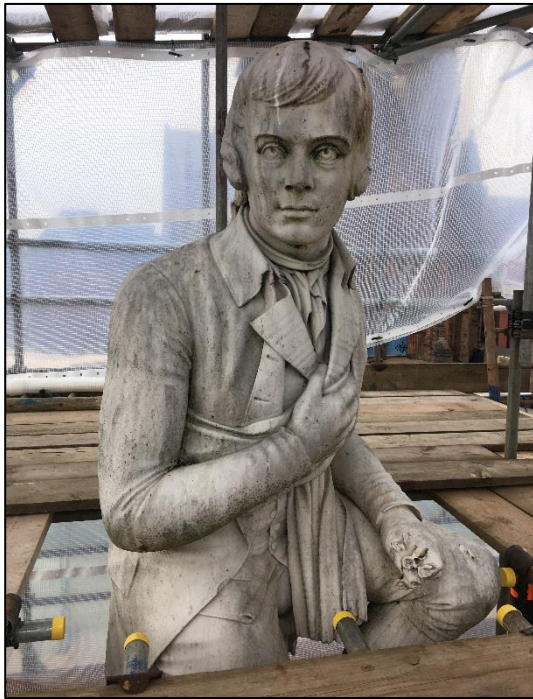
Left: marble inscription panel before cleaning. Right: marble inscription panel after cleaning

Photographic Documentation

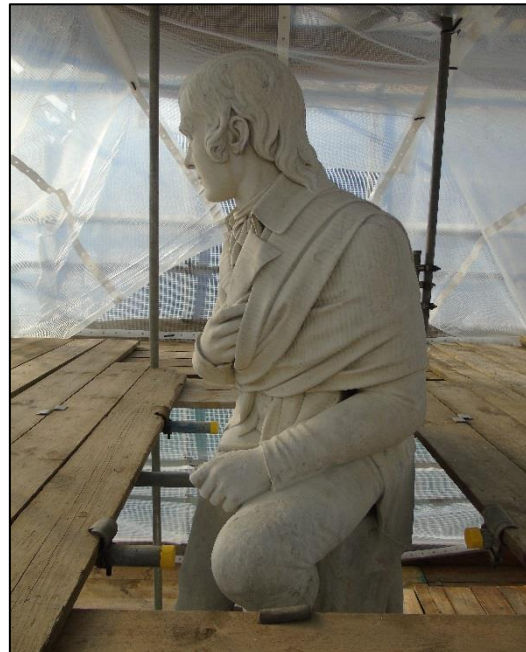
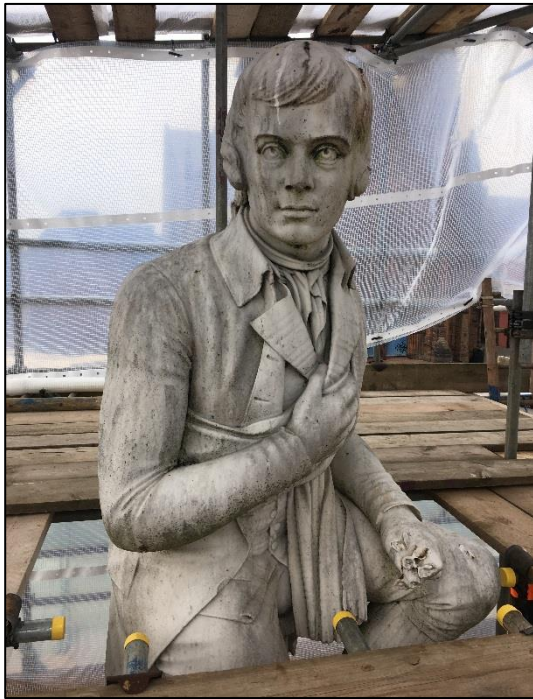
Before Conservation (left) and after Conservation (right)



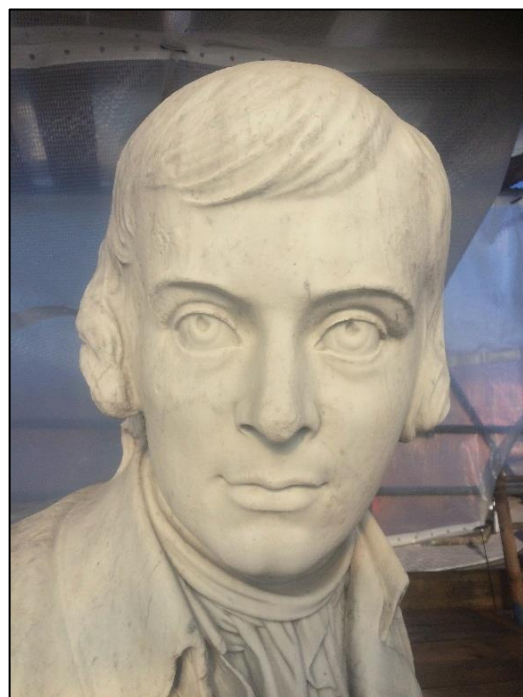
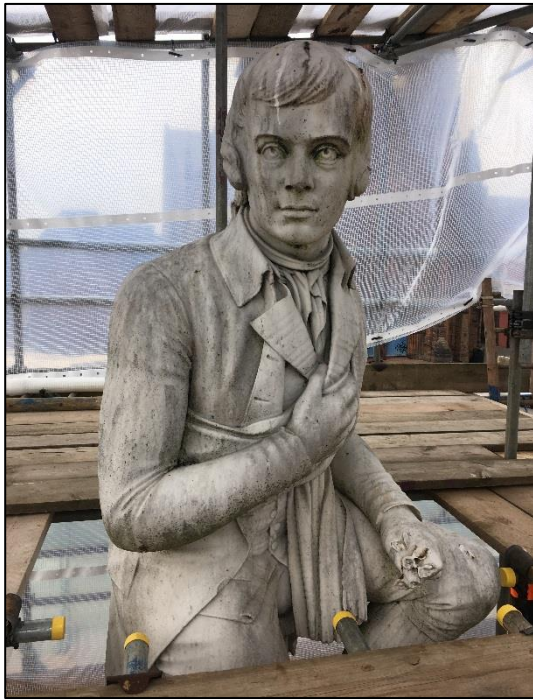
Before Conservation (left) and after Conservation (right)



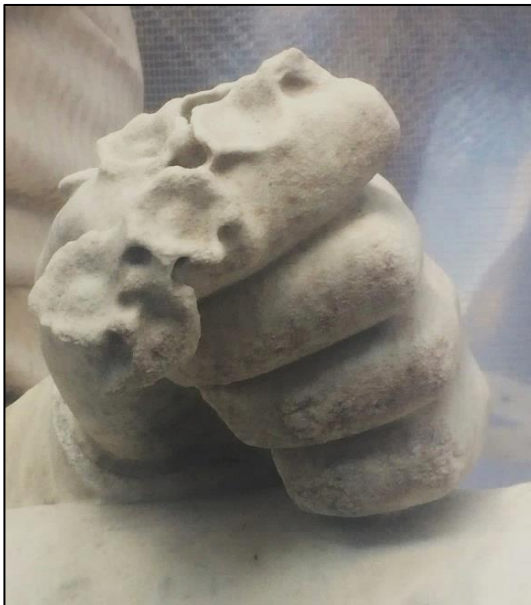
Before Conservation (left) and after Conservation (right)



Before Conservation (left) and after Conservation (right)



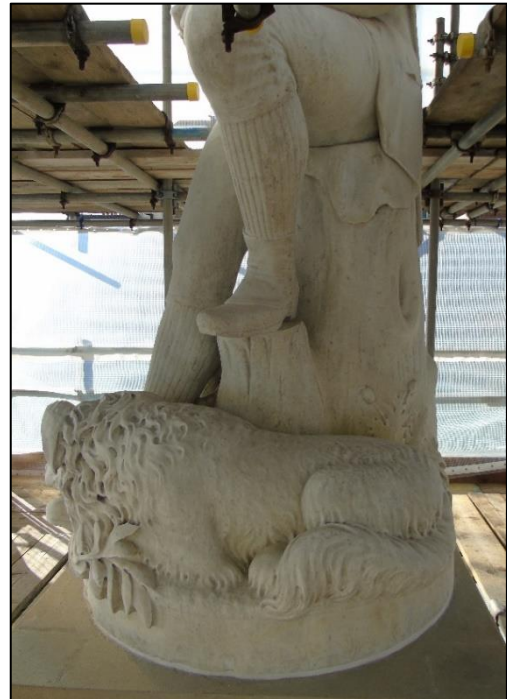
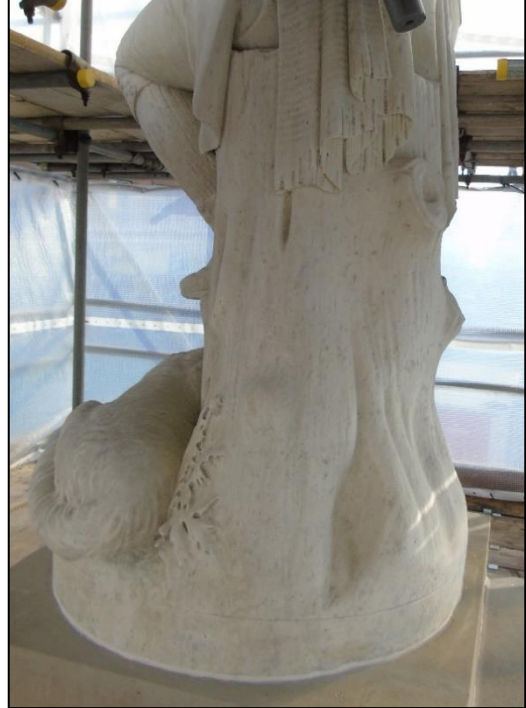
Before Conservation (left) and after Conservation (right)



Before Conservation (left) and after Conservation (right)



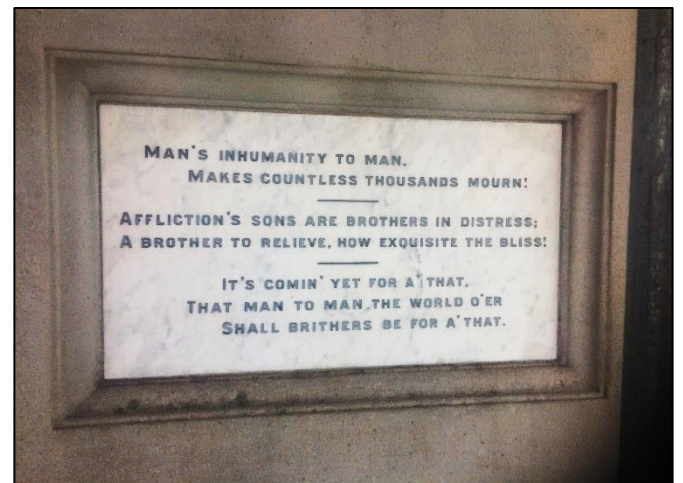
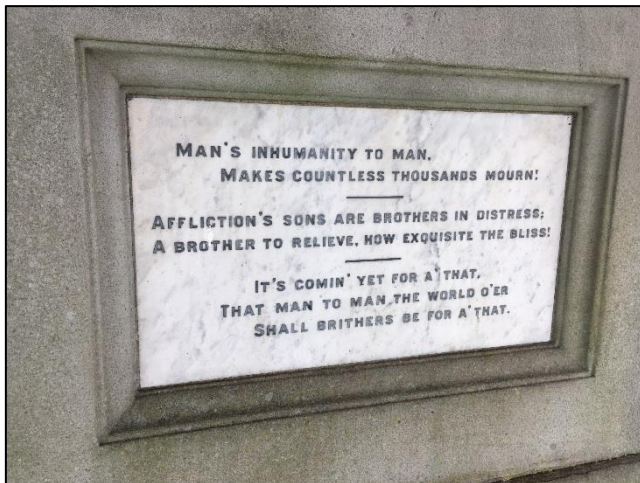
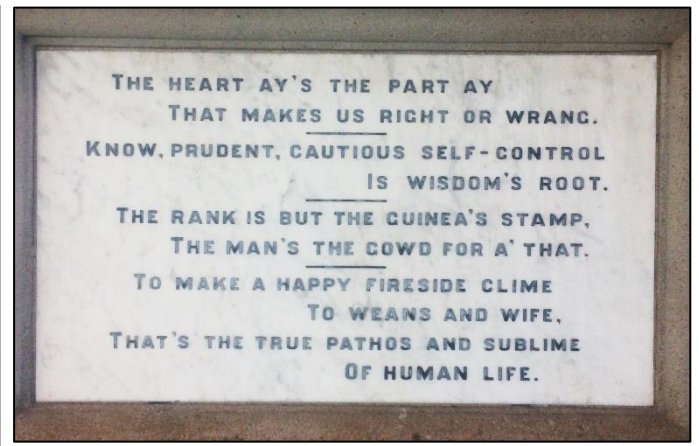
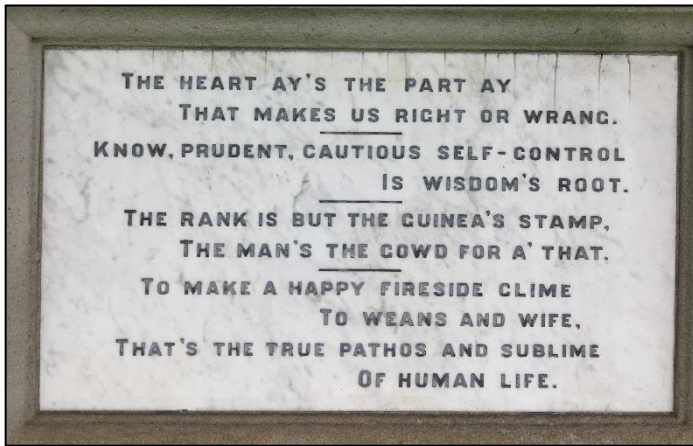
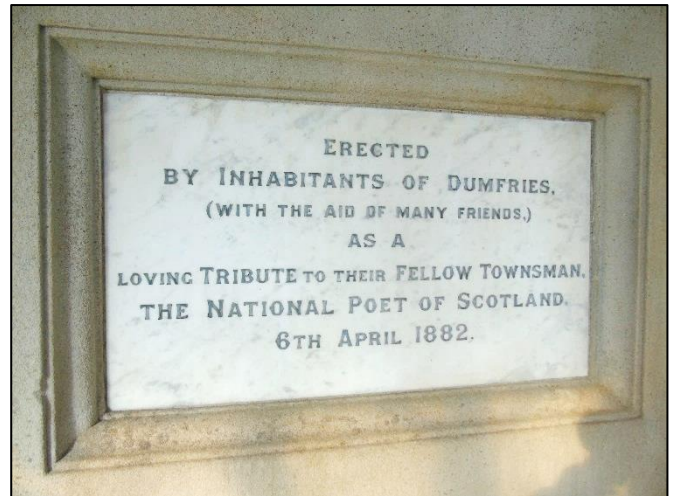
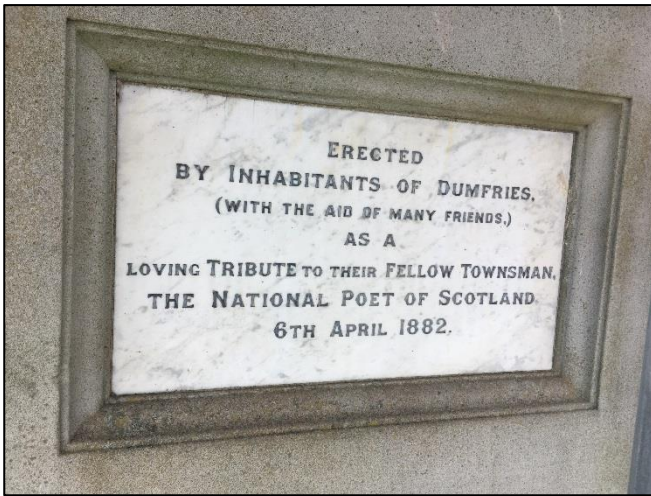
Before Conservation (left) and after Conservation (right)



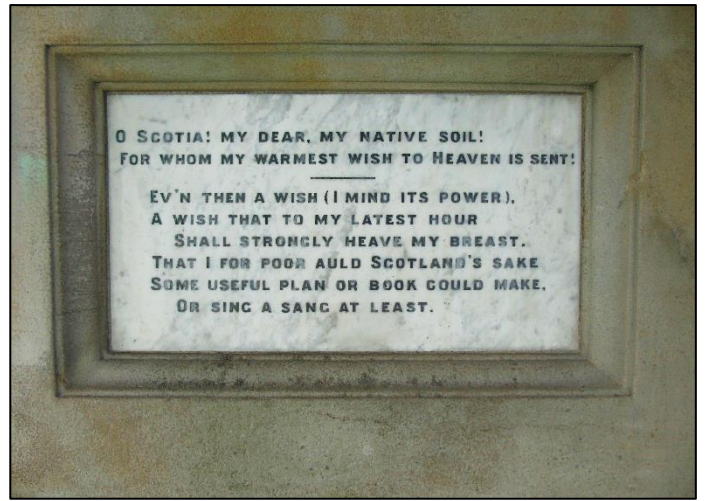
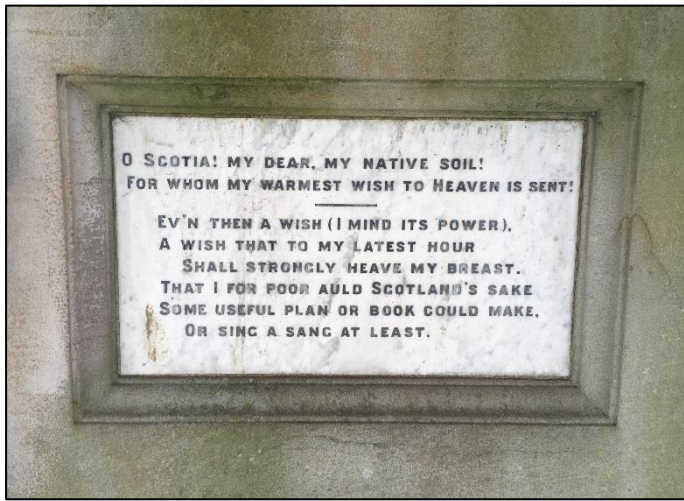
Before Conservation (left) and after Conservation (right)



Before Conservation (left) and after Conservation (right)



Before Conservation (left) and after Conservation (right)





Engraving of a maquette for the Dumfries Burns Statue by Amelia Paton Hill

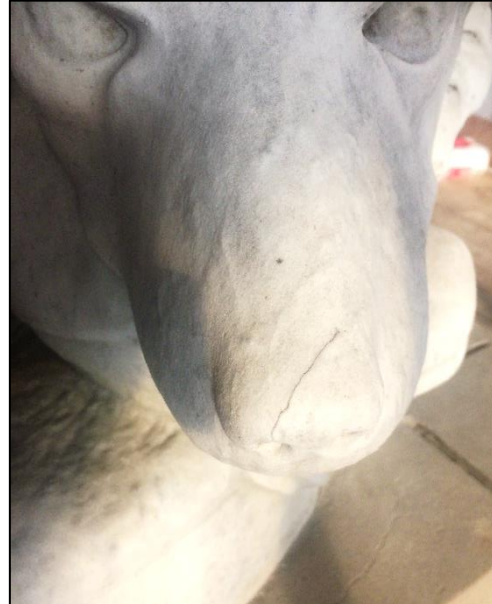
Recommendations for future maintenance

- It is desirable that a regular, perhaps annual or biennial inspection be carried out by a trained sculpture conservator from a cherry picker to monitor the condition of the sculpture and the plinth. In particular, the level of organic growth, and the condition of the vulnerable areas of stone including the cracks and their associated repairs should be monitored. The pointing should also be inspected for erosion and loss.
- The rough surface of the marble makes it particularly susceptible to organic growth, and the regular application of a biocide would help to mitigate this. It would be possible to apply a biocide by spray at the same time as the inspection.
- Initiating a regular cleaning program, carried out by trained and experienced sculpture conservators, would help to hinder the recolonization of the stone surfaces by organic growth etc. and help to limit the damaging effects of soiling and organic growth on the vulnerable surface of the stone.
- It was observed during the conservation that the lower courses of the plinth below the inscription panels are subject to rising damp. Recolonization is thus likely to occur most rapidly here, and this area would benefit from a regular, perhaps bi-annual application of biocide.
- During conservation areas with a hard black crust were observed in the crevices of the marble sculpture. This is a product of atmospheric pollutants in areas that are not washed by rain water run-off. It may be desirable to remove this build-up in a future conservation programme; the hardness of the crust means that air abrasives or a laser may be required.

Dimensions of cracks and flaws for comparison future maintenance

Measurements of the major cracks in the marble sculpture October 2018:

Across the dog's nose: 40mm



Between the dog's proper right side and the tree stump: 205mm



Perpendicular below Burn's proper right
foot: 100mm



Perpendicular below the dog's tail: 140mm



Perpendicular at the proper left side of the
thistle: 360mm

