



Australian Decorative & Fine Arts Society (ADFAS)

2019 Mid-Career Scholarship
Report

Elizabeth McCartney

Thank you

Firstly I would like to again express my sincere gratitude to ADFAS for their ongoing and incredibly generous support of the AICCM and of the conservation profession in Australia. Mid-career professional development, while incredibly important, is often very difficult to access. This scholarship provides invaluable assistance that contributes to the ongoing development of the conservation profession in Australia and, through that, to the ongoing care of cultural material in Australia.

Why did I apply for the ADFAS Mid-career scholarship?

I applied for the ADFAS Mid-career Scholarship to help me attend the course 'Conservation and Repair of Architectural and Structural Metalwork' at West Dean College of Arts and Conservation (UK) in February 2020. West Dean College is an internationally recognised and widely respected conservation education institution.

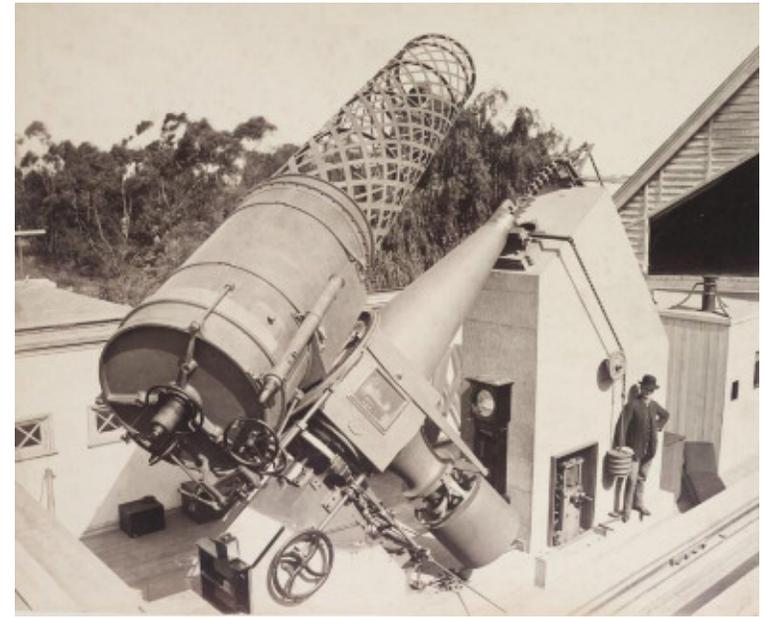
This short course has been and will continue to be invaluable to my work at Museums Victoria. As Manager, Conservation, I direct the conservation program that looks after the Victorian State Collection. The collection is substantial (around 17 million items) and varied, and includes a large number of large technology items made from metal. In this position I also advise on a number of large-scale conservation and preservation projects that involve metal objects or structures containing metal components. As well as providing advice on treatment and materials, I contribute advice to conservation management plans and oversee contractor work on these projects.

Undertaking this training course was an invaluable professional development opportunity. My previous conservation training was, by necessity, quite general and over the twelve years that I have worked in conservation, I have not had the opportunity to work on many metal objects. Since I have taken on the position of Manager, Conservation at Museums Victoria, however, I have been called upon to provide advice on many large and complex projects involving architectural and structural metalwork. It has become apparent to me that this is an area of my training and knowledge that would greatly benefit from being updated and further developed. This knowledge will improve the way in which I am able to carry out my work and the advice and support I am able to provide to my team and to other organisations who come to Museums Victoria for advice.

The Great Melbourne Telescope (GMT) Restoration

In particular, I am the project conservator for the Great Melbourne Telescope Restoration. Erected at the Melbourne Observatory in 1869, for three decades the GMT was the largest operational telescope in the world. In 1945 it was sold for reuse at Mt Stromlo Observatory near Canberra and after modernisation it continued to be used for astrophysical research. In 2003, the parts of the GMT still in use were burnt in the Canberra bushfires. In 2008 these parts were returned to Museums Victoria and the restoration project began. This is a complex project to restore an object of great state, national and international significance. The restoration project has recently arrived at a critical juncture, with the appointment of a project manager, an influx of new volunteers, and a revised delivery date for reinstatement of the GMT at Melbourne Observatory in the Royal Botanic Gardens. Further development of my knowledge of metals conservation at this point is of great and very timely benefit to my work on this project.

Currently we have no one who specialises in metals conservation working at Museums Victoria. The information and training that I received from attending this course updated and developed my knowledge of metals conservation, and has already assisted me to provide the best possible advice to colleagues and stakeholders as part of the GMT project. Undertaking this course at West Dean College was necessary as there is no metals-specific mid-career conservation training in Australia. Receiving this specialised training will continue to benefit the conservation of a number of objects and structures of high national and international significance, the preservation of the Victorian State Collection in general, and the support that I am able to provide to my team and the other organisations who come to Museums Victoria for advice.



The Great Melbourne Telescope at Melbourne Observatory 1870s-1880s (Museums Victoria)



Removing the shattered remains of the 50 inch mirror, Mt Stromlo, November 2008 (Museums Victoria)

'Conservation and Repair of Architectural and Structural Metalwork' at West Dean College of Arts and Conservation

The course was run over 4 days, and was taught by Geoff Wallis of Dorothea Restorations. The course covered the conservation of structural metalwork, architectural features and statuary. It included both ferrous and non-ferrous metals and tuition on a wide range of repair techniques was also provided by leading practitioners from both the faculty of West Dean and external organisations.

The course looked at the methods of manufacture and shaping of ferrous metals, the history of their use, their deterioration, how to survey these materials, practical cleaning methods, surface preparation and coatings, and specific metalwork repairs. The syllabus also covered corrosion science, the latest developments in cathodic protection as a remedial solution to rusting cramps, and the science of traditional electrotype forming as used for statuary.

Visits to a number of studios at West Dean were also provided, with opportunities to talk with the tutors and students. A hands on opportunity was provided in the Forge where course participants were able to try out traditional and modern techniques relevant to architectural conservation such as forging at the hearth, arc and gas welding, flame cutting and needle gunning.

As well as the opportunity for tuition from a number of different industry specialists and the chance to try some hands-on techniques, another strength of the program came from the breadth and experience of the course participants. Present as part of the February 2020 cohort were a number of contractors who worked for restoration companies in the UK, a building surveyor, a stonemason from Exeter Cathedral, a representative of the Defence Infrastructure Organisation, a representative from the Israel Antiquities Authority, the contractor who looks after a lot of the cannons on the Isles of Scilly, and two representatives from the Commonwealth War Graves Commission, who look after all the commonwealth war graves and statuary in Western Europe. The opportunity to talk with these colleagues and draw from their experiences added to the richness of the learning experience.



Examples of artificial patination in the Metalwork Studio



The February 2020 Cohort, in the Old Dairy Auditorium

Applying this knowledge to the GMT Restoration and other Museums Victoria Projects

The course at West Dean College not only provided an invaluable opportunity to further develop my knowledge of metals conservation, but gave me access to a number of industry leading professionals who I was able to talk to and ask advice of over the four days.

Specifically, I was able to seek advice on the following Museums Victoria Projects:

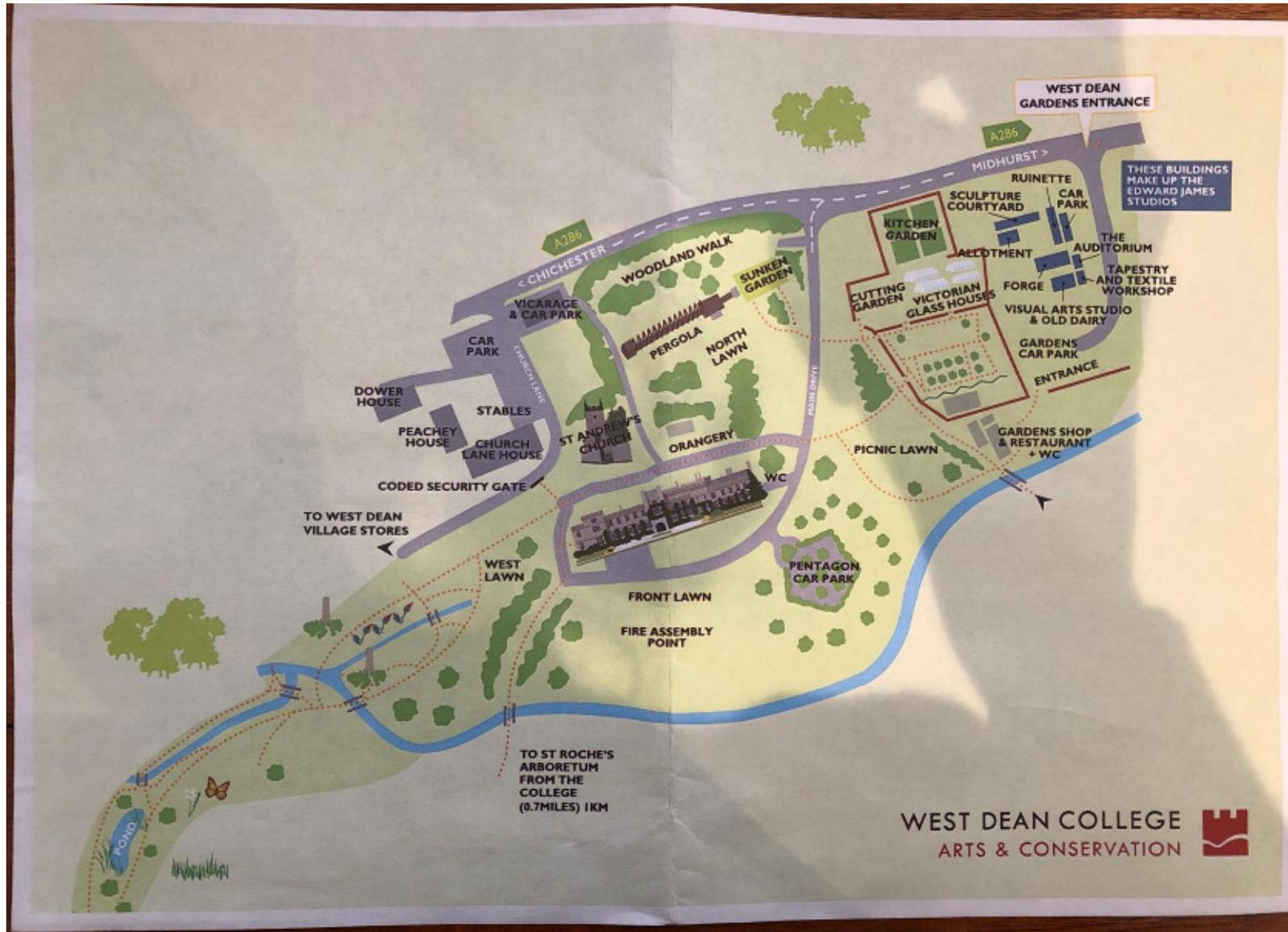
- The Great Melbourne Telescope Restoration
 - Options for coatings – during restoration as well as long term solutions
 - Dealing with elevated levels of hydrogen sulphide gas and airborne chlorides at the Scienceworks Workshop
 - Maintenance of the lead weights
 - Copper corrosion on the Finderscope
- Maintenance of the artwork ‘Wurreeka’ at Melbourne Museum
 - Coating options for frequently touched zinc sheeting

When I returned to Melbourne the timeliness of the West Dean course became apparent. As Museums Victoria moved into a covid-19 shutdown, we needed to quickly address the surface corrosion that had appeared in numerous areas across the GMT since it had been moved from Museum Victoria’s Moreland Store to the Scienceworks Engineering Workshop. We believed that the surface corrosion was being accelerated by the elevated levels of hydrogen sulphide and airborne chlorides in the atmosphere at Scienceworks. I was able to use knowledge gained at the West Dean course to argue for the importance of carrying out the work to coat the GMT with a barrier material during the shutdown and to work with staff in the Engineering Workshop to choose the most appropriate material and application technique for this particular situation (which involved working quickly and within covid-19 restrictions).



Thomas Grubb’s builder’s plate

West Dean College of Arts & Conservation



West Dean College of Arts and Conservation has an international profile for conservation and arts education. Underpinning it all is the vision of founder and Surrealist patron Edward James. Made up of the College (the main house) and the restored Gardens (which are open to the public), the whole Estate covers 6 miles.

The first significant house was built on the Estate in the 1620s. The College, as the house is known, is currently undergoing a massive roof restoration project. The 126 year old roof is made up of 38 individual sections, with leaks and failed masonry requiring attention throughout.

Among other things, the College provides accommodation for students studying short courses, and I was very privileged to be able to stay in one of the rooms in this very beautiful building.

West Dean College of the Arts



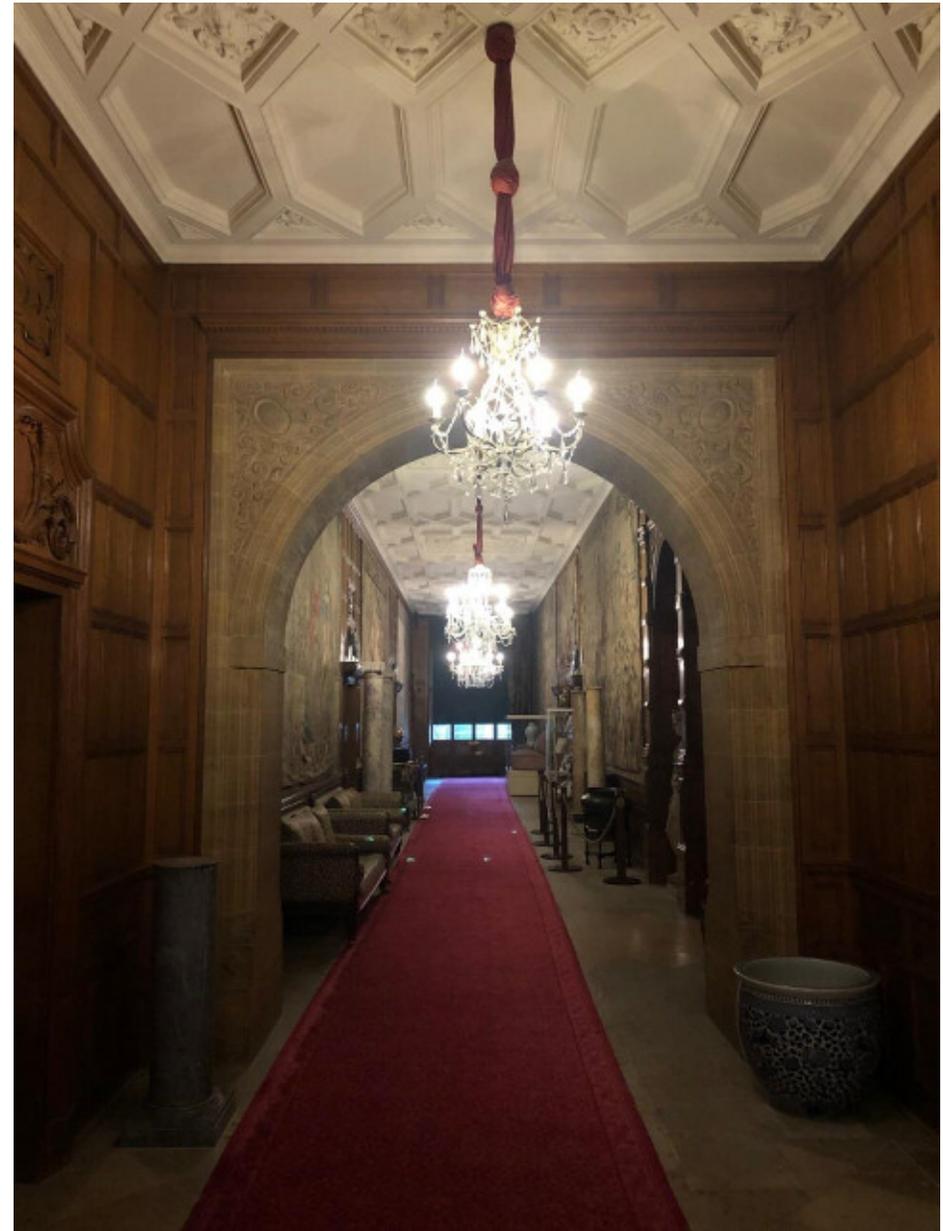
The College covered by the massive scaffolding required for the roof restoration project



The Marble Hall inside the front entrance



The Oak Hall



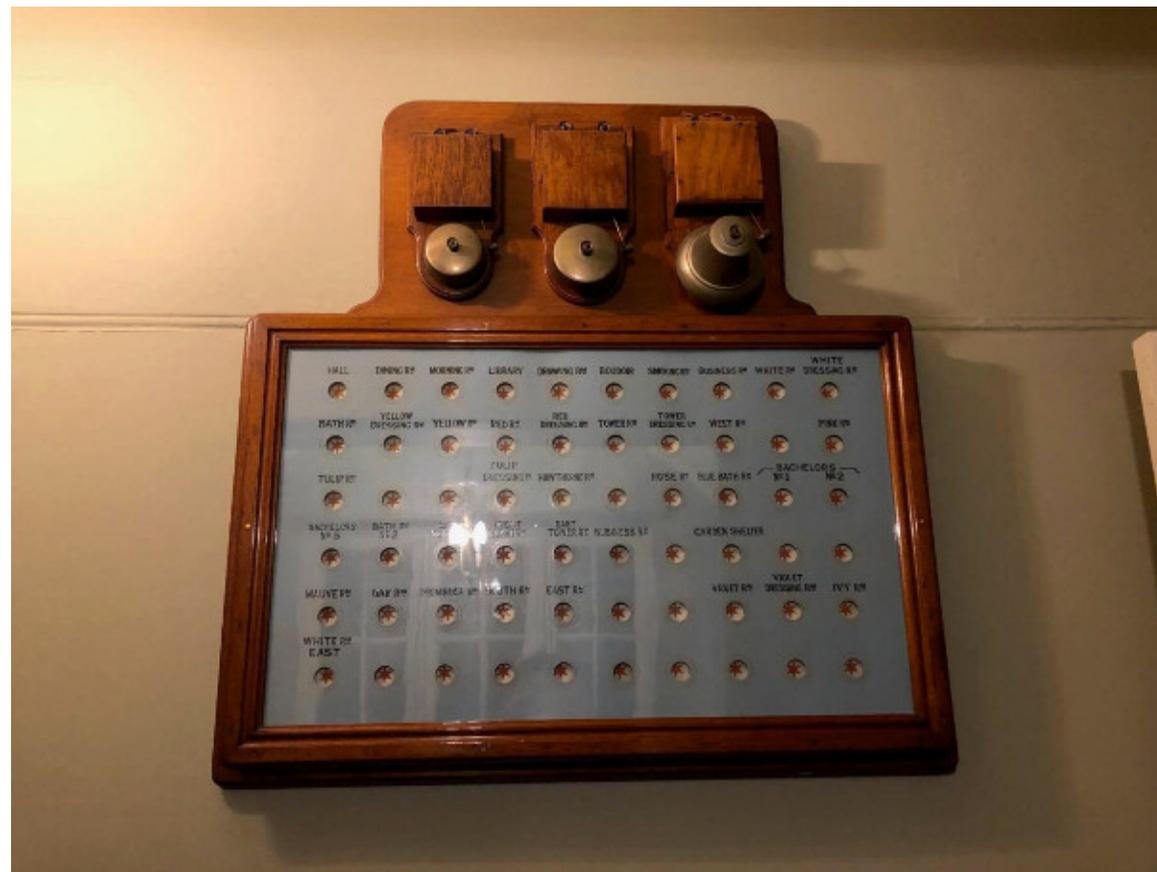
The corridor outside the Music Room and Old Library



Further details of the corridor outside the Old Library, Music Room and Old Dining Room, facing the steps that lead down to the new Dining Room.



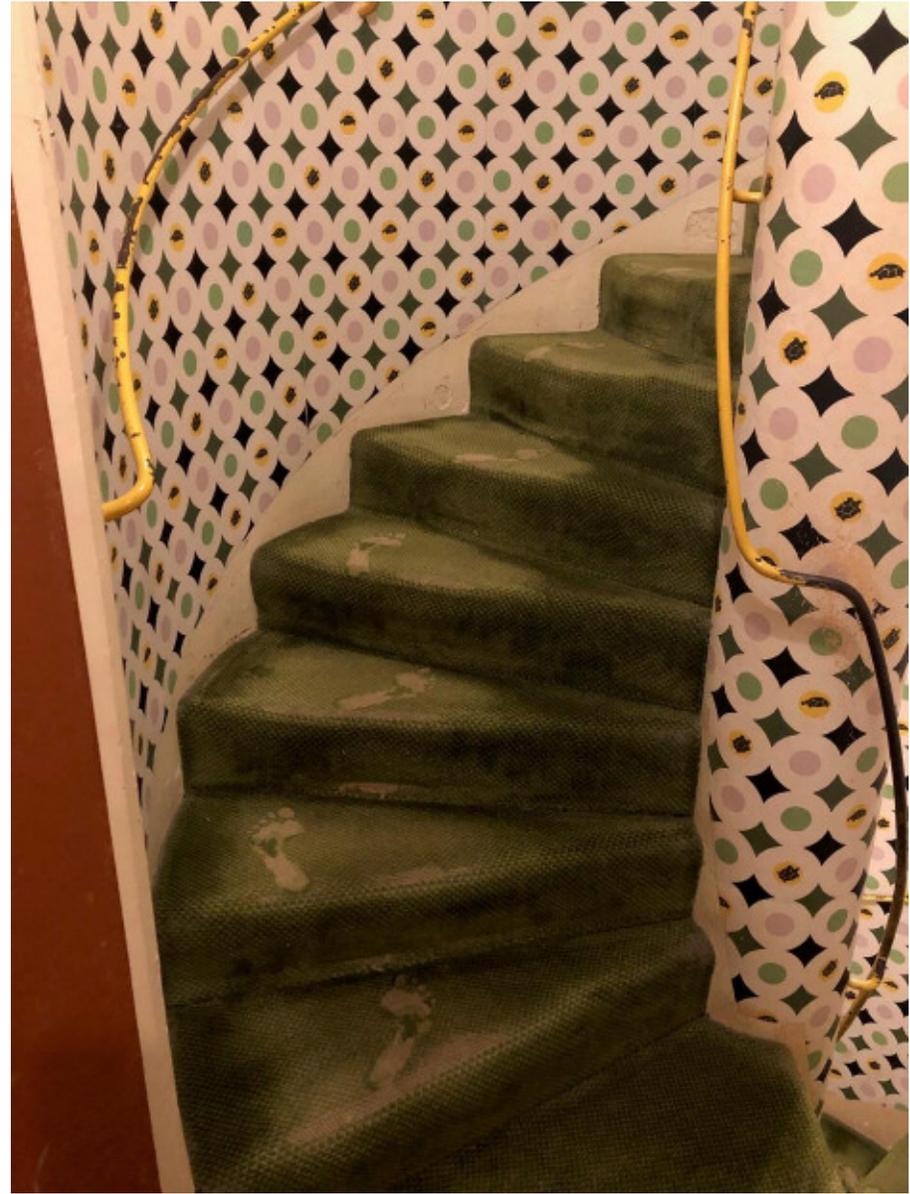
Displays of conservation students' work in the corridor between the new Dining Room and Steward's Room (i.e. the Bar)



The old bell indicator board on the way to the Laundry



Salvador Dalí's Lobster Telephone. Edward James was a friend and patron of Salvador Dalí.



Surrealist carpet on the Spiral Staircase

West Dean Gardens



The West Lawn



The Victorian Glass Houses and the Cutting Garden



Outside the Cutting Garden, looking towards the North Lawn



The Sunken Garden, Pergola and Woodland Walk



West Dean Park



The Front Lawn



The Picnic Lawn

Conservation and Repair of Architectural and Structural Metalwork



Geoff Wallis, discussing cathodic protection



Rupert Harris, leading an exercise on the identification of non-ferrous metals

Visiting Studios



Metalwork Studio

A great opportunity to pick the brain of Eric Nordgren (the Science Liaison Officer and Subject Leader for Metalwork Conservation)



Statue conserved by Zora Sanders, former student of West Dean College and current member of the AICCM, on display in the Metalwork Studio



Horology Studio



The smallest clock being worked on in the Horology Studio



Furniture Studio



An Admiralty Staff conserved by the staff and students in the Furniture department. They also made the box in which it will now be stored.

Roof Restoration Tour



Touring the roof restoration with the Project Manager, discussing the damage to the lead roofing and the repair work being undertaken on the galleted flintwork



An inside view of the scaffolding covering the College

The Forge



Heading to the Forge



Geoff Wallis demonstrating the effects of grinding as a corrosion removal technique



Geoff Wallis demonstrating a variety of welding techniques



Eric Nordgren demonstrating artificial patination techniques



An actual blacksmith demonstrating how to forge an object



Me having a go at making a pointy end on a piece of metal. Success!
(and I got to take my pointy end home!)

The Great Melbourne Telescope – June 2020



The GMT skeleton, reconstructed in the Scienceworks Engineering Workshop in November 2019 for the 150th Anniversary of the GMT's erection at Melbourne Observatory



Examples of the surface corrosion that developed across numerous areas of the GMT after moving it from Museum Victoria's Moreland Store to the Scienceworks Engineering Workshop



Simon Brink, GMT Restoration Project Manager, and me coating the GMT in June 2020 to protect it against further surface corrosion during the covid-19 shutdown. The challenges of covidsafe work practices meant that we had to improvise with the limited tools and access options available, but even within these restrictions we managed to coat 90% of the object. Using knowledge gained at the West Dean course I was able to establish that due to the type of material used at the top of the lattice tube (the area we were unable to coat), that section was at the least risk of problematic corrosion and as such we were very pleased with the outcome of this project to protect the GMT during the shutdown.



The GMT. Coated, safe and regularly checked during the covid-19 shutdown.

The coating that Simon and I applied in June is lasting well and during this shutdown period I am carrying out research to determine the most appropriate paint system to apply to the telescope when restoration work recommences. The paint system will act as a barrier layer and, with maintenance, will protect the metal surface into the future. Future conservation work also involves treatment of the lead weights and the finderscope (an aiming device that forms part of the GMT).

All of this work will be greatly enhanced by the knowledge I gained at West Dean College and will help to ensure that the public once again gets the opportunity to experience this awe-inspiring and highly significant scientific instrument.

Thank you.