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A Characterisation of the Materials and Methods in Oil Paintings by Glasgow Boy  
Artist David Young Cameron (1865-1945).

Tess Visser

Submitted in fulfilment of the requirements for the Degree of Doctor of  
Philosophy

School of Culture and Creative Arts  
College of Arts and Humanities  
University of Glasgow

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## Abstract

This research addresses David Young Cameron's (1865-1945) disputed position as one of the Glasgow Boys through the characterisation of the materials and methods he employed in his oil paintings and through evaluation of the development of his style and subject matter. Cameron is not as well known for his work in oil as he is for his printmaking; being ignored and forgotten in discussions on Scottish painting and the Glasgow Boys. Using a technical art history methodology combining art historical and archival research with detailed technical examination of six oil paintings; and visual examination of a wider range of works from throughout his career - this thesis argues that Cameron should be reinstated as a Glasgow Boy. Paintings not previously studied from the early period of Cameron's artistic career highlight the similarities between the development of his ideology, style and subject matter with that of the Glasgow Boys during the late nineteenth and early twentieth century. Technical examination reveals that the shift towards a brighter tonality observed in his paintings after 1900 coincides with a change in his use of pigment: throughout his career Cameron made use of a combination of traditional and modern pigments, but where he mixed black in his paints to create a reduced tonality in his early works, he mixed bright colours or used them unadulterated in his later works. Additionally, a change in paint application can be observed around this time. In earlier works, the paint is applied smoother and with little to no impasto. In contrast, later works show experimentation with surface texture, alternatively applying paint thickly to hide the canvas weave or thinning it and rubbing it in to reveal the canvas weave. The use of preparatory drawing directly onto the preparatory layers in architectural works and underpainting in his landscapes allowed him to create the sharp outlines and clean pictures typical of his paintings. This first technical study of Cameron, one of the Glasgow Boys, opens the discussion on this group and highlights the need for further technical analysis of their materials and methods to gain a deeper understanding of this diverse group.

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## Author's Declaration

I declare that, except where explicit reference is made to the contribution of others, this thesis is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Tess Visser

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## Definitions and Abbreviations

<b>ATR-FTIR</b>	Attenuated Total Reflectance - Fourier Transform Infrared Spectroscopy
<b>c</b>	Circa
<b>GMRC</b>	Glasgow Museums Resource Centre
<b>GSA</b>	Glasgow School of Art
<b>IRR</b>	Infrared Reflectography
<b>NGA</b>	National Gallery of Art
<b>NGS</b>	National Galleries of Scotland
<b>RA</b>	Royal Academy
<b>RE</b>	Royal Society of Painter-Etchers and Engravers
<b>RGI</b>	Royal Glasgow Institute
<b>RL(R/L)</b>	Raking Light (Right/Left)
<b>RSA</b>	Royal Scottish Academy
<b>RWS</b>	Royal Watercolour Society
<b>RSW</b>	Royal Scottish Society of Painters in Watercolour
<b>SEM-EDX</b>	Scanning Electron Microscope - Energy Dispersive X-ray Spectroscopy
<b>UV</b>	Ultraviolet light
<b>VIS</b>	Visible light
<b>XRF</b>	X-ray Fluorescence

# 1 Introduction

David Young Cameron (1865-1945) was a well-known painter-etcher, trained in Glasgow and Edinburgh, who painted portraits, figure studies, architectural scenes, and landscapes. He contributed to the promotion of the arts, becoming a prominent figure within the British art scene. In discussions on nineteenth-century Scottish art, Cameron is often included as an important etcher but reference to his place within the understanding of Scottish painting of the period is limited. Despite his achievements during his lifetime, Cameron is now largely forgotten as a painter. Current literature on nineteenth-century oil painting often describes Cameron as merely an associate of the Glasgow Boys, a group of artists working in Glasgow in the late nineteenth century, or does not include him in discussions about this group. This thesis seeks to address both his status as an artist and as a Glasgow Boy. It does so by examining the materials and methods used by Cameron in his oil paintings and comparing these to extant knowledge of the materials and methods of contemporary artists using an interdisciplinary methodology combining art historical research with technical examination.

The nineteenth century was an era of great change and rapid development, both in society and in industry. The societal changes resulting from new Enlightenment thought and the Industrial Revolution were reflected in the development of style and the choice of subject matter in art of the nineteenth century throughout Europe.<sup>1</sup> An important Enlightenment idea, and later scientific thought in the 19<sup>th</sup> century, was the stress on the need for observation. A paradigm shift occurred in art involving the steadily increasing importance awarded to landscape painting, compared to its largely inferior position as a

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<sup>1</sup> Macmillan, *Scottish Art: 1460-1990*; Adams, *The Barbizon School & the Origins of Impressionism*; Katz, 'William Holman Hunt and the "Pre-Raphaelite Technique"'; Young, 'The Motionless Look of a Painting: Jules Bastien-Lepage, Les Foins, and the End of Realism'; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*.



decorative art previously.<sup>2</sup> Genre paintings, another favoured subject in the nineteenth century, offered an opportunity to depict historical, literary, religious, and later contemporary subjects.<sup>3</sup>

The development of style throughout Europe at this time had some common sources of influence, most notably the Dutch Old Master painters and landscape painters, among whom Rembrandt and Ruysdael were some of the most influential. In general, attempts by British and French artists to imitate the golden glow seen on the works of the Old Masters and their use of strong impasto was assisted through the use of media such as asphaltum (bitumen) and megilp.<sup>4</sup> These media caused cracking in the paint or browned quickly and thus altered the work. The use of these media resulted in the nickname 'gluepots' given by George Henry, one of the Glasgow Boys, to the paintings of previous generations of British and particularly Scottish artists.<sup>5</sup>

Though it appears that one artistic movement was superseded by the next; the transition between movements was not linear. Styles, even those considered to originate from different movements, were seen alongside each other, coexisting within the work of a single artist. In the nineteenth century, cheaper and easier travel provided opportunities for artists to travel more, allowing faster exchange of ideas. In the second half of the nineteenth century, the influence of the contemporary artistic style of one country on the other became more prominent.<sup>6</sup> Artworks from home and abroad, were displayed in exhibitions alongside each other and seen by artists during their travels, causing a cross-pollination of artistic ideals and ideas.

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<sup>2</sup> Adams, *The Barbizon School & the Origins of Impressionism*, 19-39; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 12-15.

<sup>3</sup> Macmillan, *Scottish Art: 1460-1990*, 165.

<sup>4</sup> Macmillan, *Scottish Art: 1460-1990*, 198; Katz, 'William Holman Hunt and the "Pre-Raphaelite Technique"', 158; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 29.

<sup>5</sup> Billcliffe, *The Glasgow Boys*, 30.

<sup>6</sup> Macmillan, *Scottish Art: 1460-1990*, 243.

This rich and quickly changing artistic landscape formed the background in which, in the last two decades of the nineteenth century, a diverse group of young artists working in Glasgow created an artistic centre in the west of Scotland and adopted the name ‘the Glasgow Boys’.<sup>7</sup> The group was also referred to as ‘the Glasgow School’. United in their desire to create a new style inspired by the French art of the Barbizon School (1830-1870), Jules Bastien-Lepage (1848-1884), the American James McNeill Whistler (1834-1903) and the Dutch Hague School (1860-1890s), the Boys went against the Academic tradition of genre and landscape pictures with moralistic messages and sought their own form of realism, use of colour, and decoration.<sup>8</sup> In the search for their own style, they travelled to the Scottish countryside and in broad brushstrokes set down the scenes in front of them, typically painting *en plein air*. Each artist developed and retained their own individual style, while small groupings of friends, travel companions, or fellow students in Parisian ateliers were formed and worked alongside each other.<sup>9</sup>

The Glasgow Boys, led by James Paterson (1854-1932), started their own magazine, *The Scottish Art Review*, in which artists, musicians, writers and critics all had a place to acknowledge, learn and write about their own work and that of the others.<sup>10</sup> The publication was short-lived, with the first issue published in June 1888 and the last in December 1889 as control of the magazine moved away from the Boys and the subject matter moved away from Scotland to exhibitions in London.<sup>11</sup> However, this was not the last endeavour of the Boys to educate and influence the public’s reception of art. In 1891, a petition to the

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<sup>7</sup> Glasgow Art Club et al., *Glasgow Art Club 1867-1967*; Billcliffe, *The Glasgow Boys*, 15.

<sup>8</sup> Bird, ‘International Glasgow’; Irwin and Irwin, ‘Scottish Painters at Home and Abroad, 1700-1900’; Eadie, *Movements of Modernity: The Case of Glasgow and Art Nouveau*; Hardie, *Scottish Painting: 1837 to the Present*; Macmillan, *Scottish Art: 1460-1990*; Macmillan, *Scottish Art in the 20th Century, 1890-2001*; Graham-Dixon, *A History of British Art*; McConkey, *British Impressionism*; Macdonald, *Scottish Art*; Smith, Skipwith, and Foundation, *A History of Scottish Art*; McEwan, ‘The Dictionary of Scottish Art and Architecture’; Stephens, *The History of British Art: 1870-Now*; Arnold and Peters Corbett, *A Companion to British Art: 1600 to the Present*.

<sup>9</sup> Caw, *Scottish Painting Past and Present 1620-1908*; Irwin and Irwin, ‘Scottish Painters at Home and Abroad, 1700-1900’; Hardie, *Scottish Painting: 1837 to the Present*; Billcliffe, *The Glasgow Boys*; Fowle, Hamilton, and Melville, *Impressionism & Scotland*; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*; Hodge, *Glasgow Boys; Masterpieces of Art*.

<sup>10</sup> Billcliffe, *The Glasgow Boys*, 195-200.

<sup>11</sup> Billcliffe, *The Glasgow Boys*, 203.

Glasgow Corporation was started by the Glasgow Art Club, with E.A. Walton (1860-1922) taking the lead, to acquire the Whistler painting *Arrangement in Grey and Black, No.2: Portrait of Thomas Carlyle* for the city of Glasgow.<sup>12</sup> The petition was signed by 89 people including 64 artists, among whom members of both the older generation and the Glasgow Boys, including Cameron, could be found.<sup>13</sup>

As a group they were recognised in their 1890 exhibition at the Grosvenor Gallery in London and the Secession exhibition in Munich in the same year, at which time the term 'Glasgow School' was coined. The election of the Glasgow Boys as members of the Glasgow Art Club shortly after, in the early 1890s, signalled the end of the rebellion they had led against the art establishment in their early careers. Even though this is considered the end of the Boys' rebellious phase, the artists continued to paint and develop their individual styles. As will be shown below, the Glasgow Boys and Cameron were recognised for their achievements by their contemporaries. However, in modern literature, the Glasgow Boys are not awarded the same level of attention as their French contemporaries, and Cameron's status - including whether or not he was a Glasgow Boy - is typically either not addressed, or left unclear.

## 1.1 Literature Review

The Glasgow Boys were recognised by David Martin in his 1897 publication *The Glasgow School of Painting*, which included a preface by Francis H. Newbery, the Head of the Glasgow School of Art (GSA). Cameron is discussed first in this publication since it follows alphabetical order. Martin states that although Cameron is generally thought of as an etcher, he painted fine oils, citing

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<sup>12</sup> Billcliffe; Fowle, Hamilton, and Melville, *Impressionism & Scotland* ; Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys'; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*; Knox, *The Glasgow Girls and Boys*.

<sup>13</sup> Billcliffe, *The Glasgow Boys*, 261-263.

examples of works, and concluding that Cameron is ‘a gifted artist, whose efforts are to be admired as much in painted picture as in etched plate’.<sup>14</sup> Not only does Martin include Cameron without question, he discusses twenty artists as Glasgow Boys and an additional four Glasgow painters who are listed as ‘Other painters of the Glasgow School’. This presents a wider range of artists than are mentioned in most modern literature and includes artists who are now considered merely peripheral to the group.

Baldwin Brown published *The Glasgow School of Painters* in 1908, which includes largely the same selection of artists as Martin, again discussed in alphabetical order.<sup>15</sup> However, Martin included the painters J.E. Christie, George Pirie, and Grosvenor Thomas who are not mentioned in Brown’s book, whereas Brown has chosen to include two painters and a sculptor, David Gauld, Arthur Melville, and Pittendrigh Macgillivray respectively, not mentioned by Martin.<sup>16</sup> Brown remarks that the term ‘Glasgow School’ suggests a more unified group than could actually be found in Glasgow:

‘It is true that in the Glasgow of the eighties of the last century certain painters, sculptors, and architects were drawn together by a common artistic aim, but their themes, their methods, even their media of expression, were not the same. It is true also that personal contiguity gave

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<sup>14</sup> Martin and Newbery, *The Glasgow School of Painting*, 2.

<sup>15</sup> Brown and Annan, *The Glasgow School of Painters*.

<sup>16</sup> Included as Glasgow School artists by Martin: D.Y. Cameron, J.E. Christie, J. Crawhall, T. Milie Dow, J. Guthrie, J. Whitelaw Hamilton, G. Henry, E.A. Hornel, W. Kennedy, J. Lavery, W.Y. Macgregor, H. Mann, T. Corsan Morton, S. Park, J. Paterson, G. Pirie, A. Roche, R. Macaulay Stevenson, G. Thomas, E.A. Walton.

Included as Glasgow School artists by Brown: D.Y. Cameron, J. Crawhall, T. Milie Dow, D. Gauld, J. Guthrie, J. Whitelaw Hamilton, G. Henry, E.A. Hornel, W. Kennedy, J. Lavery, P. Macgillivray, W.Y. Macgregor, H. Mann, A. Melville, T. Corsan Morton, S. Park, J. Paterson, A. Roche, R. Macaulay Stevenson, E.A. Walton.

a distinct local colour to their proceedings, but they did not all belong to the West of Scotland, nor were they even all of Scottish race.’<sup>17</sup>

This explains the inclusion not only of painters, as Martin had done, but of the sculptor Macgillivray. Brown’s book provides a history of the group, discussing its origins as a ‘protest’ or rebellion against the established order, and how it disseminated when its members had been elected to the Academies, and ‘merged in a movement of advance in Scottish art as a whole’, rather than as their own ‘brotherhood.’<sup>18</sup> This is followed by a discussion of the painters of the Glasgow School, and finally those working in other art forms. Like Martin, Brown recognises Cameron’s proficiency in etching, but takes care to note that in painting too, he is successful and ‘has given us the beauty of delicate gradations of line and tone.’<sup>19</sup>

A history of the Glasgow School can also be found in Caw’s *Scottish Painting Past and Present 1620-1908*, published in 1908.<sup>20</sup> Caw discusses the protest of the Boys against the moralistic art of the previous generation and provides insights into the artists belonging to this School. The artists are grouped together in separate chapters based on the subject or style with which they were most associated, for instance landscape or animal painting, or a highly decorative style.<sup>21</sup> In these chapters he dedicates more space to the development of individual artists. Cameron is included by Caw as one of the Glasgow Boys, although he is only referenced briefly in the section on painting. Cameron is included in more depth in the discussion on etching.<sup>22</sup>

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<sup>17</sup> Brown and Annan, *The Glasgow School of Painters*, 1.

<sup>18</sup> Brown and Annan, *The Glasgow School of Painters*, 2 & 22-23.

<sup>19</sup> Brown and Annan, 27.

<sup>20</sup> Caw, *Scottish Painting Past and Present 1620-1908*.

<sup>21</sup> Caw, 365.

<sup>22</sup> Caw. 353 & 457-462.

Moreover, in period articles, the Glasgow School artists are recognised for their ingenuity and contribution to the history of Scottish art. In the 1890s several articles appeared in art magazines discussing the art of the Glasgow School in overviews or in discussions of recent developments. The reception of the School is generally positive and focuses on their interest in colour and on their sources of inspiration, for instance Whistler. Cameron is included in the majority of these articles, occasionally even being highlighted, as he was with the painting *Daisy* in 'Art in Scotland' in *The Magazine of Art* (1896).<sup>23</sup> Furthermore, the group was discussed in the 1895 publications of *Blackwood's Magazine* and *Harper Magazine*. In the article 'The Scottish School of Painting' published in the former the Glasgow School is included in the discussion on the development of painting in Scotland. Although several of the Boys are mentioned, no section dedicated solely to the Glasgow School is found. Instead, the description of the Boys is included in broader discussions of the depiction of a variety of subject matter.<sup>24</sup> In the latter's article 'Art in Glasgow', the Glasgow School is briefly compared to the Newlyn School, their contemporaries; a short history of the group is given; and an overview of the main achievements of the Boys is provided, again highlighting their use of colour.<sup>25</sup> Both articles include a short remark on Cameron's work as a painter.

In early-twentieth-century periodicals, Cameron was further highlighted in 'Landscape in England' written by Adam Palgrave, author for *The Connoisseur*.<sup>26</sup> In the article, the Glasgow School is referenced with regards to their colouristic attitude towards landscape painting. Special attention is paid to Cameron and Robert Macaulay Stevenson (1854-1952). Of the latter it is remarked that 'no one it seems to me [Palgrave] has retained so much of the greatness of the past masters, and has grafted so much of the new spirit.' Furthermore, Percy Bate writing in *The Magazine of Art* includes a description of the Glasgow School

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<sup>23</sup> 'A Phase of Scottish Art', *The Art Journal*, 1894 79; 'Art in Scotland', *The Magazine of Art*, 1896, 330-331.

<sup>24</sup> 'The Scottish School of Painting', *Blackwood's Magazine*, 1895, 343-350.

<sup>25</sup> Robins Pennell, 'Art in Glasgow', *Harper Magazine*, 1895, 412-420.

<sup>26</sup> Palgrave, 'Landscape in England', *The Connoisseur*, 1904, 137-140.

whose work has matured to warrant ‘respectful consideration’ if not ‘complete acceptance’.<sup>27</sup> In these mature works the artists still adhere to the principles which they had first expressed in an exaggerated manner as a protest against the academic traditions. Highlighted in Bate’s article are Macaulay Stevenson, Roche, and Cameron. It is remarked of both Cameron and Roche that their work contains ‘a very real poetic motive’. An image of *The Fairy Madeline* illustrates the influence of Rossetti and Matthijs Maris as well as being an original and personal composition.<sup>28</sup>

In late-nineteenth- and early-twentieth-century literature, the Glasgow Boys including Cameron are recognised for their significant contribution to Scottish art. They are included in broader discussion on developments in the British art world as well as in histories of Scottish art specifically, and the development of a ‘modern’ Scottish style. Moreover, each of these period publications employs a broad definition of the term ‘Glasgow School’, and often includes a large number of artists. Although certain artists feature more often than others, little to no distinction is made between who is believed to be a ‘true’ Glasgow Boy or an associate. Artists are included for their contribution to the development of art in Scotland, with differences in the selection of artists based on the subjects discussed, for example landscape or portrait painting. In contrast, in modern literature, the Glasgow Boys are given less prominence in the history of British and Scottish art and a narrower view of who can be considered a Glasgow Boy is taken. This is discussed in more detail below.

Modern literature on British and Scottish art of the nineteenth to early twentieth century is represented in a variety of publications: overviews of artistic and stylistic developments, including those focused on a specific art form, that is painting or mural painting; and discussions of themes, for instance national identity or the depiction of labour. Each of these publications provides insight

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<sup>27</sup> Bate, ‘Some Recent Glasgow Painting: An Appreciation’, *The Magazine of Art*, 1904, 305-306.

<sup>28</sup> Bate, 307-308.

into the artistic landscape in which the Glasgow Boys and Cameron developed, and aid in understanding how they compare to the art of their time. Moreover, they add to the discussions on their place within the artistic landscape.

Art-historical reviews of the development of Scottish art focus on the transition from historic genre painting and the grand views of the Highlands in a Neo-classical style to a more realistic depiction in contemporary genre painting, and a more emotive depiction of the Scottish landscape.<sup>29</sup> This is typically followed by a description of the move towards a more colouristic and decorative approach to the depiction of contemporary life. It is in the transition from the realistic depiction to the colouristic and decorative approach that the Glasgow Boys are included in this literature. The Glasgow Boys are considered the transition generation that paved the way during their more avant-garde years in the 1880s and early 1890s for the Colourists and the decorative art of the Mackintosh group, the Four.<sup>30</sup> However, the Glasgow Boys are generally no longer included in the discussion on Scottish art after 1895, generally considered the year the group dispersed and lost their avant-garde qualities. Their potential impact and influence on the following generations of artists is only marginally discussed if at all. Additionally, in much of the extant literature, attention is paid to a selection of the Boys and emphasis is placed on the importance of a few of the artists associated with this group, including W.Y. Macgregor, John Lavery, and James Guthrie. Overall, the extant modern literature on Scottish art includes only a

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<sup>29</sup> Hardie, *Scottish Painting: 1837 to the Present*; Macmillan, *Scottish Art in the 20th Century, 1890-2001*; Macmillan, *Scottish Art: 1460-1990*; Macdonald, *Scottish Art*; Arnold and Peters Corbett, *A Companion to British Art: 1600 to the Present*; Caw, *Scottish Painting Past and Present 1620-1908*; Normand, '55° North 3° West: A Panorama from Scotland'; Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900'; McEwan, 'The Dictionary of Scottish Art and Architecture'; Smith, Skipwith, and Foundation, *A History of Scottish Art*.

<sup>30</sup> Hardie, *Scottish Painting: 1837 to the Present*; Macmillan, *Scottish Art in the 20th Century, 1890-2001*; Macmillan, *Scottish Art: 1460-1990*; Macdonald, *Scottish Art*; Arnold and Peters Corbett, *A Companion to British Art: 1600 to the Present*; Caw, *Scottish Painting Past and Present 1620-1908*; Normand, '55° North 3° West: A Panorama from Scotland'; Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900'; McEwan, 'The Dictionary of Scottish Art and Architecture'; Smith, Skipwith, and Foundation, *A History of Scottish Art*.



limited insight into the more rebellious, anti-establishment and ‘innovative’ years of the group.

Willsdon’s overview of British mural painting highlights the revival of interest in medieval wall-painting and fresco techniques in the nineteenth century, inspired by the German Nazarene artists in Rome and Munich.<sup>31</sup> Without an established tradition in mural painting, British artists and patrons looked towards artists abroad, in France and Germany, as well as to historic artists, for instance the Renaissance painters, to find the techniques to be employed.<sup>32</sup> Even though the Glasgow Boys are not considered mural painters, they did contribute to decorative mural schemes. Guthrie, Walton, Lavery and Henry contributed painted panels to the dome of the exhibition venue of the 1888 Glasgow International Exhibition. Roche, Millie Dow, Hornel and Nairn created wall paintings for other halls in the venue.<sup>33</sup> Cameron was involved as overall coordinator with the decorative mural schemes for St. Stephen’s Hall and the Bank of England, discussed in more detail in section 1.1.2. In the literature, the involvement of the Boys with decorative schemes is often considered to be of minor importance and found to be an additional practice. In the discussion of Cameron’s role in the development of the mural paintings at the public buildings, emphasis is placed on the status awarded to him, his concern to achieve an aesthetically unified totality as the artistic coordinator of mural schemes, and his interest in Italian Renaissance art via his role at the British School at Rome in the early twentieth-century.<sup>34</sup> The potential influence of these mural painting practices on the development of style and choice of subject in the work of the Glasgow Boys and Cameron is not explored in the literature. The focus of this research on oil painting has also not allowed for a further exploration of this topic.

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<sup>31</sup> Willsdon, *Mural Painting in Britain, 1840-1940: Image and Meaning*.

<sup>32</sup> Willsdon, *Mural Painting in Britain, 1840-1940: Image and Meaning*, 2-4.

<sup>33</sup> Billcliffe, *The Glasgow Boys*, 188.

<sup>34</sup> Willsdon, 131, 353; Smith, D.Y. *Cameron: The Visions of the Hills*, 95, 99.

A theme that pervades much of the discussion of Scottish art from the late 18<sup>th</sup> century onwards is national identity. In a time of great change as a consequence of the Industrial Revolution but also of societal change, art is felt by Bonehill et al., Young, and Morrison, for example, as something that could be used to express and create a sense of identity. The publication *Old Ways, New Roads*, explores what the influence of the improved infrastructure in Scotland, tourism, and travel literature was on how the depiction of the Highlands was used to shape a Scottish identity by both those visiting the landscape from abroad and by those living in these areas.<sup>35</sup> An exploration of the role of landscape painting at large in creating a national identity is presented in *Painting the Nation*, published in 2003.<sup>36</sup> This publication, too, addresses how the Scottish landscape was used to form a national identity. Another theme that is explored in relation to Scottish art is the depiction of labour, which became a favoured subject in the nineteenth century in British and Scottish art, as is discussed by Tim Barringer.<sup>37</sup> Although the Glasgow Boys, including Cameron, depicted these themes within their art, they are often not included in the wider discussions of these themes as they are not so well-known or considered to be influential. Cameron, especially from 1900 onwards, had a great interest in the Highlands and its relation to Scottish history, as is further discussed in Chapter 5, and had a strong sense of Scottish identity.

Even though this extant literature is relevant to the understanding of and discussion on the Glasgow Boys, the accounts provided in these sources present a limited view on their work and relegate them to only a minor influence. This stands in contrast to the literature from Cameron's own period reviewed above. Contemporary publications dedicated to the Glasgow Boys as a group, or

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<sup>35</sup> Bonehill, Dulau Beveridge, and Leask, *Old Ways New Roads: Travels in Scotland 1720-1832*.

<sup>36</sup> Morrison, *Painting the Nation: Identity and Nationalism in Scottish Painting, 1800-1920*.

<sup>37</sup> Barringer, *Men at Work: Art and Labour in Victorian Britain*.

individual artists from this group, provide greater insight into these artists and relate them more directly to the context of their time.

Little literature exists on the group from the early twentieth century, with the exception of the previously mentioned articles in periodicals and books published in the first decade. The group was largely forgotten for most of the twentieth century. However, interest in the Glasgow Boys started to develop from the mid-twentieth century originating in Scotland, and exhibitions dedicated to the group were organised. Of the six exhibitions identified as taking place from then until 2000, either on the Glasgow Boys or in which they were included, four took place in Scotland. The 1949 exhibition was organised by the British Council in collaboration with the Toledo Museum of Art, Ohio, United States of America, and the National Gallery of Canada, and was shown both in the United Kingdom, London, and in Canada in 1950-1951.<sup>38</sup> The first major exhibition on the Glasgow Boys took place at the Fine Art Society in Edinburgh in 1968 and was accompanied by an exhaustive catalogue in two volumes: volume one describing the artists and their works and the second volume, published in 1971, discussing the history of the group.<sup>39</sup> These volumes made an attempt at describing in-depth who the artists were, the development of this group of artists, the relations between the artists, and their dispersal in the 1890s. It is of note, that in these two volumes, The Scottish Art Council emphasises that the selection of 23 artists, including Cameron, to be discussed as Glasgow Boys is a

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<sup>38</sup> Cursiter et al., *Scottish Painters: A Selection of Works by Contemporary Painters and Their Immediate Predecessors*; Scottish Art Council, *The Glasgow Boys 1880-1900: An Exhibition of Work by the Group of Artists Who Flourished in Glasgow 1880-1900 Art Gallery and Museum, Kelvingrove, Glasgow 5 July-15 September 1968 Volume 1*; Scottish Art Council, *The Glasgow Boys 1880-1900: An Exhibition of Work by the Group of Artists Who Flourished in Glasgow 1880-1900 Art Gallery and Museum, Kelvingrove, Glasgow 5 July-15 September 1968 Volume 2*; Fine Art Society, *The Glasgow School of Painting: Exhibition 4th-29th May*; Fine Art Society, *100 Years of Scottish Painting at The Great King St Gallery 14 April-9 May 1973*; Hill, Fine Art Society, and English Speaking Union Gallery Edinburgh, *100 Years of Scottish Painting .*; Bourne Fine Art, *Scottish Impressionism and Post Impressionism: McTaggart to Fergusson at Bourne Fine Art, Edinburgh Festival 1988*.

<sup>39</sup> Scottish Art Council, *The Glasgow Boys 1880-1900: An Exhibition of Work by the Group of Artists Who Flourished in Glasgow 1880-1900 Art Gallery and Museum, Kelvingrove, Glasgow 5 July-15 September 1968 Volume 1*; Scottish Art Council, *The Glasgow Boys 1880-1900: An Exhibition of Work by the Group of Artists Who Flourished in Glasgow 1880-1900 Art Gallery and Museum, Kelvingrove, Glasgow 5 July-15 September 1968 Volume 2*.

choice and not a definitive list.<sup>40</sup> Despite its relatively in-depth discussion, it appears not to have reawakened the interest in the Glasgow Boys that the Scottish Art Council had hoped to achieve by organising the exhibition and writing the extensive two-volume catalogue.<sup>41</sup> In 1970 a smaller Fine Art Society exhibition was organised, this time in London, which included works of a core group of fifteen Boys - and excluded Cameron (Appendix XI) - identified by their role in the creation of an original artistic style in the 1880s.<sup>42</sup>

As described above, short entries on the Glasgow Boys can be found in publications which focus on the history of British and Scottish art from the 1970s onwards.<sup>43</sup> However, it was not until 1985 that the first comprehensive study on the Glasgow Boys was published, building upon the 1968 exhibition catalogue, and describing in detail their development, style and eventual move away from Glasgow.<sup>44</sup> With it came a wider interest in the Glasgow Boys resulting in numerous publication building upon Billcliffe's research (Appendix VIII), and the organisation of exhibitions on the Glasgow Boys in Scotland and abroad (Appendix IX).

The Boys were placed in relation to the Hague School artists in the exhibition of 2015 at the Drents Museum, the Netherlands,<sup>45</sup> as well as to the French artists of the mid-nineteenth century belonging to the Barbizon School and Jules Bastien-Lepage (1848-1884), and the Impressionists.<sup>46</sup> The French connection, especially

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<sup>40</sup> Scottish Art Council, *The Glasgow Boys 1880-1900: An Exhibition of Work by the Group of Artists Who Flourished in Glasgow 1880-1900 Art Gallery and Museum, Kelvingrove, Glasgow 5 July-15 September 1968 Volume 2*, 7.

<sup>41</sup> Scottish Art Council, *The Glasgow Boys 1880-1900*.

<sup>42</sup> Fine Art Society, *The Glasgow School of Painting: Exhibition 4th-29th May*.

<sup>43</sup> Bird, 'International Glasgow'; Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900'; Eadie, *Movements of Modernity: The Case of Glasgow and Art Nouveau*; Hardie, *Scottish Painting: 1837 to the Present*; Macmillan, *Scottish Art: 1460-1990*; Graham-Dixon, *A History of British Art*; McConkey, *British Impressionism*; Macdonald, *Scottish Art*; Smith, Skipwith, and Foundation, *A History of Scottish Art*; McEwan, 'The Dictionary of Scottish Art and Architecture'; Stephens, *The History of British Art: 1870-Now*; Arnold and Peters Corbett, *A Companion to British Art: 1600 to the Present*; Clarke, Remington, and Palace of Holyroodhouse (Edinburgh Scotland), *Scottish Artists 1750-1900: From Caledonia to the Continent*.

<sup>44</sup> Billcliffe, *The Glasgow Boys; The Glasgow School of Painting 1875-1895*.

<sup>45</sup> Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*.

<sup>46</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*.

the interest of the Glasgow Boys in Bastien-Lepage, has often been highlighted in exhibition catalogues and other publications on the Boys.<sup>47</sup> A permanent gallery dedicated to the Glasgow Boys was opened in Kelvingrove Art Gallery and Museum, Glasgow, in 2011.<sup>48</sup> One work by Cameron, the figure study *Fairy Lilian* (1894-1895), is on display in this gallery. In the 'New Scottish Gallery' at the National Galleries of Scotland, Edinburgh, which opened in 2023, the Glasgow Boys are highlighted in a dedicated section. Cameron does not feature in this section, nor elsewhere in this gallery dedicated to Scottish art from 1800-1945.<sup>49</sup>

### 1.1.1 The Glasgow Boy Artists

In modern literature what defines a Glasgow Boy and how many there were is met with ambiguity. Authors each have their own selection of artists they call the Glasgow Boys, varying from a group of fifteen<sup>50</sup> to as many as twenty-three artists.<sup>51</sup> Even Macaulay Stevenson, one of the artists identified as a Glasgow Boy, changed how many he considered to be in the group from a dozen<sup>52</sup> to twenty-three in a letter written to T.J. Honeyman in 1941.<sup>53</sup> The number identified as Glasgow Boys varies depending on the criteria used to identify the artists, and how strictly they are applied.

In the catalogue for the 1970 Fine Art Society exhibition, a core group of sixteen Glasgow Boys is identified, excluding Cameron.<sup>54</sup> A smaller group is considered to

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<sup>47</sup> Billcliffe, *The Glasgow Boys*; Hardie, *The Glasgow Boys in Your Pocket*; Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys'; Walsh and Stevenson, 'Introducing the Glasgow Boys'; Billcliffe et al., *Glasgow Boys at Kirkcudbright: 1880-1900*; Cameron et al., *Glasgow Boys and Glasgow Girls*; Hodge, *Glasgow Boys; Masterpieces of Art*; Knox, *The Glasgow Girls and Boys*.

<sup>48</sup> 'Glasgow Boys Gallery Opens at Kelvingrove Museum', BBC 20 October 2011.

<sup>49</sup> Visit to the New Scottish Galleries, 16/1/2024; The Glasgow Boy artists included in this gallery can be found in Appendix XI.

<sup>50</sup> Billcliffe, *The Glasgow Boys*.

<sup>51</sup> Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900'; Hodge, *Glasgow Boys; Masterpieces of Art*.

<sup>52</sup> 'Notes', *Scottish Art Review*, 1891.

<sup>53</sup> Hardie, *Scottish Painting: 1837 to the Present*, 80.

<sup>54</sup> Fine Art Society, *The Glasgow School of Painting: Exhibition 4th-29th May, 2*; Edward Arthur Walton (1860-1922), (Sir) James Guthrie (1859-1930), Edward Atkinson Hornel (1864-1933),

be Glasgow Boys by Billcliffe, who only recognises fifteen true Glasgow Boys again excluding Cameron.<sup>55</sup>

Even though there is no consensus, agreement seems to have been reached in the identification of a 'core' group or 'leading figures'. However, no clear reasoning for the selection of this core group is given. Criteria for the determination of artists as a Glasgow Boy were first set out in the 1985 publication by Billcliffe: being amongst the 'vanguard' although he does not explain clearly what this entails, presence in Glasgow in the 1880s, producing artworks throughout this period, and age.<sup>56</sup> Billcliffe does not provide these criteria as a list, but they can be inferred from his reasoning for the inclusion and exclusion of artists as Glasgow Boys. One has to look to the footnotes to find the reasoning for Billcliffe's exclusion of certain artists listed by nineteenth-century authors to be Glasgow Boys.<sup>57</sup> Billcliffe discusses 23 artists in the main body of his book, and he states clearly of only one, J.E. Christie, that he was not a Glasgow Boy, despite being a contemporary. Christie's absence from Glasgow in the 1880s and his more conservative art are cited as the reasons.<sup>58</sup> All other artists referred to in his text are considered to be at least associated with the Glasgow Boys. Of the 26 artists identified in all literature consulted (Appendix VII), only Cameron, Harrington Mann and John Quinton Pringle are not included at all in Billcliffe's discussion.<sup>59</sup> In his reasoning for excluding these artists, he states that Cameron was younger than the Glasgow Boys and only joined them in 1890.<sup>60</sup> No explanation is provided for excluding the other two artists, although it should be noted that John Quinton Pringle, though a contemporary active in Glasgow, has only been referred to in relation to the Glasgow Boys in one

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James Paterson (1854-1932), George Henry (1858-1943), (Sir) John Lavery (1856-1941), Arthur Melville (1855-1904), Joseph Crawhall Jr. (1861-1913), Alexander Roche (1861-1921), David Gauld (1865-1936), William Kennedy (1859-1918), William York Macgregor (1855-1923), Thomas Millie Dow (1848-1919), Robert Macaulay Stevenson (1854-1952), Stuart Park (1862-1933), and John Quinton Pringle (1864-1925). Guthrie, Macgregor, and Lavery were considered to be leaders of this group.

<sup>55</sup> Billcliffe, *The Glasgow Boys*.

<sup>56</sup> Billcliffe, *The Glasgow Boys; The Glasgow School of Painting 1875-1895*.

<sup>57</sup> Billcliffe, *The Glasgow Boys*, 278.

<sup>58</sup> Billcliffe, *The Glasgow Boys*, 151, 278.

<sup>59</sup> Billcliffe, *The Glasgow Boys*.

<sup>60</sup> Billcliffe, *The Glasgow Boys*, 278.

exhibition, *The Glasgow Boys 1870-1910* at the Fine Art Society in Edinburgh 21 July - 28 Aug 2017,<sup>61</sup> in passing in Hodge's and McConkey's publications,<sup>62</sup> and in a comparison to works by Guthrie and John Singer Sargent in Fowle's book.<sup>63</sup> Hardie provides the most expansive discussion on Pringle but does not consider the artist to be a Glasgow Boy.<sup>64</sup>

Even though absence from Glasgow is one of the reasons listed for excluding Christie and Cameron from the Glasgow Boys, this is not an excluding factor for E.A. Hornel who studied in Antwerp in the early 1880s, until 1885, or John Lavery, who studied in Paris.<sup>65</sup> Nor was it seen as a reason to exclude Melville, who was never resident in Glasgow<sup>66</sup>, and was supposedly only drawn to the group in 1884 after seeing works by Guthrie.<sup>67</sup> All of this Billcliffe himself references in his book.<sup>68</sup> Cameron studied at the Glasgow School of Art until 1885 and lived and studied in Edinburgh from 1885 until 1887, being arguably closer than Hornel in Belgium or Melville.<sup>69</sup>

The exclusion of artists based on age is problematic when David Gauld (1865-1936) has been included but Cameron (1865-1945) has not despite being the same age. Gauld is often referred to as a peripheral figure or an associate to the Boys rather than a true Glasgow Boy. This, however, does not prevent his inclusion in modern discussions of the Boys and the move to a more decorative

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<sup>61</sup> The Fine Art Society Ltd., 'The Glasgow Boys 1870-1970 21 July - 28 August 2017 Edinburgh'.

<sup>62</sup> McConkey, *British Impressionism*; Hodge, *Glasgow Boys; Masterpieces of Art*.

<sup>63</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*, 46.

<sup>64</sup> Hardie, *Scottish Painting: 1837 to the Present*, 106.

<sup>65</sup> Hardie, *Scottish Painting: 1837 to the Present*<sup>85</sup>; Fowle, Hamilton, and Melville, *Impressionism & Scotland*.

<sup>66</sup> Billcliffe, *The Glasgow Boys*, 12.

<sup>67</sup> Billcliffe, *The Glasgow Boys*; Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys'; Walsh and Stevenson, 'Introducing the Glasgow Boys'; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*; McConkey et al., *Arthur Melville: Adventures in Colour*; Knox, *The Glasgow Girls and Boys*; Hardie, *Scottish Painting: 1837 to the Present*, 85.

<sup>68</sup> Billcliffe, *The Glasgow Boys*, 12.

<sup>69</sup> Glasgow School of Art, Item GSAA/REG/2/1 - Alphabetical register of students 1881-1892; Correspondence with RSA archivist and Application letters by Cameron to the Life Classes at the Royal Scottish Academy 1884 and 1885.

style also seen in the work of Hornel and Henry.<sup>70</sup> In comparison, Cameron, where he has been included, is referred to in a few sentences only. In the Dutch catalogue for the 2017 exhibition, *The Glasgow Boys: Schots Impressionisme 1880-1900*, Cameron is mentioned once alongside Guthrie and Lavery, who independent from Cameron, also travelled to the Netherlands in 1892.<sup>71</sup> Further mention of Cameron occurs when he is listed as one of the Glasgow artists, together with Crawhall, Millie Dow, Gauld, Guthrie, Lavery, Melville, Roche and Walton, exhibiting at the newly opened Grafton Gallery in London in 1893.<sup>72</sup>

Another reason given by Billcliffe for excluding Cameron is that he did not exhibit with the Boys at the Grosvenor Gallery or the Munich Exhibition in 1890.<sup>73</sup> Nor was he part of the slightly later Chicago exhibition in 1895. However, the exhibition catalogue of the 1895 Chicago exhibition states that Cameron was one of the Glasgow School artists and that he was not represented in the exhibition because he unfortunately did not have any works at his disposal to include at the time.<sup>74</sup>

Later authors, appearing to follow Billcliffe's criteria, include the same core group of artists with the inclusion and exclusion of 'peripheral' artists depending on the topic of the publication.<sup>75</sup> Fowle discusses the smallest number of seventeen Glasgow Boys in her discussion of the reception and understanding of Impressionism in Scotland.<sup>76</sup> However, in the published literature, as with Billcliffe's publication, the reasoning provided for the inclusion or exclusion of artists needs to be inferred and is not clearly stated.

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<sup>70</sup> Billcliffe, *The Glasgow Boys*, 235-240; Walsh and Stevenson, 'Introducing the Glasgow Boys'; Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys'; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*, 135; Knox, *The Glasgow Girls and Boys*, 54-55.

<sup>71</sup> Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*, 177.

<sup>72</sup> Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys', 107.

<sup>73</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 24.

<sup>74</sup> Kurtz, *The Glasgow School Artists of Denmark and Some Others*, 11.

<sup>75</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*; Hardie, *The Glasgow Boys in Your Pocket*; Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys'; Walsh and Stevenson, 'Introducing the Glasgow Boys'; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*; Hodge, *Glasgow Boys: Masterpieces of Art*; Knox, *The Glasgow Girls and Boys*.

<sup>76</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*.



The 'core' group of artists who are most frequently referred to in publications and included in exhibitions of the Glasgow Boys consists of James Guthrie (1859-1930), E.A. Walton (1860-1922), Joseph Crawhall (1861-1913), James Paterson (1854-1932), John Lavery (1856-1941), William York Macgregor (1855-1921), George Henry (1858-1943), E.A. Hornel (1864-1933), Arthur Melville (1855-1904), and William Kennedy (1859-1918). Alexander Roche (1861-1921), Thomas Millie Dow (1848-1919) and David Gauld (1865-1936), though not appearing quite as often as the 'core' group, are considered as other members of the Glasgow Boys.

The identification of this core group, the discussion of the development of this group, and the position in Scottish art history awarded them contrasts strongly with period writing discussing the reception of Cameron and the Glasgow Boys, as described above.<sup>77</sup> Significantly, Cameron was considered part of the Glasgow Boys by contemporaries but since Billcliffe's publication in 1985, even though work of his was included in exhibitions since 2000, Cameron has been largely ignored in writing on the Glasgow Boys.

### 1.1.2 David Young Cameron

As we have begun to see, the literature on Cameron is sparse, whether in publications on the Glasgow Boys as described above, or in publications on the history of Scottish art.<sup>78</sup> There is little on his art as such, although his work is included in a number of period and modern publications on British etching that describe Cameron as an eminent exponent of the technique whose work was

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<sup>77</sup> Brown and Annan, *The Glasgow School of Painters*; Martin and Newbery, *The Glasgow School of Painting*, 1897; 'The Scottish School of Painting', *Blackwood's Magazine*, 1895; Robins Pennell, 'Art in Glasgow', *Harper's Magazine*, 1895.

<sup>78</sup> Macmillan, *Scottish Art: 1460-1990*, 102-103; Macdonald, *Scottish Art*, 147-148, 179.

greatly admired.<sup>79</sup> In these publications, the technique Cameron uses in the creation of his etchings is discussed in relation to the influence of etchers of the previous generation, including Whistler. Some attention is also typically paid to the influence Cameron had as an etcher on etchers of the following generations. As may be expected, Cameron's activities as a painter are referenced only briefly in the dictionary entry in Lister's *Prints and Printmaking: A Dictionary and Handbook of the Art in Nineteenth-Century Britain*.<sup>80</sup>

Smith's monograph of 1992 is the most comprehensive publication discussing Cameron's development as an etcher and a painter. Smith brings to the fore the changes Cameron made in his art, both in subject matter and tonality, as well as the development of Cameron as a person of importance within the British art world, and key member of the staff at the British School at Rome.<sup>81</sup> It must be noted that since the publication of Smith's monograph, new information on Cameron has become available in digital sources, for instance digital reproductions of exhibition catalogues from foreign galleries and auction records, and in archives, most importantly the unpublished biography of George Renfrew Wilson, whose notes include personal communication with the artist's friends and family.<sup>82</sup> This thesis is believed to be the first study to explore the insights into Cameron's art provided by the Renfrew Wilson biography. The information provided by these sources sheds new light on the paintings Cameron produced early in his career (late 1880s-1890s), the period often used to argue for his exclusion as a Glasgow Boy.

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<sup>79</sup> Zigrosser, *The Book of Fine Prints: An Anthology of Printed Pictures and Introduction to the Study of Graphic Art in the West and the East*; Eichenberg, *The Art of the Print: Masterpieces, History, Techniques*; Godfrey, *Printmaking in Britain: A General History from Its Beginnings to the Present Day*; Lister, *Prints and Printmaking: A Dictionary and Handbook of the Art in Nineteenth-Century Britain*; Lister, *Great Images of British Printmaking: A Descriptive Catalogue, 1789-1939*; Garton, *British Printmakers, 1855-1955: A Century of Printmaking from the Etching Revival to St Ives*; Spangenberg and Museum, *Six Centuries of Master Prints: Treasures from the Herbert Greer French Collection*.

<sup>80</sup> Lister, *Prints and Printmaking: A Dictionary and Handbook of the Art in Nineteenth-Century Britain*.

<sup>81</sup> Smith, D.Y. *Cameron: The Visions of the Hills*.

<sup>82</sup> NLS ACC13488 Papers of George Renfrew Wilson relating to his unpublished biography of David Young Cameron.

Cameron's status within the art world led him to receive the job of 'Master Painter' for St. Stephen's Hall (1921-1927) and the Bank of England (late 1927-1937); a role in which he was responsible for coordinating the new suites of mural painting for the buildings.<sup>83</sup>

A brief general overview of Cameron and his work can be found in catalogues of exhibitions that took place after his death, which describe his life and achievements, as well as presenting an admiration for his prowess in oil, watercolour and etching.<sup>84</sup> The early catalogues include descriptions of Cameron's character stating that he was a charming, kind and generous man who stayed humble even when he became a man of considerable importance in the British art world.<sup>85</sup> One exception to these brief texts is that of the 1990 Fine Art Society written by Bill Smith; this is effectively an outline of Smith's later monograph discussing Cameron's life and achievements as well as the development of his artistic career and style, including influences on Cameron.<sup>86</sup>

Although little information is available on the materials that Cameron used, a description of Cameron's palette and a brief indication of his approach to painting is given in Harold Speed's *The Science and Practice of Oil Painting*, 1924, reprinted as *Oil painting techniques and materials* in 1987.<sup>87</sup> Speed has included Cameron as one of the important artists of the time, perhaps due to his prominence at this time as the artistic coordinator of the St. Stephen's Hall murals. No explanation is given by Speed as to the motivation for including

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<sup>83</sup> Willsdon, *Mural Painting in Britain, 1840-1940: Image and Meaning*, 131, 353.

<sup>84</sup> Another exhibition *Prints by Muirhead Bone, David Y. Cameron, and James McBey*, for which no catalogue has been found, was held at the National Gallery of Art in Washington from February 28 until May 14, 1950, (The National Gallery of Art, no date).; Honeyman and Committee, *A Selection from the Works of D.Y. Cameron: Paintings, Drawings & Etchings*; Cameron Sir and Auld, 'Sir D.Y. Cameron, 1865-1945: Centenary Exhibition'; Allinson et al., 'Three Scottish Printmakers, Cameron, Bone, and McBey'; Smith, Cameron Sir, and Fine Art Society Edinburgh, *David Young Cameron 1865-1945*.

<sup>85</sup> Honeyman and Committee, *A Selection from the Works of D.Y. Cameron: Paintings, Drawings & Etchings*; Cameron Sir and Auld, 'Sir D.Y. Cameron, 1865-1945: Centenary Exhibition'.

<sup>86</sup> Smith, Cameron Sir, and Fine Art Society Edinburgh, *David Young Cameron 1865-1945*; Smith, *D.Y. Cameron: The Visions of the Hills*.

<sup>87</sup> Speed, *Oil Painting Techniques and Materials*.

Cameron. Speed's account is discussed further in section 5.6. This section, also describes other archival material providing insight into Cameron's materials.

Despite the general exclusion of Cameron in modern Glasgow Boys catalogues and publications, he has been included in various exhibitions in both the United Kingdom and the United States (Appendix X), in the Glasgow Boys exhibition *A Spirit of Rebellion* (2016-2018), and in the permanent gallery at Kelvingrove Art Gallery and Museum (2011). This indicates that he has not been completely forgotten and that he does have at least an association with the Boys. Most of the exhibitions since 2000 that have included works, prints, watercolours and oils by Cameron, were organised by the Fine Art Society in Edinburgh. Only one solo exhibition on Cameron has been organised at the Scottish National Gallery of Modern Art: *The Spirit of Line: D.Y. Cameron at 150* from 24 October 2015 until 21 February 2016. This exhibition showcased prints and watercolours by Cameron but did not include oil paintings.<sup>88</sup> This exhibition was organised as a celebration of the 150<sup>th</sup> anniversary of his birth. It recognises Cameron's exceptional gift in printmaking and the influence he has exerted in this medium, establishing him as one of the most influential and gifted Scottish printmakers.

### 1.1.3 Technical Analysis Literature of Nineteenth Century Materials and European Artists

Technical examination of Scottish art of this time period has not been conducted to any great extent. Research into the Scottish Colourists' materials and methods has been ongoing at the Kelvin Centre and The Hunterian.<sup>89</sup> Little other extensive technical examination has been conducted on Scottish art of the late nineteenth century. In contrast, the materials and methods of more well-known

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<sup>88</sup> Mutual Art, 'David Young Cameron Exhibitions'.

<sup>89</sup> Richter and Smith, 'Making and Meaning: The Scottish Colourists in The Hunterian'.

artists, including Whistler<sup>90</sup>, Turner<sup>91</sup>, and the Pre-Raphaelite Brotherhood<sup>92</sup>, have been studied extensively.<sup>93</sup> Furthermore, the work of the Impressionists<sup>94</sup>, the Barbizon School<sup>95</sup> and Matthijs Maris of the Hague School<sup>96</sup> have been technically examined.

Literature on the materials available in the nineteenth century has been published, with focus on adulterations and substitutions<sup>97</sup>, recipes supplied in handbooks<sup>98</sup>, materials used by oil painters<sup>99</sup>, paint driers<sup>100</sup>, and the paint medium megilp.<sup>101</sup>

The knowledge that is available on the materials and methods used by the Glasgow Boys is limited to the study of individual works that were examined in preparation for exhibitions, of which only *Audrey and her Goats* by Melville was extensively examined.<sup>102</sup> The research conducted *The Vegetable Stall* by Macgregor was limited to technical imaging.<sup>103</sup> The results of the former have been published, but the limited further research, including that on Macgregor's painting, can only be accessed in object history and conservation files and is

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<sup>90</sup> Townsend, 'Whistler's Oil Painting Materials'; Hermens and Wallert, 'James McNeill Whistler: Fluidity, Finish and Experiment'; Hackney, 'Colour and Tone in Whistler's "Nocturnes" and "Harmonies" 1871-72'; Glazer et al., 'Whistler in Watercolor: Lovely Little Games'.

<sup>91</sup> Townsend, 'The Materials of J.M.W. Turner: Pigments'.

<sup>92</sup> Katz, 'William Holman Hunt and the "Pre-Raphaelite Technique"'; Tate, 'Pre-Raphaelite'.

<sup>93</sup> Hackney, Jones, and Townsend, 'Paint and Purpose: A Study of Technique in British Art'; Costaras et al., 'A Changing Art: Nineteenth-Century Painting Practice and Conservation'.

<sup>94</sup> Bomford et al., *Art in the Making: Impressionism*.

<sup>95</sup> Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*.

<sup>96</sup> Hermens et al., 'Matthijs Maris at Work'.

<sup>97</sup> Townsend et al., 'Later Nineteenth Century Pigments: Evidence for Additions and Substitutions'; Carlyle, 'Authenticity and Adulteration: What Materials Were 19th Century Artists Really Using?'

<sup>98</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*.

<sup>99</sup> Townsend, 'The Materials Used by British Oil Painters throughout the Nineteenth Century'.

<sup>100</sup> Carlyle, 'Paint Driers Discussed in 19th-Century British Oil Painting Manuals'.

<sup>101</sup> Townsend et al., 'Nineteenth-Century Paint Media: The Formulation and Properties of Megilps'.

<sup>102</sup> McConkey, Hellen, and Chardon-Marchetto, 'Neither Shakespeare's Audrey nor Nature's Grass; Audrey and Her Goats by Arthur Melville (1855-1904)'.

<sup>103</sup> Visit to NGS to consult conservation files of works by the Glasgow Boys, 14/01/2019.

generally limited to technical photography and visual examination. The knowledge of the materials available in the nineteenth century, in combination with research on the techniques and materials of specific artists provides the comparative material used in this research to contextualize the findings about Cameron's techniques and materials.

## 1.2 Research Questions

To summarise, therefore, the literature reviewed indicates that the Glasgow Boys and their position within the wider Scottish artistic landscape has been explored mainly as a bridge between the previous generation and the Colourists and the Four who are typically seen as more progressive. In discussions on the Glasgow Boys, questions arise about what criteria can be used to define what constitutes a Glasgow Boy and therefore who ought to be considered a Boy. Of particular interest is that the position of Cameron in relation to the Glasgow Boys as a group has been disputed in modern literature, whereas in writing from the late nineteenth and early twentieth centuries, Cameron is included. Even though Cameron's approach to etching has been discussed, his achievements and methods in painting have not received similar attention. The Glasgow Boys and Cameron have not only been marginalised in art historical literature but also in technical examination. This is evidenced by the single extant publication on the materials and methods by one of the Glasgow Boys, Melville. Much remains to be learned about this group of artists.

In an attempt to start filling in the gaps identified in the literature regarding Cameron and his relation to the Glasgow Boys, this research focuses on creating a fuller understanding of selected oil paintings made by the artist, given that oil is the medium with which the Glasgow Boys are traditionally most closely connected. This research investigates the stylistic and ideological developments in Cameron's career, in combination with his materials and methods in order to

reassess Cameron's position in relation to the Glasgow Boys. This is the first technical examination of any of Cameron's oil paintings. Arising from the gaps in the existing literature, the main research questions addressed in this research are:

1. What materials and methods did Cameron employ in his paintings?
2. Did Cameron have a specific methodological approach to painting?

### 1.3 Reading Guide

A holistic, interdisciplinary research methodology, typical for technical art history is used to answer these questions. This methodology, discussed in detail in chapter 2, considers the art historical context in which the artist worked as well as the materials available to the artist and knowledge of the materials and methodologies existent at the time. It then uses this context to interpret and understand the results from the analysis of the oil paintings examined. An in-depth explanation of the choice of works included in this research is given in Chapter 2. A discussion of Cameron's life and achievements, with attention paid to his relationships with other artists of his time, including the Glasgow Boys, is provided in Chapter 3.

The manufacturing processes and availability of materials, specifically of pigments, in the late nineteenth and early twentieth century are discussed in Chapter 4.

In chapter 5 the technical analysis case studies of six paintings from the Hunterian (University of Glasgow) and Perth Museum and Art Gallery and the visual examination of works examined in situ are used to illustrate the development of Cameron's style and subject matter.

Chapter 6 draws together the results obtained from this research and reevaluates Cameron's contribution to the artistic scene of the early twentieth century and his status as a Glasgow Boy.



## 2 Methodology

In the 1960s, it was agreed that scientific examination and the use of replicas was highly important and necessary to be able to make well-informed decisions about art works.<sup>104</sup> Initially integrated in conservation, the conducting of technical examination and the use of reconstructions became a separate discipline, technical art history, as the possibilities of technical examination have grown. This discipline focuses on the understanding of an object without conservation treatment necessarily being a goal. In the early 2000s, ‘the Art Technological Source Research working group’ was founded and sought to establish a holistic methodology based on four pillars: the scientific analysis of cultural heritage objects, art historical research, the study of primary source materials and reconstructions. This is now considered to be the typical methodology of technical art history.<sup>105</sup> The interdisciplinary method ensures that the material findings are understood within the wider historical context. The use of traditional or innovative methods and potential influences on the style or methods used by an artist can thus be identified. The making of reconstructions allows for the testing of hypotheses based on analytical results and adds to a fuller understanding of an artist’s methods. The use of technical examination of art works has since been extensively used to characterise and understand artists’ materials and methods. Therefore, it is this methodology that was used for this research.

### 2.1 Primary Source Research

To understand what materials were available to the artist and what methodologies were common in a specific time period, primary sources, for

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<sup>104</sup> Laudenbacher, ‘Considerations of the Cleaning of Paintings’; Burlington Index, ‘The Burlington Magazine and the National Gallery Cleaning Controversy (1947-1963)’.

<sup>105</sup> Clarke, M. et al., 2005; Kroustallis, S. et al., 2008; Hermens, E., Townsend, J. and Art Technological Source Research (Study group). Symposium Glasgow, S. (3rd), 2009.

instance artists' letters and diaries or artists' manuals and handbooks, as well as colourmen's catalogues, provide a great source of information. Primary source research will be used in the following chapters, mainly conducted at archives and special collections where letters and such handbooks are stored. For this research, letters and diaries by Cameron have been accessed at the University of Glasgow Special Collections and Archive, the National Library of Scotland Special Collections, Edinburgh, and Tate Archive, London. Of particular interest is the inventory taken for the fire insurance of Cameron's house in 1925 which includes a comprehensive list of the books and manuscripts in Cameron's possession.<sup>106</sup> In his will, Cameron left 186 books from his library to the National Galleries of Scotland. Unfortunately, the books have been absorbed into the collection without a specific reference to their donation and therefore the library is unable to identify which books exactly Cameron had left to the NGS. It is probable that among the books donated to the NGS were some of the books listed in the fire insurance inventory. As it was not possible to find and consult the books themselves, it was not possible to see which books appeared more used, and might have been a favourite of Cameron's.

Reviews of exhibitions and articles on artists can be found in period periodicals and newspapers. Some of the most important periodicals of the late-nineteenth and early twentieth century, the *Art Journal* and the *Magazine of Art* among others, have been digitised and are freely available on Archive.org, allowing for an examination of the contemporary reception of an artist's work. Newspaper archives are similarly brought into play in what follows.

## 2.2 Secondary Source Research

Secondary sources are used to provide an art historical context in which the artist researched worked. These sources contain monographs on individual

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<sup>106</sup> NLS ACC8950 Item 31

artists, books on artistic groupings, as well as books providing an overview of a period in art history. Furthermore, exhibition and sales catalogues give an insight into the interest in an artist or a group of artists. In this research, all the above types of sources have been used to understand what research has been conducted and what is known about the Glasgow Boys and Cameron, as reflected in the Literature Review in the Introduction. The art-historical context has also been created using these sources and is given where relevant in the following chapters.

Aside from the art historical secondary sources, literature on technical studies of nineteenth century artists was consulted to contextualise Cameron's materials and methods. This largely focused on English, French and Dutch contemporary artists, including the Barbizon and Hague Schools, the Impressionists, the Pre-Raphaelite Brotherhood, and James McNeill Whistler. This is due to the lack of technical research that has been conducted on Scottish artists' materials and methods, see the Literature Review. Consequently, the conclusions drawn about Cameron's materials and methods cannot be compared to those of his contemporaries in Scotland and wider conclusions about Scottish artistic practice cannot be drawn. More research on other Glasgow Boys artists and Scottish artists is required to be able to fully characterise the specific practices of the group and of Scottish art in the late nineteenth-century. In this research, a first glimpse of the materials and methods of a Scottish nineteenth-century artist is explored.

The notes and text of the unpublished biography of Cameron written by George Renfrew Wilson (?1900 - ?), engineer, was available for consultation at the National Library of Scotland. This source, donated to the library in 2014, was not available to Bill Smith when he wrote his monograph in 1992.<sup>107</sup> Included with the biography is correspondence with friends and family of Cameron, including his

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<sup>107</sup> NLS ACC13488 Presented, 2014, Francesca Boyd Renfrew through the good offices of Irena A Stewart, Edinburgh. 25 February 2014

sister Katharine. In these letters references are made to Cameron's friendships and some of his material use. Although much of this information is anecdotal, it presents an insight into the relationships Cameron had, and into his working mind.

### 2.3 Works Selected

Key works by Cameron were identified within The Hunterian collection to be technically examined. A key work is a signed work with a clear provenance linking the artist directly to the work. Cameron did not commonly sign his paintings with a date; therefore, this could not be used as an added characteristic of a key work.

The works selected for technical examination in this study encompass most of Cameron's career, and are found in two collections: The Hunterian (Glasgow University), and Perth Museum and Art Gallery. The earliest work, *Winter near Liberton, Midlothian* dates from circa 1890 and the latest work, *The Wilds of Assynt*, dates from 1936. The other works represent his work from the 1890s, *A French Harbour* (1894), the early twentieth century, *Cloister at Montivilliers* (1903-1908) and the period following this, *Uplands in Lorne* and *Morning in Lorne* (both undated).

Of the six Cameron paintings within The Hunterian collections, four were selected to be analysed. The other two paintings part of The Hunterian collection could not be examined as they are on display in areas that cannot be easily accessed. One painting, *A Castle on Mull*, is on display at the top of a staircase near the ceiling where it is not possible to get a close-up view of the painting or to reach it. The other painting, *Affrick*, is on display within the Principal's lodgings which are occupied by the current Principal.

The four works are *A French Harbour* (GLAHA43429), *Cloister at Montivilliers* (GLAHA43431), *Uplands in Lorne* (GLAHA43427), and *Morning in Lorne* (GLAHA43432). Three of these works are signed. The fourth work, *A French Harbour*, is not signed but has a clear provenance and mention of the work in an exhibition catalogue has been found.<sup>108</sup> The provenance of all these works can be traced from the artist to The Hunterian collection (Appendix XVIII). Often, evidence of the works having passed through the hands of Cameron's agents or art dealers (Chapter section 3.4 Cameron's Agents and Art Dealers) has been found.

Additional to The Hunterian works, two paintings at Perth Museum and Art Gallery were technically examined in situ, *The Wilds of Assynt* (2-28) and *Winter near Liberton, Midlothian* (9-28), and a paintbox (5BM1946) owned by Cameron was also technically examined. An overview of the analysis conducted and the results can be found in Appendix XVI. The conservation treatment of *Fairy Lilian* (1894-1895, Kelvingrove Museum and Art Gallery) at the Glasgow Museum Resource Centre offered the opportunity to study the work unframed and unglazed. Moreover, a number of Cameron's paintings were visually examined in situ in the stores of the National Galleries of Scotland, Glasgow Museum Resource Centre, and Perth Museum and Art Gallery. As the majority of these works was glazed and framed, the examination was limited to visible light without magnification. An overview of the works examined in situ and the examination conducted can be found in Appendix XVII.

The works selected present only a small section of Cameron's work, focusing mainly on landscape. It was not possible to technically examine any figural works. Although the intention was to study more paintings in detail than the six examined, the COVID-19 pandemic limited the access to works in external

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<sup>108</sup> Billcliffe and Royal Institute of the Fine Arts Glasgow, *The Royal Glasgow Institute of the Fine Arts 1861-1989: A Dictionary of Exhibitors at the Annual Exhibitions of the Royal Glasgow Institute of the Fine Arts*.

collections. Where possible, Cameron's paintings have been visually examined in situ in store or on display. The information gathered from this examination, however, is more limited than the extensive and detailed analysis conducted on The Hunterian and Perth paintings. Despite the challenges regarding access to paintings in external institutions, an attempt has been made to include works from all periods of Cameron's career and all subjects in the review of his style, and the wider discussion of Cameron as an artist.

All paintings that could be technically examined, were analysed following the steps laid out in the following section.

## 2.4 Technical Analysis Methodology

The third and fourth pillar, technical analysis and reconstructions, of the technical art history methodology are closely related. Using technical analysis, the objects themselves become an invaluable source of information about an artist's materials and practices. Scientific analysis of a painting or a paint sample can reveal much about the pigments and binding media used as well as the paint layer structure. The results obtained from the analysis can then be used to understand the methodology used by the artist to create his painting. Reconstructions can further the understanding of methodologies through the practical application of these methods, or can be used for the acquisition of reference data which can aid with the interpretation of data collected from the real objects.

Technical analysis was conducted on the key works within The Hunterian collections, and on two paintings and a paintbox in the collection of Perth Museum and Art Gallery (see paragraph 2.3). A stepwise approach was used, starting with non-invasive analysis which provided approximate preliminary results and ending with the most detailed, micro-invasive analysis. This ensured

that the impact of the analysis on the artwork was minimised. The combination of these non-invasive and invasive techniques allowed for the identification of pigments and binding media and the approximate built up of the paint layers, as well as an understanding of the paint application.

Analytical techniques have been used in the study of cultural heritage materials since the early twentieth century.<sup>109</sup> They have been used to examine the state of objects; understand the degradation processes undergone by objects; study any previous conservation treatments or alterations applied; and to better understand the materials used in their creation. The research detailed in this thesis consulted: general books and overviews which helped determine the most appropriate techniques, and their advantages and limitations for cultural heritage materials in general<sup>110</sup> and for paintings specifically<sup>111</sup>; technique specific books and articles, which describe the key techniques and their considerations and applications in detail which informed the technical considerations and interpretation of the results, for instance for X-radiography<sup>112</sup>, and X-ray Fluorescence<sup>113</sup>; publications related to case studies of specific objects and artists' materials, published in books and field specific journals<sup>114</sup>, among others *Studies in Conservation*, the *National Gallery Technical*

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<sup>109</sup> Stoner, J.H. and Rushfield, R., 2012, 341.

<sup>110</sup> Stuart, B.H., 2007; Pinna, D., Galeotti, M. and Mazzeo, R., 2009; Artioli, G., 2010; Varella, E., 2012; Mazzeo, R., 2017; Bastidas, D.M. and Cano, E., 2018; Garside, P. and Richardson, E., 2019; D'Amico, S. and Venuti, V., 2022.

<sup>111</sup> Pinna, Galeotti, and Mazzeo, 'Scientific Examination for the Investigation of Paintings: A Handbook for Conservator-Restorers'; Groen and Duijn, 'Paintings in the Laboratory: Scientific Examination for Art History and Conservation'; Stoner and Rushfield, *Conservation of Easel Paintings*.

<sup>112</sup> Lang and Middleton, 'Radiography of Cultural Material'.

<sup>113</sup> Szökefalvi-Nagy et al., 'Non-Destructive XRF Analysis of Paintings', 2004; Bezur et al., *Handheld XRF in Cultural Heritage: A Practical Workbook for Conservators*.

<sup>114</sup> Townsend et al., 'Nineteenth-Century Paint Media: The Formulation and Properties of Megilps'; Feller et al., 'Artists' Pigments: A Handbook of Their History and Characteristics'; Carlyle, 'Authenticity and Adulteration: What Materials Were 19th Century Artists Really Using?'; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*; Townsend, 'The Materials Used by British Oil Painters throughout the Nineteenth Century'; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*; White and Kirby, 'A Survey of Nineteenth- and Early Twentieth-Century Varnish Compositions Found on a Selection of Paintings in the National Gallery Collection';

Bulletin, and the Burlington Magazine, and in more recent years as part of exhibition catalogues, for instance the ‘Art in the Making’ series<sup>115</sup>, which informed the interpretation of the results and provided a broader context.

Each technique used as part of the technical examination provides unique information about the aspects or materials in a cultural heritage object, and therefore, a combination of analytical techniques is used to create a fuller understanding of the object as a whole, and strengthen hypotheses and results.<sup>116</sup> The specifications of the analytical equipment used for this research can be found in Appendix XII.

#### 2.4.1 Technical Imaging

For this research, both the recto and verso of the paintings were photographed in visible light with a colour reference chart to create records of the object. Damages, exhibition labels or colourmen’s stamps were photographed as details. Two LED lights (6500±200K) were placed at approximately 45-degree angles to the painting on an easel to illuminate its surface. One significant issue facing visible light photography is the appearance of ‘glare’ - which is caused by glossy surfaces reflecting more light. When the paint surface of a work was highly glossy, the positions of the LED lights were adjusted to reduce glare. Where this

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Gettens et al., *Artists’ Pigments: A Handbook of Their History and Characteristics Volume 2*; Riederer et al., *Artists’ Pigments: A Handbook of Their History and Characteristics Volume 3*; Winter et al., *Artist. Pigment. A Handb. Their Hist. Charact. Vol. 4*; Eastaugh et al., *Pigment Compendium: A Dictionary of Historical Pigments*; Kirby, Spring, and Higgitt, ‘The Technology of Eighteenth- and Nineteenth-Century Red Lake Pigments’; Costaras et al., ‘A Changing Art: Nineteenth-Century Painting Practice and Conservation’.

<sup>115</sup> Bomford et al., *Art in the Making: Impressionism*; Bomford, *Art in the Making: Degas*; Bomford, Brown, and Roy, ‘Art in the Making: Rembrandt’; Bomford, ‘Art in the Making: Italian Painting before 1400’.

<sup>116</sup> Trentelman, K., 2017, 249.



was deemed insufficient, as was the case for *A French Harbour*, a semi-transparent crepe paper was placed over the light to reduce its brightness.

Where possible, visible light photography was performed on all works analysed for this research. However, paintings in Perth Museum and Art Gallery were examined in the store and it was not possible to conduct similar visible light photography as was conducted in the labs at Glasgow University, due to limitations in lighting, time and space. Detail photographs of areas of interest were taken under the normal light conditions in the collection's store.

#### 2.4.1.1 Raking Light Photography

In raking light photography, the painting is illuminated at an oblique angle from one direction making the texture of the paint surface and distortions of the support more evident. This can more clearly show brushstrokes and impasto, and provide evidence of where alterations may have occurred during the painting process or as a result of conservation treatments.<sup>117</sup>

Raking light images were obtained for all works examined at Glasgow University. The images were illuminated using LED lights (6500±200K). The set-up was repeated so raking light images were taken with the painting illuminated from the right side and from the left side. Depending on the size of the painting, a single light was used or two lights, one placed above the other. Similarly to the approach for visible light photography, the position of the light was adjusted and crepe paper placed over the LED lights when the glossiness of the paint surface caused too much glare and therefore would obscure the texture of the surface.

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<sup>117</sup> Stoner, J.H. and Rushfield, R., 2012, 292-293.

### 2.4.1.2 Ultraviolet Induced Visible Fluorescence

Ultraviolet fluorescence imaging is regularly employed as part of the study of paintings as it can reveal information about surface media and pigments.<sup>118</sup> When a painting is exposed to ultraviolet light, the materials can absorb energy from the light, resulting in an excited state, which is unstable. To return

Spectral energy distribution for longwave BLB UV tube

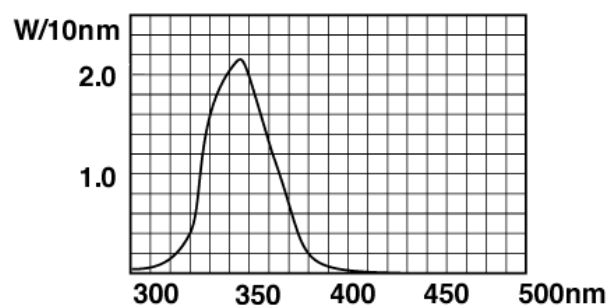


Figure 2.1 Spectral distribution of the UV light.

to a stable condition, the excess energy present in the excited state is emitted as radiation. In the case of ultraviolet induced visible fluorescence, the radiation of the materials occurs at a wavelength in the visible light spectrum.

While relatively simple to perform, the analysis and interpretation of UV fluorescence images is complicated by the complex physical structures of paintings and their mixed media. For example, the fluorescence observed is generally limited to the surface of the object, and therefore its main use is to reveal information about the varnishes and retouchings rather than the pigments. Some varnishes show strong fluorescence, for example a contemporary synthetic varnish fluoresces blue and a degraded natural varnish fluoresces green. Overpaints, when painted on top of the varnish layer or when covered with a thinner varnish layer, can be more easily identified using ultraviolet fluorescence as these areas generally appear black or darker.<sup>119</sup> Where little or no varnish has been applied on a work, ultraviolet fluorescence can aid

<sup>118</sup> Carden, M.L., 1991; Stuart, B.H., 2007, 75; Stoner, J.H. and Rushfield, R., 2012, 295; Measday, D., Walker, C. and Pemberton, B., 2017.

<sup>119</sup> Stoner, J.H. and Rushfield, R., 2012, 295.

in the identification of pigments, for instance a red fluorescence can be seen for vermillion, and yellow for zinc white.<sup>120</sup>

Ultraviolet fluorescent material libraries such as the one compiled by Measday et al.<sup>121</sup>, and the description of pigment behaviour under ultraviolet light in the Pigment Compendium<sup>122</sup> can aid in the interpretation of the fluorescence images.

For this research, two ultraviolet lights in the 355-360nm region(UVA) (Figure 2.1) were placed at an approximately 45 degree angle to the painting. A Kenko UV filter was used with the camera to block the ultraviolet light (absorbs wavelengths up to  $\pm 370\text{nm}$ ) ensuring that only the visible fluorescence from the painting was recorded. Similar to photography with visible light sources, glare was an issue for the highly glossy paintings and the light positions had to be slightly adjusted.

#### 2.4.1.3 Infrared Reflectography (IRR)

Near-infrared radiation (800-2000nm) penetrates through the upper paint layers as the majority of pigments do not absorb or scatter in this region depending on their composition and pigment size.<sup>123</sup> It is only possible to detect infrared absorbing materials, for instance carbon containing pigments or charcoal. If these pigments are present in higher paint layers, they will absorb the radiation and it is not possible to reveal what is underneath this area. Similarly, if the paint layers are thick, they absorb more infrared radiation and may block the detection of any underdrawing material underneath. If an underdrawing is

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<sup>120</sup> Measday, Walker, and Pemberton, 'A Summary of Ultra-Violet Fluorescent Materials Relevant to Conservation'; Stuart, B.H., 2007, 73-74; Stoner, J.H. and Rushfield, R., 2012, 294-295..

<sup>121</sup> Measday, Walker, and Pemberton, 'A Summary of Ultra-Violet Fluorescent Materials Relevant to Conservation'.

<sup>122</sup> Eastaugh et al., *Pigment Compendium: A Dictionary of Historical Pigments*.

<sup>123</sup> Stuart, B.H., 2007, 73; Stoner, J.H. and Rushfield, R., 2012, 296-297.

present but was executed in a non-infrared absorbing material, i.e. red chalk, this will not be revealed using infrared reflectography.

For this research, IRR was conducted on each painting, including the paintings studied at Perth Museum and Art Gallery (fig. 3).



Figure 2.2 Set-up for conducting IRR of *Morning in Lorne* in The Hunterian lab.

Tungsten lamps were used to provide the infrared radiation. The lights were switched off when the set-up was adjusted and the largest possible distance between lights and object was kept to avoid significant heating of the painting. An Opus Apollo infrared camera was controlled via the Apollo software on a laptop. The exposure was adjusted and the F-number, indicating the focal length, was adjusted on the camera itself. The best exposure time and F-number were determined for each individual painting (see Table 1).

Acc. No.	Title	Exposure	F-number
GLAHA43427	<i>Uplands in Lorne</i>	30	8
GLAHA43429	<i>A French Harbour</i>	50	8
GLAHA43431	<i>Cloister at Montivilliers</i>	30	8
GLAHA46432	<i>Morning in Lorne</i>	30	11
9/28	<i>Winter near Liberton, Midlothian</i>	30	8
2/28	<i>The Wilds of Assynt</i>	30	8

Table 2.1 Exposure times and F-number for infrared reflectography.

#### 2.4.1.4 X-Radiography

X-radiography detects dense pigments, for example lead white, and other dense materials, such as wooden stretchers, or tacks. It does this through the interaction of the emitted X-rays with the materials in the painting. Dense materials stop the X-rays from reaching the detector plate and appear white or light grey in X-radiographs, where light materials are easily traversed by the X-rays and these areas appear black. Consequently, X-radiography can provide information about the support used, pigments, and pentimenti.

Even though X-radiography is commonly used to study paintings, only two paintings, *Uplands in Lorne* and *A French Harbour*, were radiographed at 40kV and 1.8mAs and 50kV and 0.8mAs respectively. This was partially due to the late availability of the X-ray system which was acquired by the Kelvin Centre near the end of the technical analysis for this research. Moreover, the radiography conducted on these two paintings provided little extra information that could not be gleaned in other ways. *Uplands in Lorne* was radiographed as a test object for the newly acquired device as it was readily available and there were questions about the presence of a ground layer. The second painting was selected for X-radiography as there is evidence of paint on the verso of this work. X-radiography was used to shed light on the presence of an underlying composition or a composition on the verso.

#### 2.4.1.5 *Processing of Images*

All photographs, reflectograms and radiographs taken were processed using Affinity Photo. Where needed, the photos were straightened and cropped. In colour photographs the white balance was checked with Affinity Photo and adjusted where necessary. The raking light photographs were converted to black-and-white images as this makes the relief captured in raking light more evident. Affinity Photo was also used to mosaic the X-radiographs into one image.

#### 2.4.2 *Microscopy*

##### 2.4.2.1 *Surface Microscopy*

Studying the surface of art works under magnification can provide information on the artist's materials and techniques, the age and condition of the work, and any treatments it may have undergone.<sup>124</sup>

For this examination, a binocular stereomicroscope with a ring light (magnification 0.67 - 4.5x, eyepieces 10x) was used. The paintings were placed flat on the microscope table with protective polystyrene foam underneath the work. Any areas of interest which showed evidence of a particular technique, pigment, underdrawing or that provided information on the condition of the work were photographed using the microscope's camera and a computer. Diagrams indicating the locations of the micrographs used in this thesis are provided in Appendix XXIII. In the captions of surface microscopy images, the total magnification of the objective and the eyepieces is given, that

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<sup>124</sup> Stoner, J.H. and Rushfield, R., 2012, 306-310.

is, if a magnification of 0.67 was used with eyepieces of 10x, the caption states a total magnification of 6.7x.

The observations made during this microscope examination, together with the observations made during examination with the naked eye and during photography, informed the decisions about what further analysis would be carried out and which areas specifically would be investigated.

#### *2.4.2.2 Polarised Light Microscopy*

The high magnification (5x-50x) of a polarised light microscope allows for the study of pigment particles and the layering structure in paint samples. The layer stratigraphy of paint samples shows the order of application and can provide evidence of the paint application, for instance wet-in-wet, and the migration of materials or pigments through the paint layers, as occurs with the formation of metal soaps. The particle morphology of pigments can provide information about which pigment it is. When coupled with fluorescence microscopy, it is possible to study paint samples in ultraviolet light and observe the fluorescence of the materials in the samples.<sup>125</sup>

The Olympus BX40 polarised light microscope (5-50x, eyepieces 10x) was used for the examination and photography of the samples obtained from the paintings and the paintbox. The camera attached to this microscope used to make digital images of the samples has a magnification of 0.67x. Consequently, the magnification embedded in the image is that of the objective times the magnification of the camera, that is if an objective magnification of x10 was used, the magnification embedded in the image is 6.7x. In figure captions, the magnification of the objective times the eyepieces as well as the camera

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<sup>125</sup> Stoner, 317.

magnification is listed as follows:  $100 \times 0.67$  ((objective x eyepieces) x camera magnification).

The microscope has both a visible and an ultraviolet light source allowing for the study of fluorescence in samples. Specifications of the UV light source and the filters built into the microscope can be found in Appendix XII. The built-in camera and a stacking function in the software enabled the in-focus photography of samples. In each micrograph, of sample or paint surface, the magnification as observed by the camera and the ruler bar were imprinted.

### 2.4.3 Sampling

Non-invasive techniques are limited to providing more general information, whereas samples allow for the study of individual particles and paint layers and therefore provide detailed information.

Sampling is invasive and requires removing a small ( $\mu\text{m}$ ) piece from a work of art. To ensure that the paintings were little impacted by sampling, whenever a sample was taken this was done from areas of losses or along the extreme edges, and the number of samples was limited.<sup>126</sup> The samples were kept as small as possible ( $\pm 0.5\text{mm}$ ), taking in consideration the types of analysis to be conducted. Where possible one sample was used for multiple types of analysis. Samples for organic analysis with ATR-FTIR (see below) were taken from areas where questions about the medium arose or where the presence of organic pigments was suspected. Other samples were taken to assess layer stratigraphy of the paintings and were made into cross-sections.<sup>127</sup>

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<sup>126</sup> Garside, P. and Richardson, E., 2019, 49.

<sup>127</sup> Stoner, J.H. and Rushfield, R., 2012, 326-327.



Cross-sections can provide information about the layer stratigraphy, as previously mentioned, ageing processes, and cracking, or show evidence of cleaning and conservation processes.<sup>128</sup> Moreover, the dispersion and size of pigment particles throughout the paint layers can be assessed.<sup>129</sup> When viewed in ultraviolet light, the fluorescence of materials in the sample can be studied and the layer distinction can become more apparent. Further evidence of the presence of media, such as a resin or oil layer, can be found in this manner as well.<sup>130</sup>

A cross-section is cast in a transparent resin block. The resin block is ground and polished until the sample is at the surface of the block and no longer covered by resin, and this surface is smooth. To create the cross-sections for this research, first a label was inserted into the mould and a drop of Technovit resin added to secure the label in place. This was cured in the light-chamber for one-two minutes, after which the mould was filled halfway and cured for a further five minutes. The sample was placed on the resin and the mould further filled until full. The filled mould was placed in the light-chamber to cure for forty to forty-five minutes. After the curing process was complete, the samples were left in a windowsill to further harden overnight. Before grinding and polishing, the samples were washed in acetone to reduce the stickiness of the resin. The cross-sections were ground with rough silicon-carbide (SiC) paper of grades 400 and 800 on a grinding wheel smoothed with water. Subsequently, Micro-Mesh cloths of grades 1800 to 12000 were used to dry polish the samples.

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<sup>128</sup> Ibid., 326.

<sup>129</sup> Ibid., 333.

<sup>130</sup> Ibid., 327.

Diagrams of the sample locations and descriptions can be found in Appendix XXIV. In total, 8 samples were taken from three paintings: *A French Harbour*, *Cloister at Montivilliers*, and *Uplands in Lorne* (see table 2.2).

Title	No. Samples	Technical Methods
<i>Cloister at Montivilliers</i> (The Hunterian, acc. No. GLAHA43431)	3	VIS, UV, RL, IRR, LM, SEM-EDX, ATR-FTIR, pXRF
<i>A French Harbour</i> (The Hunterian, acc. No. GLAHA43429)	4	VIS, UV, RL, IRR, LM, SEM-EDX, ATR-FTIR, pXRF
<i>Uplands in Lorne</i> (The Hunterian, acc. No. GLAHA43432)	1	VIS, UV, RL, IRR, LM, pXRF, mapping-FTIR
<i>Morning in Lorne</i> (The Hunterian, acc. No. GLAHA43427)	-	VIS, UV, RL, IRR, LM, pXRF
<i>The Wilds of Assynt</i> (Perth Museum and Art Gallery, acc. No. 2/28)	-	VIS, IRR, pXRF
<i>Winter near Liberton, Midlothian</i> (Perth Museum and Art Gallery, acc. No. 9/28)	-	VIS, IRR, pXRF

Table 2.2 Overview of samples taken and analysis conducted on the paintings and paintbox examined for this research.

#### 2.4.4 Portable X-ray Fluorescence (pXRF)

X-ray fluorescence (XRF) is an analytical technique that provides information on the elemental composition of an art work.<sup>131</sup> It is non-invasive and non-destructive and requires little to no preparation of the material to be analysed. XRF relies on the detection of the energy, fluorescence, released by electrons ‘falling’ from outer to inner atomic shells. The XRF device contains sensors which measure the energy of the fluorescence emissions. Each element has its own typical emission energy, and can therefore be identified. The reading of the

<sup>131</sup> Stuart, B.H., 2007; Stoner, J.H. and Rushfield, R., 2012, 346-347; Garside, P. and Richardson, E., 2019, 27-29; Bezur, A. et al., 2020, 17-18.

emissions can be affected by the presence of air, Rayleigh and Compton scattering, and absorption of the X-ray energies within the sample.<sup>132</sup>

The interpretation of the data gained with XRF is not straightforward, especially when there is little or no knowledge about the layering structure of a painting. The results include elements related to pigments, and can also include elements from underlayers, from the support, or from dirt embedded in the surface.<sup>133</sup> Peak overlap of elements that generate emissions at similar energies can cause further confusion. This occurs often in the lower energy side of the spectrum where emissions of both low atomic weight elements and higher shell emissions of higher atomic weight elements can be found, for instance the K $\alpha$  and B emissions for sulphur (S) and the M emission for lead (Pb) at  $\pm 2.4$  keV, seen often in the spectra obtained in this research. To distinguish between the elements with peak overlap, it should be remembered that element emission lines always have all the peaks in the series, both the  $\alpha$  and the B peaks are present. If not, the peak may be a sum peak or represent only one of the two elements with peak overlap.<sup>134</sup>

Acc. No.	Title	Ranges	Time/range (sec)	Total run time (sec)
GLAHA43429	<i>A French Harbour</i>	Main, Low, High, Light	5	20
GLAHA43431	<i>Cloister at Montivilliers</i>	Main	20	20
GLAHA43427	<i>Uplands in Lorne</i>	Main, Low, High, Light	15 20 (light)	80
GLAHA46432	<i>Morning in Lorne</i>			
9/28	<i>Winter near Liberton, Midlothian</i>			
2/28	<i>The Wilds of Assynt</i>			

\*The light range was set to run for 20 seconds but because the total run time for each measurement was 80 seconds it ran for 35 seconds in total.

Table 2.3 Specifications of pXRF settings for measurements.

<sup>132</sup> Bezur, A. et al., 2020, 21-22.

<sup>133</sup> Stoner, J.H. and Rushfield, R., 2012, 346.

<sup>134</sup> Bezur, A. et al., 2020, 31-32.

All paintings examined as part of this research were analysed with portable XRF (pXRF). Diagrams of the sites analysed can be found in Appendix XXV. The settings for the pXRF analysis changed during the course of this research as the instrument and its capabilities were better understood (see Table 2.3).<sup>135</sup> The specifications of the analysis conducted can be found in Appendix XII.

Due to the generation of X-ray emissions in this technique, health and safety requirements were kept in place to limit the exposure of the analyst. The pXRF analysis was largely conducted using a tripod and a laptop to remotely control the device (Figure 2.3). The use of a tripod with adjustable height and an extendable arm allowed the analyser to be brought close to the surface of the painting (mm). This set-up was used for all analysis except that of the paintbox. In this instance, the XRF device was controlled via the laptop but held in the hand as near as possible to the surface of the paint in the pots. The handheld use of the device ensured greater control of the angle between device and paint surface which was influenced by how far the lids of the paint pots would open without applying excess pressure. As the pXRF was used in the handheld position, the device may have moved slightly during the reading time, resulting in more noise. However, this is not expected to have affected the quality of the reading significantly.

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<sup>135</sup> The device was acquired by the Kelvin Centre for Conservation and Cultural Heritage Research during the course of this project. The pXRF analysis conducted for this research was among the first analysis to be conducted with this device and therefore its best settings and the analytical protocol had not yet been established before the analysis of the first paintings. When the last pXRF analysis was conducted a protocol had been firmly established.



Figure 2.3 Set-up for pXRF analysis of *Morning in Lorne* in The Hunterian lab.

Background readings were taken of the verso of the paintings to better be able to understand what the detected elements might relate to.

For more details regarding the processing of the pXRF data see appendix XIII ‘Matlab Method for pXRF Processing’. The spectra generated by this technique were interpreted with the help of an X-ray slide rule which shows the typical X-ray peaks of elements and where peak overlap can occur.

#### 2.4.5 Scanning Electron Microscopy - Energy Dispersive X-ray (SEM-EDX)

SEM-EDX has been used to study paint samples since the 1970s.<sup>136</sup> It consists of two complementary analytical techniques: scanning electron microscopy (SEM) and energy dispersive X-ray spectroscopy (EDX). Both techniques measure a specific aspect of the interaction of an electron beam with the sample. This analysis is conducted on a microscale ( $\mu\text{m}$ ). EDX focuses on elemental analysis, whereas SEM provides information on the topography (secondary electron

<sup>136</sup> Stoner, J.H. and Rushfield, R., 2012, 345.

imaging, SE), or the elemental weight of compounds (backscattered electron imaging, BSE).<sup>137</sup> The backscattered electron images are grey scale images in which the heavy weight elements appear white and the lighter elements are proportionally dark. This often clarifies the paint layer stratigraphy and allows for the identification of target particles to be analysed with EDX.<sup>138</sup>

EDX allows for the elemental analysis of target particles and mapping of elements in a selected area. The principle of EDX is the same as that which applies to XRF: identifying elements by measuring the typical X-rays associated with the excess energy of outer shell electrons falling down to an inner shell to fill a vacancy. However, as this analysis is executed on a much smaller scale, at the level of individual pigment particles, it is more precise. In cross-sections it can be used to assess the distribution of elements throughout the paint layers. The element identification can be used for both the identification of pigments and the identification of additives or fillers. SEM-EDX works best for the identification of pigments containing metals. The technique cannot detect the organic compounds of a lake pigment, but it can identify the elements found within the mordant to which this organic compound is bound, for example alum.

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<sup>137</sup> Schreiner, M., Melcher, M. and Uhler, K., 2007, 739; Stoner, J.H. and Rushfield, R., 2012, 345; Garside, P. and Richardson, E., 2019, 29.

<sup>138</sup> Stoner, J.H. and Rushfield, R., 2012, 345.

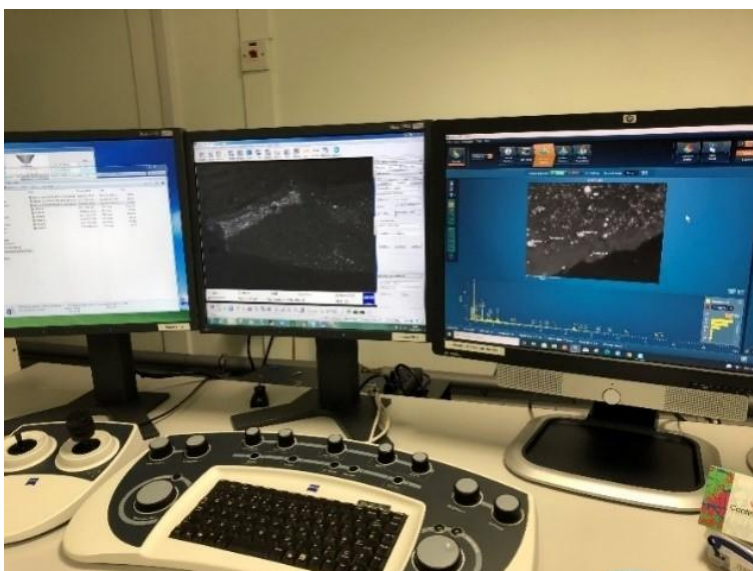


Figure 2.4 SEM-EDX analysis of sample CM3 taken from *Cloister at Montivilliers*.

Paint samples to be analysed with this technique were placed on a stub covered in conductive material, carbon paste. Additionally, the sample, a loose sample or a cross-section, was coated with a conductive material, carbon, to reduce the chance of burning the sample when exposing it to the electron beam. On cross-sections this coating can be removed by polishing.<sup>139</sup>

The data collected with SEM-EDX was used to support and challenge initial conclusions drawn after the pXRF analysis.

#### 2.4.6 Attenuated Total Reflectance - Fourier Transform Infrared Spectroscopy (ATR-FTIR)

Attenuated Total Reflectance - Fourier Transform Infrared Spectroscopy (ATR-FTIR) is an analytical technique which allows for the analysis of the chemistry of materials using the mid-infrared range ( $4000\text{--}500\text{ cm}^{-1}$ ). It requires minute samples to easily and quickly obtain high quality data. Only the surface of the

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<sup>139</sup> Ibid.

sample is analysed using this technique. Due to the pressure applied to the sample, it can be slightly damaged or flattened but can still be used for further analyses, depending on the intended analysis.<sup>140</sup> FTIR was used for the identification of both organic and inorganic materials in samples from the paintings. Microscopic samples from these works were placed on the diamond cell window and pressure applied to ensure good surface contact. All ATR-FTIR spectra are represented in transmission mode unless specified otherwise. After analysis, the samples were removed from the window and placed in a separate vial for potential further analysis.

The interpretation of FTIR data requires knowledge of organic chemistry, specifically of functional groups, and a comprehensive reference library of known materials and mixtures.<sup>141</sup> Reference libraries from the Kelvin Centre for Conservation and Cultural Heritage Research were consulted to aid with the identification of materials and potential deterioration products or chemical changes which occur for instance in aged oil. The bands of individual materials can shift slightly depending on the mixture in which they are found, and with ageing the intensity of the peaks and their location can change.

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<sup>140</sup> Garside, P. and Richardson, E., 2019, 21-22.

<sup>141</sup> Stoner, J.H. and Rushfield, R., 2012, 354.



### 3 Cameron's Life

David Young (D.Y.) Cameron was one of seven children born to Reverend Robert Cameron and Margaret Johnston Robertson Cameron. His father was minister of the Cambridge Street United Presbyterian Church in Glasgow. From a young age Cameron was involved with the Church as president of the Glasgow Young Men's Christian Association and teaching Sunday School.<sup>142</sup> This laid the foundation for his involvement with churches throughout his life. Cameron had one brother and five sisters, one of whom, Katharine (1874-1965) was also an artist, watercolourist and etcher.<sup>143</sup> In becoming an artist, Cameron went against the wishes of his father who refused to pay for his art education.<sup>144</sup> His efforts were well worth it as he became a well-known, respected and admired artist of the late nineteenth and early twentieth centuries.

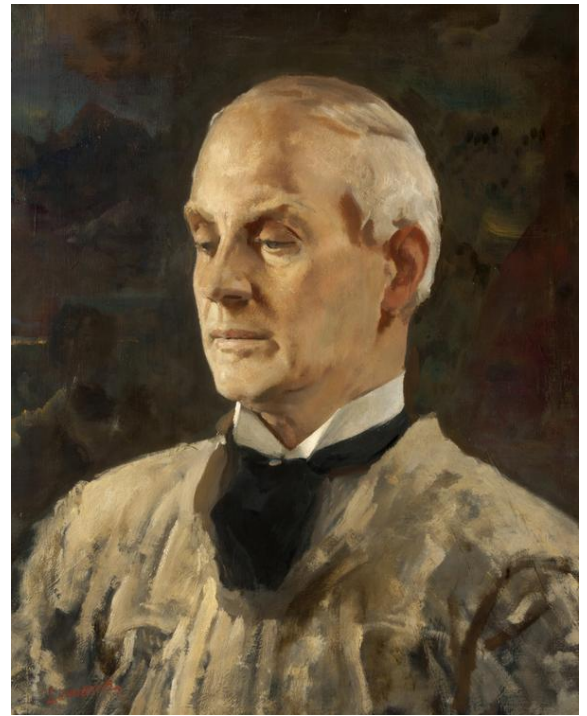


Figure 3.1 Alfred Kingsley Lawrence, Sir David Young Cameron (1865-1945), Artist, 1930s, oil on canvas, 60.9 x 51.3 cm, National Galleries of Scotland: Portrait © Estate of the Artist.

Cameron worked as a teacher to afford his art education. He is thought to have given up this job when he went to Edinburgh for his art studies. Cameron was soon recognised for his etchings, and his work was in demand. In his early career, his subjects included portraits, figure studies, architectural subjects and landscapes. However, it appears he did not feel entirely comfortable painting

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<sup>142</sup> Smith, 13.

<sup>143</sup> Smith, 57-59.

<sup>144</sup> Smith, 16.

portraits and figure studies, giving up these subjects in 1900.<sup>145</sup> Some figures can often still be identified in his landscapes and architecture studies, but they are suggestions rather than detailed studies.<sup>146</sup>

In 1896, Cameron married, Jeanie Ure Maclaurin, with whom he would spend many a happy year until her death in 1931. Together they travelled to France, Italy, Belgium, and further abroad to Egypt.<sup>147</sup> Everywhere they went, Cameron would produce drawings to be made into etchings or paintings. However, no matter where they went or how busy Cameron was with his various official functions, he would always return to Scotland to paint its Highlands.<sup>148</sup> Towards the end of his life, the Scottish landscape became increasingly important to Cameron.<sup>149</sup>

For the first two decades of Cameron's artistic career, Cameron lived mainly in Glasgow with the exception of his student years in Edinburgh, and the short time he and his wife lived in London in 1898 (Appendix II).<sup>150</sup> In 1903, the success of his work allowed him and his wife to move into their own house in Kippen, Stirlingshire, near Glasgow. This house was named Dun Eaglais, the Gaelic for church hill. It was designed by Charles E. Whitelaw, and remodelled and extended in 1913 and 1923-1924 by Alexander Paterson, the brother of Glasgow Boy James Paterson. Here he had a printing room and a studio with a view on the Highlands that were so dear to him. As discussed further below, the studio had views onto the mountains of the Trossachs and Ben Ledi to the north, and

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<sup>145</sup> Smith, 37.

<sup>146</sup> Smith, 68.

<sup>147</sup> Smith, 35, 39, 51, 73.

<sup>148</sup> Smith, 94-95.

<sup>149</sup> Smith, 68.

<sup>150</sup> Billcliffe and Royal Institute of the Fine Arts Glasgow, *The Royal Glasgow Institute of the Fine Arts 1861-1989: A Dictionary of Exhibitors at the Annual Exhibitions of the Royal Glasgow Institute of the Fine Arts*; Laperriere, *The Royal Scottish Academy Exhibitors, 1826-1990: A Dictionary of Artists and Their Work in the Annual Exhibitions of the Royal Scottish Academy*; Smith, *D.Y. Cameron: The Visions of the Hills*, 35.

Stirling Castle and Gargunnock Hill to the east.<sup>151</sup> Whilst living in Kippen, Cameron and his wife were involved in the redecoration of Kippen Church with Cameron in charge of the overall decorative scheme and his wife, a skilled embroiderer, executing designs by Cameron which were sold to raise funds for the church or functioned as decoration for the church.<sup>152</sup> In the 1920s, Cameron's artworks, both paintings and etchings, allowed him to afford the upkeep of his house Dun Eaglais in Kippen, a London house where they stayed often when Cameron's public functions required him to be in London, and a chauffeur to drive them around the United Kingdom and the continent in his Daimler.<sup>153</sup> Cameron gave up the London house and moved back permanently to Kippen after the death of his wife in 1931.<sup>154</sup> At this time he also gave up etching.

### 3.1 Personal library

Cameron's library in Dun Eaglais shows his interests in both contemporary art and that produced in the past. His collection contained many books on art, both on specific artists and on specific time periods, for instance the Renaissance, as well as catalogues in which he was included or of exhibitions he had visited.<sup>155</sup> Writings on Rembrandt and Michelangelo, two artists who Cameron greatly admired and lectured on, and on Van Eyck and Velasquez informed Cameron of the work by the Old Masters. Books on British artists of the nineteenth century, including Joseph Mallord William Turner, George Paul Chalmers and the Pre-Raphaelite Dante Gabrielle Rossetti, also appear in his library. An admiration of the work of Whistler can be seen in the number of books, eleven in total,<sup>156</sup> on his life and work that were part of Cameron's collection. A book on Paul Gauguin and a volume on the Barbizon School indicate an interest in the artists working

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<sup>151</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 46.

<sup>152</sup> Smith, 104-105.

<sup>153</sup> Smith, 49, 91.

<sup>154</sup> Smith, 106.

<sup>155</sup> NLS ACC8950 item 31.

<sup>156</sup> NLS ACC8950 Item 31

in France. Also included in his library were several instruction manuals on the art of painting, drawing and etching, as discussed further in Chapter 6. The artists found in Cameron's library were among the most well-known and influential artists of the nineteenth century. As discussed in Chapter 5, the influence of several of the artists found within his library can be found in Cameron's painting.

### 3.2 Friendships

Katharine, Cameron's younger sister, was known as one of the 'Immortals', a group of women artists studying together at the Glasgow School of Art (GSA).<sup>157</sup> Cameron and Katharine were close and where possible he supported Katharine in her artistic endeavours.<sup>158</sup> It is possible that he met Katharine's artist friends, for instance 'The Four', Charles Rennie Mackintosh, the sisters Margaret and Frances Macdonald, and James Herbert MacNair, and potentially the Dutch Hague School artist Matthijs Maris who Katharine is said to have met several times.<sup>159</sup>

A close friend of Cameron's was the photographer James Craig Annan (1864-1946). The two friends travelled together on two occasions: to The Netherlands in 1892, and to Northern Italy in 1894. It is of note that the few photographs of Cameron and his family identified in archival material were mostly taken by Annan. Cameron's close friendship with the photographer could have easily provided him with access to photographs. However, no evidence has been found, nor implied by Smith, that Cameron used photographs as part of his artistic process. No photographs of potential subjects were identified in archival materials.

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<sup>157</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 59.

<sup>158</sup> Smith, 57.

<sup>159</sup> Smith, 59-61.

Cameron was close friends with fellow Glasgow Boy Guthrie, who he had known since he was 8 or 9 and who Cameron writes 'meant so much to me'.<sup>160</sup> According to Katharine, Cameron called on Crawhall when he had Hornel's studio.<sup>161</sup> This is mentioned in passing, and no reference to a date or year is given. Cameron is not known to have attended the discussions at Macgregor's studio at 134 Bath Street in the 1880s where the Glasgow Boys congregated. However, he knew Macgregor, and later occupied the same studio, taking it over from Guthrie.<sup>162</sup> That Cameron was acquainted with the Glasgow Boys James Paterson and W.Y. Macgregor is clear from the journal entries and letters they've written respectively. In his journal entry of 28 May 1893, Paterson writes that he 'Made more thorough acquaintance of D Y Cameron...to whom personally feel more drawn than any of our other boys...'.<sup>163</sup> Later entries in 1931 indicate that the friendship lasted many years.<sup>164</sup> Macgregor writes in a letter to Paterson of 30 May 1896 that he is still working on a gift for Cameron's wedding: 'Cameron's marriage present looks like a Terris, the sluise is in a very hard state, and the Quarry is as backward in coming forward as ever'.<sup>165</sup> However, this relationship seems to have withered over time as on 4 March 1905 Macgregor writes:

'I thought you knew that my relations with Cameron [~~crossed out and substituted with "X"~~] were the reverse of friendly. I am not going to vote for him, whatever I do. Last night I received a letter from him - Oh the butter! "The finest landscape design he ever saw, well worthy of a place in any permanent gallery among the great things", I wonder what he takes me for? I wont [sic] be fooled in this way, and have sent him an icy reply. Though he should apologise for his conduct when in my house, I would decline to know him. His personality is most abominable, one feels when near him, as if you had been eating chocolate creams for a fortnight

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<sup>160</sup> UofG Special Collections MS MacColl C22 and NLS ACC7797 8/9/1930

<sup>161</sup> NLS ACC13488 Letter by Katherine Cameron to Renfrew Wilson of 15/3/1960.

<sup>162</sup> National Library of Scotland, 'Scottish Post Office Directories', Glasgow 1891-1896.

<sup>163</sup> Paterson Wallace, *The Glasgow Boy James Paterson of Moniaive (1854-1932)*, 153.

<sup>164</sup> Paterson Wallace, 158-161.

<sup>165</sup> Paterson Wallace, 158-161.

without leaving off, and have a strong desire to run to [Pottages?] in Princes Street for a pick me up.'<sup>166</sup>

It is likely that these friendships, while they lasted, offered Cameron an opportunity to discuss art and artistic ideals with his contemporaries who had similar ideals to him.

### 3.3 Artistic Training

Cameron attended evening and morning classes at the Glasgow School of Art from 1881 until 1884, starting during his final year at the Glasgow Academy and continuing when he had found a job in the office of an iron foundry.<sup>167</sup> It is not known exactly which classes he attended, but Smith states that architecture was listed as a subject he was trained in.<sup>168</sup> In 1884 Cameron decided he wanted to become a full-time artist, a decision not supported by his father, and moved to Edinburgh to attend the Royal Scottish Academy School.<sup>169</sup> Although Cameron applied to the classes every year from 1884 until 1886, he was not accepted.<sup>170</sup> Whether Cameron instead attended the Trustees Academy is unknown. Correspondence with Archives and Special Collections at the University of Edinburgh revealed that the registers of the Trustees Academy could not be located and Cameron himself does not write about his education.<sup>171</sup> Exhibition records show that Cameron exhibited with the RSA and the RGI for the first time

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<sup>166</sup> Paterson Wallace, 305-306.

<sup>167</sup> Glasgow School of Art GSAA/REG/2/1, Alphabetical Register of Students 1881-1892; Smith, *D.Y. Cameron: The Visions of the Hills*, 15-16.

<sup>168</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 15.

<sup>169</sup> 'Obituary Sir David Young Cameron', *The Manchester Guardian*, 1945; 'Obituary', *The Times*, 1945; Smith, *D.Y. Cameron: The Visions of the Hills*, 16-17.

<sup>170</sup> Correspondence with Robin Rodger, Documentation Officer at the RSA 07/06/2022: Photocopies of the letters by Cameron requesting admission to the RSA schools in the years 1884-1887.

<sup>171</sup> Correspondence with Lauren McKay at the University of Edinburgh Archives and Special Collections, 12/07/2021.

in 1886 (Appendix V).<sup>172</sup> Unfortunately, the works exhibited are no longer in public collections.

In Edinburgh, Cameron became friends with William Miller Frazer (1864-1961) and William Walls (1860-1942), both of whom attended the RSA schools, and with John Duncan (1866-1945), a passionate explorer and reviver of historic techniques and paint recipes.<sup>173</sup> In a letter from 1941, Frazer writes to Cameron about meeting up with the group to reminisce about their time in Edinburgh, stating that he could 'never forget your [Cameron's] quenchless enthusiasm for work, and your adoration for Paul Chalmers, Pettie + Orchardson.'<sup>174</sup> It is possible that through his friendships with these academic artists with a shared passion for artists of an earlier generation Cameron experienced some of what the RSA classes had to offer. Additionally, the young artists appear to have discussed artists of the previous generation, as is evidenced by Frazer's letter. Information about Cameron's interests in artists and their practice can be further gleaned from his library.

It is not clear how he financed his study or his living in this period as his father did not provide financial support and it is not known if Cameron had a job.<sup>175</sup> Upon his return to Glasgow in 1887, Cameron took up a position as a teacher. In the same year, some of his sketches were seen by George Stevenson, who then taught Cameron how to etch and encouraged him to become a full-time artist, financing him and introducing him to reliable dealers.<sup>176</sup>

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<sup>172</sup> Laperriere, *The Royal Scottish Academy Exhibitors, 1826-1990: A Dictionary of Artists and Their Work in the Annual Exhibitions of the Royal Scottish Academy*; Billcliffe and Royal Institute of the Fine Arts Glasgow, *The Royal Glasgow Institute of the Fine Arts 1861-1989: A Dictionary of Exhibitors at the Annual Exhibitions of the Royal Glasgow Institute of the Fine Arts*.

<sup>173</sup> NLS ACC8950 Item 1 Letter from W.M. Frazer to Cameron 30/11/41.

<sup>174</sup> NLS ACC8950 Item 1 Letter from W.M. Frazer to Cameron 30/11/41; NLS ACC6866 Notebooks of John Duncan.

<sup>175</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 18.

<sup>176</sup> Smith, 18-19.

### 3.4 Cameron's Agents and Art Dealers

In his early career, T. & R. Annan & Sons (1855-2006) acted as his dealer.<sup>177</sup> As described above, the photographer and son of the owner of T. & R. Annan & Sons was a close friend of Cameron.<sup>178</sup> Cameron's paintings were sold by David Croal Thomson (1855-1930) at Barbizon House in London until 1930.<sup>179</sup> Cameron got his first agent in 1899 when he signed an agreement with James Connell & Sons of London (ca. 1906-1914) and Glasgow (ca.1864-1930s).<sup>180</sup> The relationship between Cameron and his agent was not always without issue. In 1900, a dispute about the sale of Cameron's 'London Set' of etchings, sold by Gutekunst in London, resulted in the agreement that Connell & Sons would be the only firm allowed to sell Cameron's etchings in Scotland.<sup>181</sup> Connell & Sons were to sell Cameron's etchings and paintings in both their Glasgow and London galleries until the early 1930s, when the Glasgow Dealer Ian MacNicol (1908-1979) took over as Cameron's agent. MacNicol was to act as Cameron's agent until his death in 1945 but would continue to promote Cameron's work until his own death in 1979.<sup>182</sup> Cameron was friends with or became friends with all the art dealers and agents who sold his work.

### 3.5 Cameron's Studios

In 1892 Cameron took over the studio at 134 Bath Street from Guthrie.<sup>183</sup> This studio had passed from Macgregor to Guthrie and then to Cameron. It was later taken over by other Glasgow Boys and associates. When Macgregor rented this studio, it was considered a convenient gathering place for the Glasgow Boys

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<sup>177</sup> Smith, 98.

<sup>178</sup> Smith, 27.

<sup>179</sup> Smith, 98-99.

<sup>180</sup> Smith, 98.

<sup>181</sup> NLS ACC7797 Item 6.

<sup>182</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 99.

<sup>183</sup> National Library of Scotland, 'Scottish Post Office Directories'.



during the life classes held here from 1882-1885.<sup>184</sup> It is believed that Cameron did not take part in the life drawing classes and discussions that were organised here during this time as there are no records of him attending. It may be that Cameron's evening classes at the GSA and his job prevented him from attending these studio sessions.

In 1895 he moved his studio to 217 West George Street, where he stayed until 1897. It is unknown where Cameron had his studio between 1897 and 1903, when he and his wife moved to Dun Eaglais in Kippen. A printing studio was included in the basement of this house, where Cameron printed the majority of his etchings himself. On the ground floor, a large painting studio was included. Large windows in one wall of the studio presented a view onto the Highlands, as described in the introduction to this chapter. What Cameron's studio practice was is largely unknown. According to Renfrew Wilson, access to Cameron's studios was not easily gained. Those that were allowed entry to the Dun Eaglais studio described it as neat and tidy.

In general it has been assumed that Cameron worked largely from his studios. No evidence of Cameron accompanying other Glasgow Boys on their countryside painting retreats exists. However, these ventures to the lowlands of Scotland, for instance to Cockburnspath in 1883, mostly occurred during the late 1870s and 1880s when Cameron was a student and not yet a full-time artist; some of the other Glasgow Boys were already full-time artists by this time.<sup>185</sup>

Cameron's painting practice from early in his career is largely unknown, and few early works exist in public collections that could illuminate this. It is known that he travelled to the Highlands from letters dating to later in Cameron's life.<sup>186</sup> It

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<sup>184</sup> Billcliffe, *The Glasgow Boys*, 42.

<sup>185</sup> Billcliffe. 94-97; the Glasgow Boys in Cockburnspath were E.A. Walton, Crawall, George Walton, Guthrie, and Whitelaw Hamilton.

<sup>186</sup> Special Collections University of Glasgow MS MacColl C15: a letter from DY Cameron to DS MacColl about his trip to Ben Slioch 26/8/1922.

may have been that he, alongside the detailed sketches created in his sketchbooks, also made small paintings during these trips. The sketchbooks at the National Library of Scotland all date from the 1930s and reveal Cameron's practice later in his life.<sup>187</sup> However, this does not necessarily reflect on his practice from early in his career.

Even though no evidence has been identified in the form of photographs or recollections by Cameron or others, this does not mean that he did not value the practice of working directly from nature and that he did not do so. The studio at Dun Eaglais, with its large windows upon the Highlands, would have allowed Cameron to paint his favourite scenery from the comforts of his studio. The view of Ben Ledi, for instance, can be seen in a number of Cameron's later works, depicting various times of day and seasons, including *Ben Ledi, Late Autumn* (National Galleries of Scotland) (Figure 5.56). It may be possible to consider his painting of the scenery from his window as painting directly from nature, even if he was inside his studio. Cameron's studio practice is further discussed in Chapter 5 with specific reference to his materials and methods.

### 3.6 Artistic Output

Cameron was known for his artistic prowess in both etching and painting with reviews of works in both media speaking well of his efforts. The reviews and articles do not agree on how Cameron started his artistic career, with some stating that he started as a painter,<sup>188</sup> whereas others write that it is as an etcher that Cameron first found artistic success.<sup>189</sup>

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<sup>187</sup> NLS ACC8950 Items 8 and 10.

<sup>188</sup> Wedmore, 'The Etchings of D.Y. Cameron', *The Art Journal*, 1901.

<sup>189</sup> 'Colnaghi', *Manchester Guardian*, 1899, 30.

### 3.6.1 Etching

The encouragement of George Stevenson in 1887 for Cameron to pursue etching, would result in Wedmore's assessment that Cameron be considered one of the greatest etchers who ought to be listed among Méryon, Whistler and Rembrandt.<sup>190</sup> Others certainly agreed with Wedmore's assessment.<sup>191</sup> One anonymous author of *The Art Journal* writes in a critique on the article "Prospects in the Professions" in *Cornhill* in which the state of British art is discussed and viewed quite negatively:

‘Or, again, with craftsmen such as Messrs. D.Y. Cameron, Joseph Pennell, William Strang, to say nothing of veterans like Sir Seymour Haden and Professor Legros in mind, how can the writer assert that “there is at present an absolute lack of British engravers and etchers”?’<sup>192</sup>

However, not all of Cameron's etchings were a great success. A review in the 1901 edition of the *Art Journal* states that the etching *Transept, St. Mark's* was ‘acceptable’.<sup>193</sup> Even Wedmore, a great proponent of Cameron, concedes that not all his etchings were successes, especially in his early years. However, Wedmore states that in ‘all his mature labours’, Cameron's etchings are works made by a master.<sup>194</sup> The admiration for and interest in Cameron's etchings can be seen by the publication of the *catalogue raisonné* by Wedmore<sup>195</sup> and the later catalogue by Frank Rinder of which two editions appeared, with the second including additional etchings made since the first edition.<sup>196</sup> The catalogues included prints of all Cameron's etchings available to date and were considered

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<sup>190</sup> Wedmore, ‘The Etchings of D.Y. Cameron’, *The Art Journal*, 1901.

<sup>191</sup> ‘Exhibitions in London’, *The Art Journal*, 1903, 160.

<sup>192</sup> ‘Passing Events’, *The Art Journal*, 1903, 318.

<sup>193</sup> ‘A Group of London Exhibitions’, *The Art Journal*, 1901, 159.

<sup>194</sup> Wedmore, ‘The Etchings of D.Y. Cameron’, *The Art Journal*, 1901, 291.

<sup>195</sup> Wedmore, *Cameron's Etchings: A Study and a Catalogue*.

<sup>196</sup> Cameron and Rinder, *D.Y. Cameron: An Illustrated Catalogue of His Etched Work, with Introductory Essay & Descriptive Notes on Each Plate*; Rinder, *D.Y. Cameron: An Illustrated Catalogue of His Etchings and Dry-Points, 1887-1932*.

valuable for collectors as they showed which works by Cameron were available. Cameron was particular about how many prints were made from his plates. He printed the etchings himself and destroyed the plates when he had taken as many prints from them as he thought could be made while retaining a sufficient quality.<sup>197</sup> In his letters to the art dealer Connell & Sons, Cameron discusses the prices for his etchings and the number of proofs available for each plate he completes.<sup>198</sup> Occasionally, Cameron mentions that he has some proofs of a plate, but it is not quite finished, and he wishes to work on them a little longer.<sup>199</sup>

Several exhibitions of Cameron's etchings were held in the early twentieth century, mainly in London.<sup>200</sup> *The International Studio* contains advertisements for exhibitions including Cameron's works as well as publications about Cameron and his works.<sup>201</sup> A lecture given on the British School of Etching in 1924 includes Cameron and his etchings, specifically discussing the change from a stark realism to a more imaginative and romantic approach.<sup>202</sup>

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<sup>197</sup> NLS ACC7797 Item 1 letter of 17<sup>th</sup> December 1903 & 13<sup>th</sup> April 1903

<sup>198</sup> NLS ACC7797 Item 1-5.

<sup>199</sup> NLS ACC7797 Item 1-5.

<sup>200</sup> Cameron Sir, *Drawings by D.Y. Cameron: Messrs. MacLehose Have a Small Portfolio of Original Drawings by Mr. D. Y. Cameron for Sale : The Following Are the Drawings Contained in It*; Walker and Cameron Sir, *Catalogue of a Complete Collection of Original Etchings by D.Y. Cameron*; Rinder and James MacLehose & Sons, *D.Y. Cameron's Etchings*; Cameron Sir and Sons, *Catalogue of an Exhibition of Original Etchings by D.Y. Cameron . [et Al.] Held at James Connell & Sons . Glasgow*; Cameron Sir and Finberg, *The Paintings of D.Y. Cameron*; Cameron Sir and Hind, *The Etchings of D.Y. Cameron*; Cameron Sir and Salaman, *Modern Masters of Etching Sir D.Y. Cameron, R.A.*; Cameron Sir and Salaman, *Modern Masters of Etching Sir D.Y. Cameron, R.A., R.S.A. 2nd Volume*; *Fifty Etchings by Sir D.Y. Cameron from the Lady Cameron Collection*.

<sup>201</sup> 'A List of Important Art Books', *The International Studio*, 1908; 'The Print-Collectors Quarterly', *The International Studio*, 1911; 'Albert Roullier Printseller', *The International Studio*, November 1911; 'Albert Roullier Printseller', *The International Studio*, December 1911; 'C.W. Kraushaar Art Galleries', *The International Studio*, 1911; 'C.W. Kraushaar', *The International Studio*, 1912; 'Hill Tolerton', *The International Studio*, 1916; 'Some Artists in Books', *The International Studio*, 1921.

<sup>202</sup> Hardie, *The British School of Etching: Being a Lecture Delivered to the Print Collector's Club*.

### 3.6.2 Oil Painting

Reviews of his oil paintings praised and critiqued Cameron's use of colour and broad handling of various subject matters. His portrayal of figures and landscapes was considered largely decorative and containing a certain romanticism which allied Cameron more to the artists of the previous generation than his contemporaries in France.<sup>203</sup> Contrastingly, it is the use of colour for which Cameron is praised in his works *St. Mark's, Evening* and *Stirling*<sup>204</sup>, *The Valley* and *Early Spring in Tuscany*<sup>205</sup> and *Spring Blossoms, Touraine* and *Dark Angers*.<sup>206</sup> However, the latter work contained some conflicting elements, where the use of highlight and shadow in the bridge and its reflection in the water was deemed insufficient and the sky in the Spring painting may have been too light.<sup>207</sup> Cameron's oil paintings and the critiques on his work are discussed in more detail in Chapter 5 discussing the development of his style and subject matter.

### 3.7 Position in British Art Scene

Cameron was a talented artist but wished to do more than merely produce works of art. He wanted to promote it as well, which he did in his various public appointments. He was a trustee on the board of the Tate, a member of the board of the National Galleries Scotland, the only painter member of the Fine Art Commission, and painter and limner to the King in Scotland among other positions (Appendix III).<sup>208</sup> As official war painter for the Canadian War Memorials

<sup>203</sup> 'Colnaghi', *The Art Journal*, 1899, 30.

<sup>204</sup> 'The Society of Oil Painters', *The Art Journal*, 1901.

<sup>205</sup> 'The New Gallery and the Society of Oil Painters', *The Art Journal*, 1902.

<sup>206</sup> Rinder, 'The London Galleries', *The Art Journal* 1903.

<sup>207</sup> Rinder, 'The London Galleries', *The Art Journal* 1903.

<sup>208</sup> 'The Society of Oil Painters', *The Times*, 9 January 1902; 'Society of Oil Painters', *The Times*, 2 January 1903; 'National Galleries of Scotland', *The Times*, 4 April 1922; 'Royal Fine Art Commission', *The Scotsman*, 4 June 1924; 'King's Birthday Honours', *Financial Times*, 3 June

Fund and the British Pictorial Propaganda Committee (section 5.3.2.3) from 1917-1919, Cameron ventured to the front lines of the Great War and depicted the scenery he encountered. In 1919 Cameron was requested to consider the position of RSA President, taking over from Guthrie. However, he declined, stating his other engagements required too much time to afford the presidency the devotion it deserved.<sup>209</sup> His appointment as a member of the Faculties of Painting and Engraving at the British School in Rome in the same year was one of the aforementioned engagements. This will have placed him in more direct contact with Italian art, including Renaissance art, which may have influenced his painting from this time, as discussed in Chapter 5. His importance to the British art world was marked in an article listing the 26 important artists of the past twenty-five years in 1935 in which Cameron appears alongside other Glasgow Boys, John Lavery, James Guthrie and George Pirie.<sup>210</sup> The appointment of Cameron as 'Master Painter' in the large projects of the redecoration of St. Stephen's Hall and the new building of the Bank of England further emphasise the trust in Cameron's tastes and abilities.<sup>211</sup> Furthermore, Cameron received honorary degrees from the universities of Glasgow, St. Andrews, Cambridge and Manchester.<sup>212</sup>

Cameron strongly argued for the reintegration of decoration into the church, a belief that went against that of the United Presbyterian Church in which he was raised. This is illustrated by the speeches he delivered, for instance 'The Church and Art', his involvement with the redecoration of his local parish church in

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1924; 'Scottish Fine Art Commission', *The Times*, 11 January 1933; 'The King's Painter in Scotland', *The Times*, 1933; 'Trustees For Scottish National Galleries', *The Times*, 8 April 1937; Smith, *D.Y. Cameron: The Visions of the Hills*, 92, 106-107.

<sup>209</sup> Gordon and Philip consort of Elizabeth II, Queen of Great Britain, 'The Royal Scottish Academy of Painting, Sculpture & Architecture, 1826-1976', 194; Smith, *D.Y. Cameron: The Visions of the Hills* 85-86.

<sup>210</sup> Davis, 'Art and Artists of Twenty-Five Years', *Illustrated London News*, 17 April 1935.

<sup>211</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 95-100; Willsdon, *Mural Painting in Britain, 1840-1940: Image and Meaning*, 131, 353.

<sup>212</sup> 'University News', *The Times*, 26 April 1928; 'University News', *The Times*, 27 June 1936; 'Obituary Sir David Young Cameron', *The Manchester Guardian*, 17 September 1945; 'Obituary', *The Times*, 17 September 1945; Smith, *D.Y. Cameron: The Visions of the Hills*, 110.

Kippen<sup>213</sup> and his public appointment as Vice-convenor of the Church of Scotland's Advisory Committee on Artistic Questions.<sup>214</sup> In his speeches, Cameron states that the work of Michelangelo and Rembrandt are examples of a perfect integration of religion and beauty. How this view on art and Christianity influenced his own art is explored further in Chapter 5.

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<sup>213</sup> NLS ACC8950 Item 3.

<sup>214</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 107.

## 4 Pigment Manufacturing in the Nineteenth Century

In the nineteenth century colourmen played an increasingly prominent role as the suppliers of art materials, such as tube paints, brushes, painting supports (see chapter 5 Cameron's Materials and Methods) and painting equipment for instance easels and paintboxes.<sup>215</sup> Colourmen helped develop and commercialize new materials and variations on traditional ones as new pigments were synthesised based on recently discovered metals, for instance chrome, cobalt and cadmium. These were commercially available by the time that Cameron started painting. Furthermore, artists in the nineteenth century moved outdoors to paint *en plein air* increasing the demand for innovative equipment. At the same time the availability of convenient, portable equipment further encouraged artists to make the move outdoors. An example of a convenient product for artists working in a studio as well as outside was a paintbox for instance the watercolour paintbox belonging to Cameron. This paintbox is briefly discussed in this chapter as an example of the material available in the nineteenth century. Detailed technical analysis of this paintbox has taken place and a discussion of these results can be found in Appendix XX.

### 4.1 Artists' Materials

Colourmen sold pigments, paints and the other items necessary to paint. As artists increasingly wished to paint *en plein air* and therefore needed to take their painting equipment with them, colourmen began to supply lighter, foldable easels, parasols to block the sunlight, and small portable paintboxes and palettes.<sup>216</sup> These paintboxes generally contained space for a limited number of paint containers, such as bladders, paint tubes, or watercolour cakes, as well as a compartment for brushes and a mixing palette. The lids of the boxes could be

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<sup>215</sup> Bomford et al., *Art in the Making: Impressionism*. 31-34.

<sup>216</sup> Bomford et al. 31-34.



used as a temporary support for sketching paper or canvas.<sup>217</sup> Jean-Baptiste-Camille Corot took it a step further and painted directly on the inside of the lid.<sup>218</sup> Paintboxes are an incredible source of information when attempting to understand an artist's materials and the materials available at a certain time. Several paintboxes and palettes of nineteenth-century artists have been investigated to better understand their artistic practices: J.M.W. Turner, James McNeill Whistler, Jean Baptiste Camille Corot, and Matthijs Maris, who bought Corot's paintbox.<sup>219</sup> Consequently, Corot's paintbox reveals perhaps more information about Maris' materials than it does Corot's as many of the tubes in the paintbox have been identified to have been added and used by Maris.<sup>220</sup>

It is unknown if Cameron owned any items specifically for painting outdoors, for instance a foldable easel. In several of his letters, Cameron refers to a recent trip to the Highlands, or writes while he is away from home.<sup>221</sup> Portable equipment certainly would have been useful for the artist on his trips into the Highlands, as he describes in a letter of 1922 that they had to traverse a difficult path and most of it was done on pony back.<sup>222</sup> Even though it is unlikely Cameron painted works from start to finish solely outside, it appears he at least had a sketchbook, charcoals, and some watercolour paints with him on his trips to the Highlands. In a sketchbook at the National Library of Scotland, sketches of various Highland landscapes can be seen.<sup>223</sup> All of the sketches were made using a

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<sup>217</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*. 301

<sup>218</sup> Hermens et al., 'Matthijs Maris at Work '. 22.

<sup>219</sup> Hermens et al., "Matthijs Maris at Work ", 22-24; Townsend, "The Materials of J.M.W. Turner: Pigments"; Townsend, "Whistler's Oil Painting Materials."

<sup>220</sup> Hermens et al., 'Matthijs Maris at Work ', 22-24; Hermens et al., 'A Travel Experience: The Corot Painting Box. Mathijs Maris and 19th Century Tube Paints', 115-118.

<sup>221</sup> Special Collections University of Glasgow MS MacColl C15: a letter from DY Cameron to DS MacColl about his trip to Ben Slioch 26/8/1922, MS MacColl C20: a letter from DY Cameron to DS MacColl 27/5/1928, and MS MacColl C21: a postcard send to MacColl from the Highlands.

<sup>222</sup> Special Collections University of Glasgow MS MacColl C15: a letter from DY Cameron to DS MacColl about his trip to Ben Slioch 26/8/1922.

<sup>223</sup> National Library of Scotland Special Collections Acc.8950 item 10 'A Sketchbook containing ca. 10 drawings by Cameron of Scottish Landscapes, 1932'

dry medium, such as charcoal. In some of them, a little watercolour has been used in specific areas to add more detail.

The demand for portable, convenient materials as well as recent developments within industry at large, allowed for the development of new types of materials or alternatives to historical materials. Historically, prepared paint was stored in bladders.<sup>224</sup> Paint could be bought in a bladder from a colourman or, when prepared in the artist's studio, it could be transferred to a bladder for storage. When the paint was to be used, the skin of the bladder could be pierced with a tack after which the paint could be squeezed out. The tack could later be used as a stopper for the hole to avoid paint leaking out. Unfortunately, the bladders, despite using the tack as a stopper, were not airtight and often the paint quickly dried out. In the nineteenth century, new, more convenient manners of storing paint were considered. First brass and glass syringes were suggested.<sup>225</sup> The syringes could be filled with paint in the factory or at the colourman's shop. The paint could be gently expelled by pressing the plunger, and air could be blocked from the syringe by the application of a cap to the nozzle, preventing the paint from drying out quickly. The glass syringes allowed for easy identification of colour but were not ideal for storing lightfast pigments. Additionally, the glass was fragile and could easily break upon transport or dropping of the syringe. Moreover, the cost of these syringes compared to the bladders was high and this might be the reason that the syringes never superseded the use of bladders.<sup>226</sup>

A solution was found in the invention of the collapsible paint tube with a screwcap by John G. Rand in 1841.<sup>227</sup> The thin, shapable tin metal sheets necessary to create these collapsible paint tubes were developed as a result of

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<sup>224</sup> Harley, "Oil Colour Containers: Development Work by Artists and Colourmen in the Nineteenth Century"; Bomford, "Art in the Making: Impressionism "; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 1.

<sup>225</sup> Harley, "Oil Colour Containers: Development Work by Artists and Colourmen in the Nineteenth Century" 2-4; Bomford, "Art in the Making: Impressionism ." 39-40.

<sup>226</sup> Harley, 3.

<sup>227</sup> Harley, 4-6.

the Industrial Revolution. The metal sheets could be shaped like a tube and filled before the end was folded over to seal the tube. A screwcap was attached for easy use, the paint could be easily expelled, and closed off from air after use.<sup>228</sup> The collapsible paint tube was a durable way of storing paint and quickly became the standard. After Rand patented his invention, the colourman Winsor & Newton soon started working on creating their own collapsible paint tube and in 1842 the Winsor & Newton collapsible paint tube was patented.<sup>229</sup> The paint tube became the standard container for oil paints. It is known that Cameron bought ready prepared oil paints in tubes, as is evidenced by his account at Roberson (see Chapter 5). He also acquired powdered pigments, oil and resins, suggesting that he may have prepared or adjusted his paint himself.<sup>230</sup> No reference was found of watercolour paints in the account ledgers.

Watercolour paints were sold in a variety of containers, the new tubes as well as porcelain pans, glass jars or as watercolour cakes; dry blocks of pigment mixed with medium.<sup>231</sup> The artist could dip a brush in water and then gather some of the pigment from the watercolour cakes to apply it to a painting support. Despite these new developments in paint storage and the more common use of watercolour cakes and paint tubes, in Cameron's paintbox a different type of paint container was used. The paintbox includes twelve enamel pots with watercolour paint. On the lids of the pots the names of the pigments are listed. This uncommon storage of the watercolour paint raises questions about who the box was made for and why these types of containers were chosen. This is further discussed in Appendix XX.

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<sup>228</sup> Harley, 6; Bomford, "Art in the Making: Impressionism ." 40.

<sup>229</sup> Winsor & Newton, 'From the Archives: The History of the Metal Paint Tube'; Harley, 'Oil Colour Containers: Development Work by Artists and Colourmen in the Nineteenth Century'., 8.

<sup>230</sup> Hamilton Kerr Institute, Roberson Archive, Account ledgers: HKI MS 136-1993, 137-1993, 138-1993, Drawing materials ledger HKI MS 764-1993.

<sup>231</sup> Doerner, *The Materials of the Artist and Their Use in Painting with Notes on the Techniques of the Old Masters*. 258.

## 4.2 Pigment and Paint Manufacture

Pigment and paint manufacturing in the nineteenth century occurred on a large scale in factories, owned by colourmen or colour manufacturers, rather than artists preparing what they needed from raw, powdered pigments in their studios. Some colourmen had their own paint factories and manufactured their own pigments and paints. However, due to the large variety in pigments, factories specialised in the preparation of specific pigments or the making of paint out of raw materials were also in existence.<sup>232</sup> Some colourmen bought their materials from these factories, such as Winsor & Newton who presumably bought pigments from the chemist George Field (1777-1854).<sup>233</sup>

### 4.2.1 Substitutions and Additions

With the manufacturing process being spread over different companies, it was not always known exactly what the pigment bought by the artist consisted of. Throughout the manufacturing process from raw materials to ground pigment or mixed paint, additions or substitutions could be made either with products that were believed to be more stable and would result in a higher quality paint, or with cheaper alternatives that would reduce the manufacturing costs. Not all substitutions or additions to pure pigments were made with malicious intent or to reduce costs. Some pure pigments that were known to not be lightfast or to have undesirably long drying times, were added to or substituted by pigments that were more lightfast or that had better drying properties. Additionally, the handling properties of paint were considered, and additions were made to

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<sup>232</sup> Bomford et al., *Art in the Making: Impressionism*, 34.

<sup>233</sup> Bomford et al., 34; Harley, 'Field's Manuscripts: Early Nineteenth Century Colour Samples and Fading Tests'. 36.

binders and pigments to better the handling properties of the final tubed paint.<sup>234</sup>

As the paint manufacturing process moved away from artists' studios towards largescale production in factories, artists had to trust that the quality of the material and the pureness of the pigments they bought was as advertised and as the artist expected. Artists, depending on their artistic training, might have had a frame of reference as to how traditional pigments should behave in paint mixtures. For instance, artists who trained in the workshops of senior painters or who were educated at art schools or at the royal academies in London and Edinburgh would have been taught at least a little about their materials. However, an (amateur) artist who did not attend art classes but was self taught would be more reliant on what was commonly available in artists' treatises and manuals and what was advertised by the colourmen.

For both artists who attended art classes and those who did not there was no reference yet for the new pigments developed after the discovery of new elements during the Industrial Revolution. To counteract this colour scientists, colourmen, and artists immediately started working on creating an understanding of their properties, see section 4.2.2.<sup>235</sup> Some of these new pigments appeared to be stable pigments and only time would reveal whether they were actually lightfast or did not work well in combination with other pigments. As a result, artists occasionally bought 'faulty' materials such as pigments that were not as lightfast as the true pigment or that reacted badly when mixed with medium or other pigments. Vincent van Gogh is known to have

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<sup>234</sup> Carlyle, "Authenticity and Adulteration: What Materials Were 19th Century Artists Really Using?", 57-58; Doerner, *The Materials of the Artist and Their Use in Painting with Notes on the Techniques of the Old Masters*.

<sup>235</sup> Field, *Chromatography, or, A Treatise on Colours and Pigments: And of Their Powers in Painting, &c*; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*. 1-17

bought and used several newly developed pigments, even after it became known that some of these were not lightfast.<sup>236</sup>

An example of the use of light fugitive pigments, as well as additions and substitutions to paints was found within the watercolour paintbox owned by Cameron. The initially bright lake pigments were known to be light fugitive, yet in Cameron's paintbox three pots labelled to contain lake pigments can be found: Dutch Pink and Brown Pink.<sup>237</sup> Stable colours such as ochres, Prussian blue, and Naples yellow are also present in the paintbox. However, even though Naples yellow had been in use in paintings since the 1600s<sup>238</sup>, it was by the nineteenth century no longer used in its original form and substitutions for its original components were preferred. The common substitutions for Naples yellow were cadmium yellow with lead white or chrome yellow with lead white. Neither of these substitutions was identified in the watercolour pot. Instead, it appears that this colour may have been made up out of lake pigments and a lead pigment. The technical analysis of this paint was not able to conclusively identify the pigments used, see Appendix XX.

Not only were pigments substituted or added to paint mixtures, but binding media were also experimented with. Drying oils with specific dryers such as manganese oxide, zinc sulphate or lead acetate were used for slow drying pigments.<sup>239</sup> Dryers were sold separately as well, to be added to paint mixtures on the artist's palette. Specific media for manipulating paint were developed, such as megilps, gel-like substances which could be mixed with paint to adjust

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<sup>236</sup> REVIGO, 'Original Colours of Van Gogh's Paintings', 1.

<sup>237</sup> Harley, "Artists' Pigments c.1600-1835: A Study in English Documentary Sources", 114; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 520; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 149.

<sup>238</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 133; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 574.

<sup>239</sup> Carlyle, 'Paint Driers Discussed in 19th-Century British Oil Painting Manuals'; Carlyle, 'Authenticity and Adulteration: What Materials Were 19th Century Artists Really Using?', 58-59.

its handling properties.<sup>240</sup> Megilps are made up of a combination of a drying oil containing lead compounds and mastic varnish to form a thick clear jelly.<sup>241</sup> Occasionally, colourmen would create their own medium, such as Roberson's medium, of which the composition was not exactly known.<sup>242</sup> Also for the manipulation of binding media does Cameron's paintbox provide evidence. It was found that the binder of the lake pigments in this paintbox were adulterated with a sugar compound to enhance solubility. This was recommended in contemporary watercolour manuals.<sup>243</sup>

#### 4.2.2 Artists' Manuals

Literature dedicated to artistic practice had always focused on how to prepare artists' materials and how to best employ them. However, as described above, the focus of artists' treatises changed as the Industrial Revolution presented new challenges. Most artists were no longer involved in the preparing of the materials they used. However, there remained some artists who still prepared their own materials, for example Holman Hunt. As a result, the knowledge about these processes and what the materials used were actually composed of amongst the general artist community declined.

A debate arose in the nineteenth century about who was responsible for the durability of artists' materials. In the first few decades of the century, the onus was placed on the colourmen. However, in his *Chromatography* published in 1835, Field writes that artists carry the responsibility of knowing about their materials. Towards the end of the century, the 1880s, colourmen were again

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<sup>240</sup> Townsend et al., 'Nineteenth-Century Paint Media: The Formulation and Properties of Megilps', 205.

<sup>241</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 101.

<sup>242</sup> Carlyle, 461-462.

<sup>243</sup> Carlyle, 489, 520; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 28; Doerner, 'The Materials of the Artist and Their Use in Painting, with Notes on the Techniques of the Old Masters', 257.

considered responsible. Following a meeting in 1880 to discuss the issues of responsibility as raised in Holman Hunt's article 'The present system of obtaining materials in use by artist painters, as compared with that of the Old Masters', there was a general disenchantment with colourmen among artists.<sup>244</sup> In this article, Hunt describes how throughout history, the artist had much influence on the materials they used because they were either prepared in the artist's studio or under his instructions by a chemist. In contrast, Hunt writes that nineteenth-century artists no longer have the knowledge or ability to judge their materials properly. Colourmen judge the materials while in their store, but cannot oversee the quality of the materials in the long run or when in use in combination with other materials because there is now a hard separation between artist and material production. It is easier for the colourmen to dismiss complaints about a material made by an artist when this material has not elicited complaints before and the producers of that material have made it the exact same way as previously.

'The colourman naturally judges of the character of the materials he vends by the condition they are in while under his won eye. To him, the evils revealing themselves in the work which has passed through his shop do not exist if he never sees them; and, if he hears of them only, as evils untraceable in their casue which have occurred to one of his customers (who may, sometimes, have obtained materials elsewhere), his sense of responsibility is quieted, when he has received the assurance of his men in the workshop that the usual rules, which have hitherto resulted in work of a kind not eliciting complaints, have been strictly adhered to.'<sup>245</sup>

It is in this time that it was found that artists turned towards instruction manuals and handbooks to learn about the materials they were using, for instance Merimée's treatise of 1830.<sup>246</sup> This is not to say that written accounts were the only sources of artistic practice for the nineteenth-century artist. As briefly

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244 Hunt, 'Painters, Artist, Present System of Obtaining Materials in Use by, "Paper" ', 492.; Carlyle, 272.

245 Hunt, 'Painters, Artist, Present System of Obtaining Materials in Use by, "Paper" ', 492.

246 Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 272.



mentioned previously, art schools and the royal academies taught student artists how they ought to approach the painting methodology and their materials. Additionally, apprenticeships with artists existed. Although this was a less popular form of learning art, there were artists, including the Glasgow Boy Guthrie who studied in the studio of John Pettie (1839-1893), who never attended art school and instead learned their craft in the workshop of a senior artist and on their own.

To counteract the lack of knowledge of artists, nineteenth- and early-twentieth century treatises on painting provided instructions on what materials to use, how to paint, and included a section dedicated to pigment properties, potential adulterations and how to identify them.<sup>247</sup> It was thought that when artists knew more about their materials they would be able to make informed decisions about the materials they acquired as well as how to use them more effectively. This allowed artists to confront colourmen when the materials they bought did not meet expectations or were found to be substituted. It is known that certain artists, e.g. Holman Hunt, complained about the quality of the materials that they bought to the colourman from which they acquired them.<sup>248</sup> This contact between colourman and artist could thus be used to address the quality of the materials supplied but was also a way for artists to request specific materials, such as a non-standard sized support, as was done by Cameron (see paragraphs 4.3.1 and 5.10.2), brushes with a specific shape as ordered at Roberson by Frederic Leighton<sup>249</sup>, or a (specific grade of) pigment.<sup>250</sup> Additionally, an artist was able to contact the colourmen to discuss the stability of their colours or view their colours in a work of art, as Holman Hunt did.<sup>251</sup> In colourmen's

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<sup>247</sup> Doerner, *The Materials of the Artist and Their Use in Painting with Notes on the Techniques of the Old Masters*; Townsend, "The Materials Used by British Oil Painters throughout the Nineteenth Century" 48; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*. 4.

<sup>248</sup> Townsend, 'The Materials Used by British Oil Painters throughout the Nineteenth Century', 48.

<sup>249</sup> Woodcock, 'Leighton and Roberson : An Artist and His Colourman', 526.

<sup>250</sup> Bomford et al., *Art in the Making: Impressionism*, 41.

<sup>251</sup> Katz, 'Holman Hunt on Himself: Textual Evidence in Aid of Technical Analysis', 437.

catalogues, different variations of pigments were available.<sup>252</sup> These variations could be based on different preparation methods, for instance wet or dry processed vermillion; they could refer to natural or synthetic variations, such as natural ultramarine and French ultramarine; or they could indicate different qualities of the material, e.g. the different grades of lead white in France which were known as *blanc d'argent*, *blanc de céruse* and *blanc de plomb* in order of decreasing price.<sup>253</sup> Varying grades of genuine ultramarine were also available in the late nineteenth century.<sup>254</sup> Moreover, in many of these handbooks about materials and good artistic practice, colour theory was discussed in depth.<sup>255</sup> Colour wheels that visualise how complementary colours worked were developed, for instance, Chevreul's colour wheel from 1864 or the colour wheel found in Mérimée's 1830 work.<sup>256</sup> Understanding the primary, secondary and tertiary colours and how they relate to one another was seen as one of the basic aspects necessary for creating a harmonious painting. In George Field's *Chromatography; or, a Treatise on Colours and Pigments, and of their Powers in Painting* published in 1835<sup>257</sup>, the characteristics of individual pigments, such as their colour, ability to mix well with other pigments and their light-fastness, as well as the interrelation between different colours are discussed. Among the subscribers to this treatise are prominent artists and colourmen of the first half of the nineteenth century, such as the artists Turner and Constable, and the colourmen Newman, Roberson & Miller and Winsor & Newton.<sup>258</sup> Cameron's library does not include Field's publication. However, he may have known of the work.

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<sup>252</sup> Bomford et al., *Art in the Making: Impressionism.*, 51-72.

<sup>253</sup> Bomford et al., 66

<sup>254</sup> Woodcock, 'Leighton and Roberson : An Artist and His Colourman', 527.

<sup>255</sup> Bomford, "Art in the Making: Impressionism ", 76-83; Doerner, *The Materials of the Artist and Their Use in Painting with Notes on the Techniques of the Old Masters*, 165-180.

<sup>256</sup> Mérimée, *De La Peinture a l'Huile, Ou Des Procédés Matériels Employés Dans Ce Genre de Peinture, Depuis Hubert et Jean van-Eyck Jusqu'a Nos Jours*. [08/02/2022]

<sup>257</sup> Field, *Chromatography, or, A Treatise on Colours and Pigments: And of Their Powers in Painting, &c.*

<sup>258</sup> Field.

Artists of the nineteenth century could have obtained some knowledge of colour theory and its potential application in painting at art schools and academies or through artists' manuals, handbooks and colourmen's treatises as described above. A good example of an artist who worked with careful colour harmonies in their practice was James McNeill Whistler, of whom it is known that he had a specific manner of choosing and organising his paints on his palette.<sup>259</sup> The harmony was already established on the palette, before any paint was applied to the support. The Impressionists too were well aware of colour theory and applied it in their art through the juxtaposition of complementary colours, especially in highlights and shadows.<sup>260</sup> Understanding why and how the colour combinations or contrasts worked in painting was important to these artists. The Glasgow Boys too, looking toward the Barbizon School, the Hague School and the Impressionists, sought to find their way of balancing colours and tonality in their paintings.<sup>261</sup> The influences of these artistic groupings on the Glasgow Boys is further discussed in the case studies in Chapter 5.

#### 4.3 Colourmen - Roberson & Co, Winsor & Newton, Lechertier.

There was a large variety of colourmen working throughout the United Kingdom in the nineteenth century. Many colourmen sold their products not only in Britain but abroad as well, either through foreign colourmen's shops or through a subsidiary. Within the United Kingdom too, colourmen sold each other's products alongside their own. Especially, for those colourmen who did not manufacture their own products, this was common practice.

The information available on colourmen's labels and in account books can be used to help date the manufacturing or selling date of the item. Moreover, the

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<sup>259</sup> Townsend, 'Whistler's Oil Painting Materials'. 690.

<sup>260</sup> Bomford et al., *Art in the Making: Impressionism*. 76-83, 87-90.

<sup>261</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*.

information gained from these labels can be used to indicate when an artist may have acquired the item and started working on a painting when there is no written record of the acquisition of the item or production date of an art work.<sup>262</sup>

This is especially useful when considering Cameron's paintings as he rarely dated his works, and he did not write about where he acquired his materials in his personal letters and diaries. Therefore, the limited information available on the works, sketchbooks, and other items that belonged to Cameron was used to determine from which colourmen he acquired his materials. Additionally, the 'Index of Account Holders in the Roberson Archive 1820-1939' lists Cameron as having an account with this colourman from September 21<sup>st</sup>, 1917, until November 16<sup>th</sup>, 1939. Unfortunately, no similar records of account holders have been identified for other colourmen from which Cameron bought materials.

Although it is not known if Cameron also acquired materials from Scottish colourmen, it is not improbable. It is recorded that several of the Scottish colourmen, including Robert Miller (c.1808-1900) in Glasgow, had an account with London colourmen, including Roberson & Co and Winsor & Newton.<sup>263</sup> Evidence of this has been found in account books, advertisements, and where a Scottish colourman's stamp has been found alongside a London based colourman. This means that these Scottish colourmen sold products manufactured by another colourman, for instance canvases, brushes, or paints. If these items were not clearly marked by the Scottish colourman, evidence of artists having acquired material from them can be hard to find.

Colourmen's labels on sketchbooks and art works provide some indication of where Cameron bought his materials. He bought supplies from a variety of

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<sup>262</sup> Woodcock, 'A Colourful Past', 82.

<sup>263</sup> National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - M'.

colourmen in the UK and Paris: Roberson & Co Ltd., Lechertier Barbe & Co, and Winsor & Newton in London, and Sennelier in Paris. Sketchbooks with stamps from Lechertier Barbe & Co and Sennelier were identified in the special collections at the National Library of Scotland. On the verso of the painting, *Winter near Liberton, Midlothian* on academy board a Winsor & Newton label was found. Works by Cameron on canvas which have a colourmen's stamps on the verso have been found on auction websites. The stamps indicate that Cameron acquired canvas and stretchers from Roberson & Co Ltd and from Winsor and Newton. Roberson, Winsor & Newton, and Lechertier were among the most well-known artists' materials suppliers in the United Kingdom of the nineteenth century.

#### 4.3.1 Roberson & Co. Ltd.

Roberson was one of the most important art materials suppliers in the nineteenth century in the United Kingdom. As Sally Woodcock remarks: 'In the provision of materials for both amateur and professional artists Roberson rivalled the longer established firms of Reeves and Rowney and the royal warrant-holders Winsor and Newton.'<sup>264</sup>

Roberson was first established in 1819 in Long Acre, London. As the business grew, Roberson changed location and name several times, finally becoming known as Roberson & Co Ltd from 1908 onwards.<sup>265</sup> The records of these changes of location and name are incredibly useful when dating works or materials which carry a Roberson label. For instance, on the inside of the lid of Cameron's watercolour paintbox, the colourman's label reads 'Roberson & Compy Manufacturers of Water and Oil Colours and Materials for Drawing, Painting, &c. No. 51 Long Acre, London'. Roberson started advertising as 'Roberson & Co' in

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<sup>264</sup> Woodcock, 'Leighton and Roberson : An Artist and His Colourman', 526.

<sup>265</sup> National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - R '.

1841 and the address listed on the label implies that the box was made while Roberson was located at 51 Long Acre in London. In 1853, Roberson relocated to 99 Long Acre in London.<sup>266</sup> This dating, between 1841 and 1853, evidences that the paintbox itself was produced over a decade before Cameron was born in 1865. The watercolour palette within this box has a stamp on the verso which indicates it was sold at a different date.

The products sold by Roberson could be acquired throughout the United Kingdom, including in Scotland as described above. Roberson sold everything an artist required including various kinds of paint, brushes, supports, sketchbooks, dry media, wet media such as oil or resins, lay figures, parasols, stools, and easels. Aside from selling materials for professional artists, Roberson supplied amateurs and craftspeople with materials, including paint for painting on china, velvet, lampshades, as well as wall paints.<sup>267</sup>

The colourman was particularly known for the lay figures it sold and rented out, and its medium 'Roberson medium', a gel-like substance which could be added to paint by the artist to adjust its handling properties. The lay figures, mannequins, were available in a variety of sizes and shapes - man, woman and child - and could be manipulated to the preferred position of the artist.<sup>268</sup>

The artist's materials sold by Roberson were acquired from various contractors who each specialized in a certain product, for instance, canvas sold by Roberson was acquired from among others Alexander Glenday & Co in Fife, Scotland, and at the end of the century canvas was acquired in considerable quantities from

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<sup>266</sup> Simon et al., 'British Canvas, Stretcher and Panel Suppliers' Marks . Part 8, Charles Roberson & Co'; National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - R '.

<sup>267</sup> Woodcock, 'A Colourful Past', 83.

<sup>268</sup> Woodcock, 'Posing, Reposing, Decomposing: Life-Size Lay Figures, Living Models and Artist's Colourmen in Nineteenth Century London', 450-452; National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - W '.

Belgium.<sup>269</sup> It may be that it is this Belgian canvas that was listed as ‘foreign canvas’ in Roberson’s catalogues from this period. Similarly, the colours, other supports, stretchers, and media sold by Roberson were acquired from contractors throughout the UK and abroad. The lay-figures were acquired from France.

Not only were materials acquired from both within and outside the United Kingdom, some materials were specifically designed to be used in climates and circumstances not inherent to Britain. These materials could be used by artists and amateurs travelling throughout the British Empire.<sup>270</sup>

Some of the most well-known artists of the nineteenth century were regular customers of the company, including Turner, Lord Frederick Leighton, Whistler, Sargent and the designer William Morris.<sup>271</sup>

The account books of Roberson & Co Ltd. were accessible to consult and revealed much about the materials Cameron acquired, see Appendix XIV. The ‘Index of Account Holders in the Roberson Archive 1820-1939’ includes an entry for Cameron stating he had an account with the colourman from 1917 until 1939.<sup>272</sup> He bought canvases, stretchers, panel, paint brushes, oil paints, powdered pigments, and media including mastic, copal and linseed oil. Which oil paints and powdered pigments Cameron bought are not listed. More information was found about the canvas orders placed by Cameron. A separate book was kept by the company with details of canvas orders, often including the dimension and preparation of the canvases, and describing the stretcher to be used. Cameron’s

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<sup>269</sup> National Portrait Gallery, ‘British Artists’ Suppliers, 1650-1950 - R’.

<sup>270</sup> Woodcock, ‘A Colourful Past’, 83.

<sup>271</sup> Woodcock, 82.

<sup>272</sup> Hamilton Kerr Institute, Roberson Archive, Account ledgers: HKI MS 136-1993, 137-1993, 138-1993, Drawing materials ledger HKI MS 764-1993

canvas orders are discussed in detail in 5.10.2 Setting the Scene - Morning in Lorne.

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Mr. David Cameron

1920 To Lorne L. D. H. 1920 7 11 4

June 7 1920 To Lorne L. D. H. 1920 7 11 4

June 10 1920 To Lorne L. D. H. 1920 7 11 4

July 17 1920 To Lorne L. D. H. 1920 7 11 4

July 25 1920 To Lorne L. D. H. 1920 7 11 4

July 28 1920 To Lorne L. D. H. 1920 7 11 4

July 31 1920 To Lorne L. D. H. 1920 7 11 4

August 3 1920 To Lorne L. D. H. 1920 7 11 4

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1928 To Lorne L. D. H. 1928 7 11 4

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Mr. David Cameron

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1930 To Lorne L. D. H. 1930 7 11 4

1931 To Lorne L. D. H. 1931 7 11 4

1932 To Lorne L. D. H. 1932 7 11 4

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1996 To Lorne L. D. H. 1996 7 11 4

1997 To Lorne L. D. H. 1997 7 11 4

1998 To Lorne L. D. H. 1998 7 11 4

1999 To Lorne L. D. H. 1999 7 11 4

2000 To Lorne L. D. H. 2000 7 11 4

Figure 4.1 The account book with Cameron's orders from 1920 until 1928. Listed are canvas orders, orders for brushes, a panel, oil colours, copal, and sable brushes.



### 4.3.2 Winsor & Newton

Winsor & Newton was founded in 1832 at 38 Rathbone Place, London, by the friends William Winsor (1804-1865), chemist and artist, and Henry Charles Newton (1805-1882), artist. It is still an active artist's material supplier nowadays although it has moved premises throughout its lifetime.<sup>273</sup> In the nineteenth century, Winsor & Newton, like Roberson, supplied all the materials an artist, professional or amateur, could need. Besides supplying these materials, the company was involved in developing recipes for new pigments and testing their durability. This is evidenced by the recipe books detailing pigment manufacture, as well as canvas and oil media preparation in the Winsor & Newton archive.<sup>274</sup> An interest in the chemical properties of artists' pigments can also be seen through the subscription of William Winsor to George Field's *Chromatography*.<sup>275</sup> Additionally, the company developed new storage materials, such as the collapsible paint tube and patented these inventions, discussed further in the section on 'Artist's Materials' below.

The importance of Winsor & Newton as a colourman in the nineteenth century is evidenced by the royal appointments the company received. The company received its first royal warrant in 1841 awarded by Queen Victoria. It has received this endorsement to this day.<sup>276</sup> The international use of their products, as can be gleaned from trade catalogues and the availability of Winsor & Newton catalogues in French is another indication of the importance of the London colourman.<sup>277</sup> Winsor & Newton products were available throughout Europe, having for instance been used by Edvard Munch in Norway<sup>278</sup>, and in the United

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<sup>273</sup> Winsor & Newton, 'Timeline'; National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - W'.

<sup>274</sup> Hamilton Kerr Institute and Fitzwilliam Museum, 'Winsor & Newton Archive'; Carlyle, 'Researching the Winsor & Newton Database', 1.

<sup>275</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 18.

<sup>276</sup> Winsor & Newton, 'Timeline'.

<sup>277</sup> National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - W'.

<sup>278</sup> Sandu et al., 'The Art Historical Materials Collection At Munch: Colours, Brands, Labels', 1655-1656.

States.<sup>279</sup> In New York, a subsidiary of the London colourman, Winsor & Newton Inc, was established in 1915, although the company had been selling its products and publishing catalogues in the city from 1889 onwards.

Alongside the catalogues, Winsor & Newton published instruction manuals, often including catalogues of their products, for instance *A manual on flower painting in oil colours from nature : with instructions for preliminary practice : also a section on flower painting in water colours, etc.* compiled by William J. Buckley and published by Winsor & Newton.<sup>280</sup> Furthermore, books illustrating what the oil and watercolours sold by the company looked like were sold, for example, *Specimen tints of Winsor & Newton's artists' oil and water colours* published in the first two decades of the twentieth century.<sup>281</sup>

There are numerous artists both in the UK and abroad who made use of Winsor & Newton products, including but not limited to, Turner, Munch, Tissot, and Millais.<sup>282</sup>

#### 4.3.3 Lechertier Barbe

It is believed that Lechertier Barbe was established at Regent Street, London, in 1844 as the English counterpart of a French business.<sup>283</sup> However, it appears that through the course of the century, the London premises became the main business and that the addresses in Paris were subsidiaries.<sup>284</sup>

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<sup>279</sup> National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - W '.

<sup>280</sup> Buckley, *A Manual on Flower Painting in Oil Colours from Nature: With Instructions for Preliminary Practice: Also a Section on Flower Painting in Water Colours, Etc.*

<sup>281</sup> Winsor & Newton, *Specimen Tints of Winsor & Newton's Artists' Oil and Water Colours*.

<sup>282</sup> National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - W '.

<sup>283</sup> Callen, *The Art of Impressionism: Painting Technique & the Making of Modernity*, 30-32, 104.

<sup>284</sup> National Portrait Gallery, 'British Artists' Suppliers 1650-1950 - L'.

Lechertier Barbe had a wide ranging catalogue of materials available to the artist, including everything from dry and wet media, drawing implements including pencil cases, supports, and pigments both powdered and prepared.<sup>285</sup> These items were supplied to artists themselves but also to other colourmen. It is noted that Lechertier Barbe supplied Roberson throughout the nineteenth century with various dry media, pigments, drawing implements<sup>286</sup>, wet media and lay figures.<sup>287</sup>

#### 4.4 Conclusion

The nineteenth century was a time of innovation and discovery, including in the fields of art, and art material production, in which new pigments were produced and used. The mass production of pigments and paints brought with it the opportunity to enhance or substitute pigments. An understanding of the potential changes to traditional pigments and the properties of the newly developed pigments was sought by both artists and pigment manufacturers and merchants. Cameron's paintbox is a good example of a product used in this time period as well as a good object to study the materials of the nineteenth century. In this paintbox the use of additives and substitutions was found to be typical of nineteenth century practice. Additionally, considering the colourmen from which Cameron is known to have acquired materials sheds some light on the practices of these suppliers. They were highly influential in developing new materials, understanding the properties of all the materials they sold, and sharing this knowledge with artists, both professional and amateur through artists manuals

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<sup>285</sup> National Portrait Gallery.

<sup>286</sup> Roberson Archive, Hamilton Kerr Institute, MS 944-1993, pp.121, 261.

<sup>287</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 48, 345; Woodcock, 'Posing, Reposing, Decomposing: Life-Size Lay Figures, Living Models and Artist's Colourmen in Nineteenth Century London', 450-451; Roberson Archive Hamilton Kerr Institute, MS 183-1993, 232-1993.

and catalogues. Interestingly, colourmen often sold more than just their own products, and supplied each other with materials.

## 5 Cameron's Materials and Methods

In this chapter, Cameron's painting materials, processes and ideology are discussed. The development of Cameron's style and subject matter is discussed alongside the results from the technical examination to illuminate the artist's artistic process. This chapter places Cameron firmly as a follower of the artistic ideals of the late nineteenth century early in his career, only to seemingly return to older ideals, expressed by artists in the early nineteenth century, in his later works. His style continues to develop according to the overall stylistic development towards colour and emphasis on the decorative visible in late nineteenth and early twentieth century art. In contrast, his choice of pigments was found to be consistent throughout his career, although the way in which he employed them changed.

The results presented in this chapter are based on the detailed examination of six oil paintings, and the visual examination of a wider selection of Cameron's works, which were consulted in situ in museum stores. Additionally, auction databases were consulted to identify and visually study works no longer in public collections. Paintings in public collections were viewed in online museum collections databases. This has allowed the results from the technical examination to be discussed in a wider context, and tentative conclusions about the use of materials across his broader oil painting practice to be drawn. However, note must be made of the small proportion of works that was examined and that the works examined include only two figural studies, *Mrs. Thomas Annan* and *Battledore and Shuttlecock*. All other works are landscapes or street scenes. This is a limiting factor when drawing conclusions about Cameron's artistic practice. Additionally, a *catalogue raisonné* does not exist for D.Y. Cameron, therefore, online databases and the catalogue website ArtUK were consulted to gain general information on Cameron's works.<sup>288</sup> Additionally,

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<sup>288</sup> <https://artuk.org/>

exhibition catalogues and auction websites<sup>289</sup> were consulted to identify works not listed in collection databases.

Works in museum collections were viewed during visits to Perth Museum and Art Gallery, Glasgow Museums Resource Centre, and the National Galleries of Scotland, see Appendix XVII. Where available, conservation records and object history files in these collections and in The Hunterian collection, were consulted. Unfortunately, these shed little light on the materials used by the artist as the majority of works have not been conserved, and none have been subject to thorough technical examination.<sup>290</sup>

Additionally, in this research an attempt is made at establishing Cameron's artistic ideology through examination of his paintings, linking this to the art historical context, and interpretation of his writings. To support the technical examination of Cameron's materials and to link this to an ideology or wider artistic practice, first what Cameron himself and others wrote about his painting practice, ideology, and his materials is considered. Contemporary treatises on artists' materials available to Cameron were also consulted. This chapter will first discuss this existing literature, and will then present the results in a brief overview before discussing Cameron's artistic practice and ideology in more detail in a series of case studies.

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<sup>289</sup> [www.christies.com](http://www.christies.com); [www.mutualart.com](http://www.mutualart.com); [www.lot-art.com](http://www.lot-art.com); [www.artnet.com](http://www.artnet.com); [www.freemansauction.com](http://www.freemansauction.com); [www.bonhams.com](http://www.bonhams.com); [www.artfoxlive.com](http://www.artfoxlive.com); [www.liveauctioneers.com](http://www.liveauctioneers.com); [www.lyonandturnbull.com](http://www.lyonandturnbull.com)

<sup>290</sup> Object history files of The Hunterian Museum and Art Gallery Cameron oil paintings, object history files of Perth Museum and Art Gallery Cameron oil paintings and correspondence on 25/10/2021 with Lesley Stevenson, conservator at the National Galleries of Scotland, regarding the Cameron oil paintings in their collection.

## 5.1 Extant knowledge of Cameron's materials, artistic practice, and ideology

To understand Cameron's choice of materials, how he employed them, and how this fits with his ideology, it is worth considering the information about artists' materials and methods available to him. Additionally, any records presenting Cameron's materials and thoughts on artistic practices and ideals provide valuable context in which to discuss the results of the technical examination.

Insight into Cameron's artistic ideals can be gleaned from the speeches<sup>291</sup> he delivered on artistic matters towards the end of his life to a varied audience, including artists as well as the general public. The precise dates when these talks were given is not known. One of the talks, 'A Cry from the Heart'<sup>292</sup>, was delivered by Cameron in St. John's Church in Perth on the morning of his death. The written records of these speeches provide an invaluable source. The subjects discussed in these speeches cover the history of Scotland and its inherent Romanticism, the relation between art and the Church, the ongoing conflict of the Great War, and Cameron's view on Michelangelo and Rembrandt. Although they are all from the last two decades of Cameron's life, when his career was already established, it is interesting to follow the development in Cameron's artistic ideology as visible in his paintings, and how it reached its conclusion as described in Cameron's speeches.

The books in Cameron's library as recorded in the fire insurance inventory of 1925 provide insight into the artists' treatises Cameron had access to. Among the books listed in Cameron's library (Appendix VI) are several artists' manuals, and

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<sup>291</sup> The term 'speeches' has been used by the National Library of Scotland to describe the written records (ACC8950 Item 26). Some of the texts were clearly intended to be spoken, the first sentence addressing the audience directly. Others could be essays as well as lectures or speeches given. All handwritten speeches by Cameron have the same reference number (ACC8950 Item 26), and all typed out speeches (ACC8950 Item 29) in the NLS Special Collections.

<sup>292</sup> NLS ACC8950 Item 29

books about artists and movements. A wide range of movements and styles are included in his collection from early Renaissance art to books on contemporary artists, covering works in etching, watercolour and oil painting. Among the manuals on artistic practice are translations from the fifteenth and sixteenth century treatises by Cennini and Vasari respectively, and modern manuals on oil painting the latest dating from 1923. The range of topics and the time periods covered illustrate the wide variety of sources from which Cameron drew inspiration and in which he was interested. By considering the books in Cameron's collection in the context of the wider publications of this period, it is possible to draw some information about his understanding of art and his artistic ideals in terms of his technical and procedural preferences.

Speed's 'Practice and Science of Oil Painting', in which Cameron makes an appearance, and 'The Technique of Painting' by Charles Moreau-Vauthier, 1923, oil painting treatises as described in Chapter 4, were both in Cameron's library.<sup>293</sup> They include instructions on the best painting practice and information regarding the properties of pigments. Moreau-Vauthier's book includes a colour permanency study executed by Etienne Dinet which illustrates the lightfastness of both traditional and modern pigments. Additionally, a chapter discusses pigments and their properties in detail.

Furthermore, books focused on individual artists including Rossetti, Turner, and Whistler. Also included is William Holman Hunt's 'Pre-Raphaelitism and the Pre-Raphaelite Brotherhood' of 1905 in which Hunt describes some of his artistic practice, including his and Millais technique of painting into a wet white ground.<sup>294</sup> 'The materials of the painter's craft in Europe and Egypt' by A.P. Laurie, 1910, presents a literature review collating the information presented in treatises across the centuries of the materials used by painters in the earliest drawings up until the seventeenth century. This suggests that Cameron had an

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<sup>293</sup> Speed, *Oil Painting Techniques and Materials*; Moreau-Vauthier, *The Technique of Painting*.

<sup>294</sup> Hunt, *Pre-Raphaelitism and the Pre-Raphaelite Brotherhood Vol. 1*, 276.



interest in artists' materials and descriptions of techniques from a variety of periods and was at least somewhat aware of the suggested 'best' practice of his time.

Despite Cameron's apparent interest in artist's materials, little is known about his working practice and materials; few conservation reports exist and those that do reveal little about the painting they concern.<sup>295</sup> Additionally, with the exception of the occasional listing of a size and a drawing of a stretcher without referencing a specific work or project, Cameron himself provides no insight.<sup>296</sup> In his letters to his dealer Connell & Sons, Cameron refers to paintings often solely with a vague description, for instance 'little landscape' or 'architectural picture'. There are a few paintings that are named, generally only when a sale is discussed. However, there are references to Cameron's preference to have his works glazed<sup>297</sup> and to the frames in which the works are displayed.<sup>298</sup> In one letter of 25 June 1923 Cameron writes that he is 'at work on a painting to make it better than it had been 4/5 years previous', implying that Cameron reworked paintings after initially finishing them.<sup>299</sup> Unfortunately, it is not known to which work Cameron refers in this letter.

Two descriptions of Cameron's pigment palette are documented in a treatise and an unpublished biography further discussed in the below section 5.6.

Furthermore, the account books of the colourman Roberson & Co Ltd, and colourmen's marks on the reverse of some of Cameron's works provide further

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<sup>295</sup> Object history files of The Hunterian Museum and Art Gallery Cameron oil paintings, object history files of Perth Museum and Art Gallery Cameron oil paintings and correspondence on 25/10/2021 with Lesley Stevenson, conservator at the National Galleries of Scotland, regarding the Cameron oil paintings in their collection.

<sup>296</sup> NLS ACC8950 no.15 Diary of D.Y. Cameron, 1944

<sup>297</sup> NLS Special Collections Acc. 7797 No.2 Letters from Sir David Y Cameron 1904-1905: letter from 1 July 1905.

<sup>298</sup> NLS Special Collections Acc. 7797 No.2 and No.3 Letters from Sir David Y Cameron 1904-1905 and 1906-1915.

<sup>299</sup> NLS Special Collections Acc. 7797 No.4 Letters from Sir David Y Cameron 1916-1923: letter from 25 June 1923.

information on the materials Cameron used, see the section on 'Colourmen' below.

## 5.2 Studio

Cameron does not write about his studio practice, nor whether he had a preference for studio working or working *en plein air*. According to both Smith and Renfrew Wilson, Cameron painted largely from his studio. The technical examination has not been able to confirm or deny this supposition. The detailed sketches identified suggest that if this is the case, Cameron still used his observation as the basis for his works, even if he did not paint them *en plein air*, as discussed in section 5.5 and in the case study on *Morning in Lorne* (section 5.10.2).

Cameron had several studios throughout his life. Initially, he had studios in Glasgow's city centre, taking charge of the studio on 134 Bath Street (1892-1895) when Guthrie left the premises. A few years later, he had his studio in the West End in Glasgow at 217 West George Street (1895-1897). When Cameron's house Dun Eaglais was built in Kippen (1903), he included a printing studio in the basement and a large painting studio on the ground floor. No descriptions of Cameron's Glasgow studios is known to exist, but a glimpse of the studio at Dun Eaglais is provided by Renfrew Wilson:

The artist's easel was usually placed parallel to the eastern wall so that the quiet diffused light from the north fell athwart the canvas, and to the left-hand side of the easel there was a small table on which Cameron placed his painting materials when at work. A shelf at the window supported a number of shallow glass bowls each containing fresh clean water and part of a collection of coloured stones and shells which the artist had brought together because of their striking combinations of colour. A large coloured reproduction of the painting of "Mona Lisa", by Leonardo da Vinci, always hung on the studio wall, because, in addition to the other great qualities

this picture possessed, Cameron was specially attracted to the subtle quality of Leonardo's flesh painting.<sup>300</sup> - Renfrew Wilson, p.141

No explanation of how Renfrew Wilson was able to establish this description of Cameron's studio is given. Therefore, it cannot be stated with certainty that this was indeed how the studio was organised. However, Wilson was in contact with Cameron's sister Katherine who could have aided with this description. A photograph of the artist in front of his easel found amongst the notes and letters for the unpublished biography presents Cameron holding his palette and a variety of square brushes standing in front of the painting *Loch Trool* (Figure 5.1). A pane of glass seems to have been placed in front of the painting, indicating that this photograph was staged. It provides only a small indication of the painting implements used by Cameron, but the information is invaluable.

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<sup>300</sup> NLS13488 Unpublished biography by Renfrew Wilson, 141.

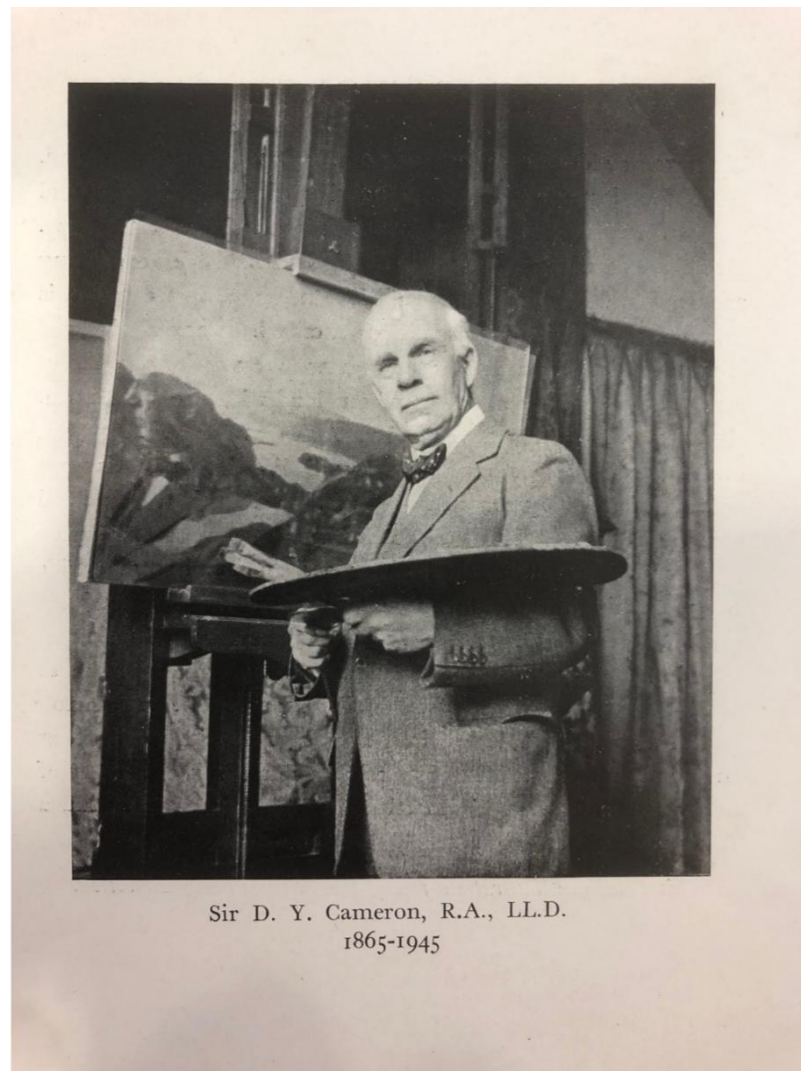


Figure 5.1 Photograph of Cameron in front of his easel with the painting *Loch Trool* holding a palette and brushes in his hands, NLS ACC13488 Unpublished Biography by George Renfrew Wilson ©National Library of Scotland.

### 5.3 Supports

The majority of Cameron's works identified in UK collections are on canvas (103 works in collections in the United Kingdom, according to ArtUK). There are also works on different supports; UK collections include seven works on panel and five on board. It appears that Cameron only used panels for smaller works, as was common in the nineteenth century.<sup>301</sup> The panel of *Cloister at Montivilliers*

<sup>301</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 187.

(28.8 x 25.7 cm) is the second largest Cameron used for his works known to be in UK collections. His largest panel is slightly bigger (*The Hills of Dee*, 31 x 40 cm, Kirklees Museums and Galleries). However, his canvas paintings vary in size from 15.3 x 22.8 cm, *Castle Campbell, Dawn* (The Dick Institute, Kilmarnock), to 141.7 x 114.2 cm, *A Scottish Loch* (Kirklees Museum and Art Gallery) and 182.8 x 317.5 cm, *The Battlefields of Ypres* (Imperial War Museum, London, 1919).

In the account ledgers as well as in the order book available in the Roberson archive, Hamilton Kerr Institute, information about Cameron's canvas supports from 1917 until 1939 can be gained. In the order book the type of stretcher, its size, and the number of crossbars, usually one or two, required is described by small drawings. The canvas dimensions described do not always match the sizes listed in Roberson catalogues, suggesting that artists could place specific requests which was not an uncommon practice.<sup>302</sup> Occasionally, Cameron bought empty stretchers which suggests that he stretched some of his own canvases or potentially that he wished to alter the size of a canvas. These stretchers were frequently part of a larger order containing stretched canvases.

Cameron had a clear preference for working on plain weave canvas, using this support throughout his career. Canvas is a light support of which the dimensions are easily altered throughout the painting process. Additionally, the texture of canvas is more prominent than that of either panel or board. Especially later in Cameron's career, he played with texture; rubbing paint into the canvas weave, smoothing paint with a palette knife, and applying impastoed strokes. This is further discussed in the case studies below. He was conscious of the type of canvas he used and how it was prepared to ensure it remained in a good condition, seeming to prefer 'double canvases' or 'loose linings' or canvases prepared on the verso as well as the recto later in his career. This is further discussed in 'Setting up the Composition'. Similar care was taken with some but not all of his panels, as illustrated by the carefully finished and prepared panel for *Cloister at Montivilliers* and the rough edges of the lightwood, seemingly

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<sup>302</sup> Callen, *The Art of Impressionism: Painting Technique & the Making of Modernity*, 17-21.

improvised panel for *Uplands in Lorne*. Similarly to the works on board, only one of the works on panel has been approximately dated to 1908. The subject matter and the style of the works on panel suggest that Cameron used this support from 1900 onwards. Linking the use of boards to a specific time period proves to be more puzzling as the dated work is from the 1890s but the other paintings on board show more similarities in style with works in the latter half of Cameron's career, from the 1900s onwards. This would suggest that board was a support that Cameron occasionally used throughout his career.

Of the six works technically examined for this research, three were on canvas, two on panel and one on board. The supports used by Cameron show that he readily made use of the supplies available at colourmen, including prepared supports.

## 5.4 Grounds

Four out of the six paintings have a lead white ground (*Winter near Liberton*, *Midlothian*; *A French Harbour*; *Morning in Lorne*; and *The Wilds of Assynt*), one has a zinc white ground (*Cloister at Montivilliers*), and one has no ground (*Uplands in Lorne*). SEM-EDX mapping of a sample taken from the extreme top edge of brown ceiling of *Cloister at Montivilliers* revealed that the zinc white ground layer of this painting contained some lead white, likely to do with the quality grade of zinc white used, (Figures 5.2-5.4), and that a thin layer of lead white could be seen covering the ground (Figures 5.5-5.6).

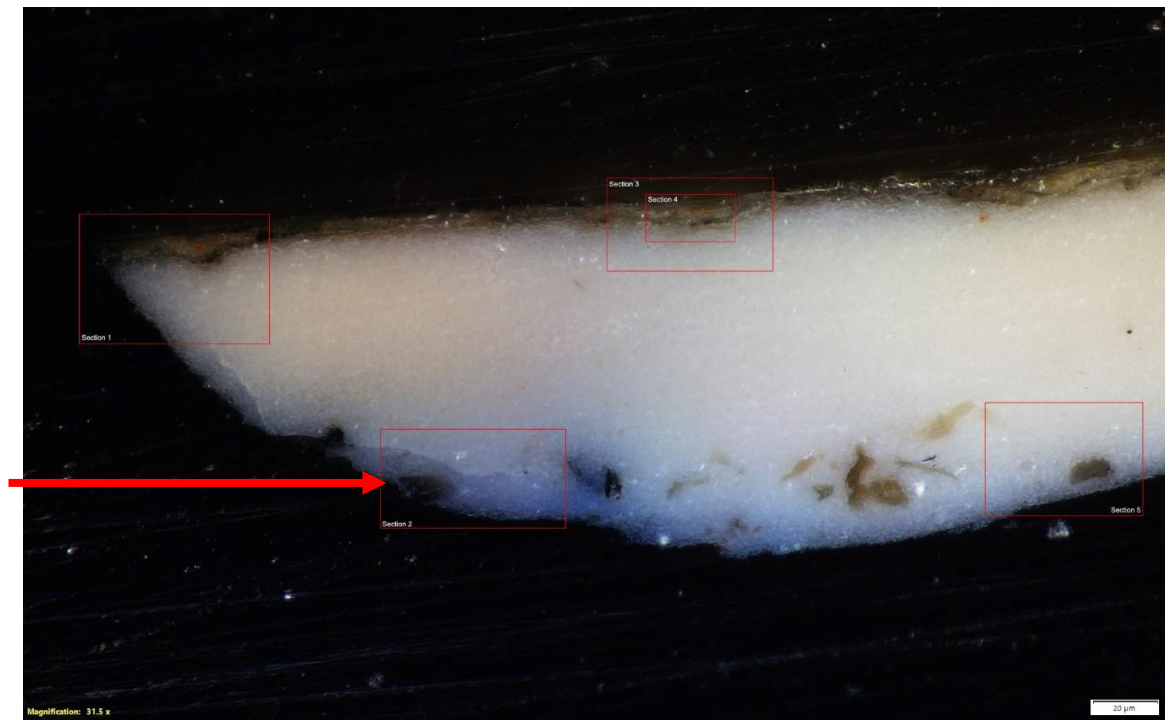


Figure 5.2 Left edge of the sample CM1 from *Cloister at Montivilliers* with indications of the sections that were analysed with SEM-EDX, 500 x 0.67x.

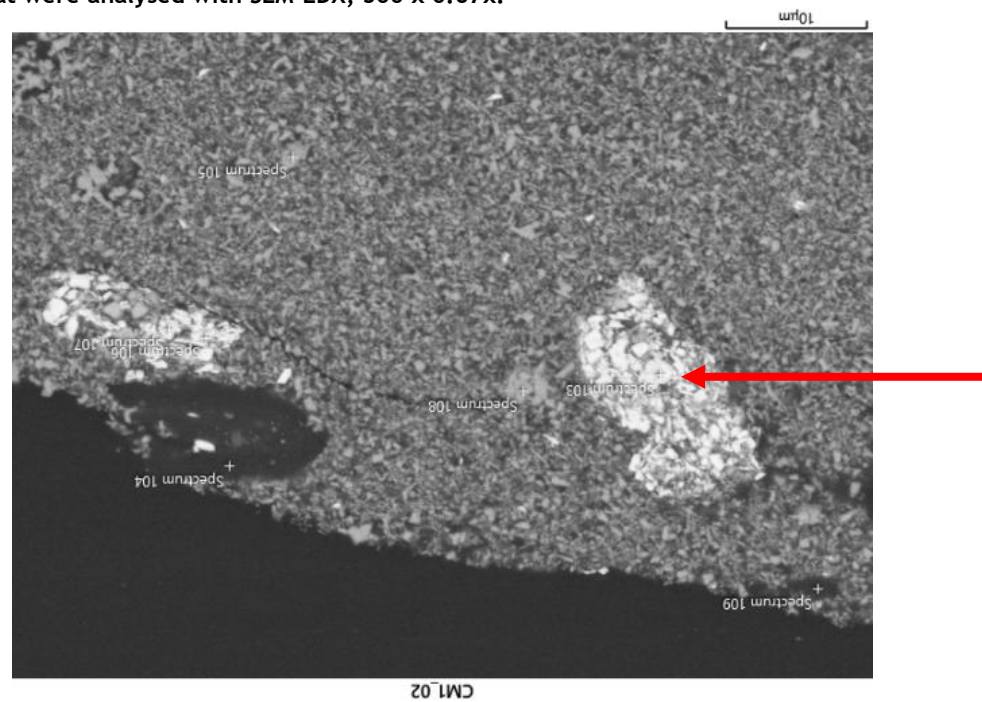


Figure 5.3 Backscattered electron image of sample CM1 Section 2 with analysis point 103 where a measurement was taken.



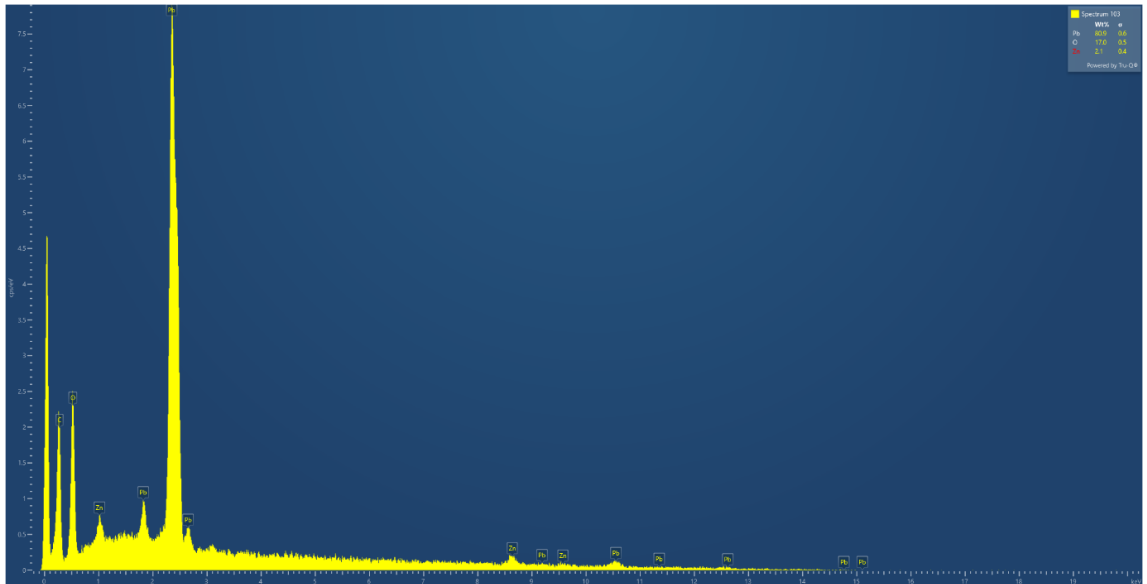


Figure 5.4 SEM-EDX spectrum taken at site 103 from sample CM1 section 2 *Cloister at Montivilliers*. The strong lead peak indicates that this particle contains lead and is likely lead white.

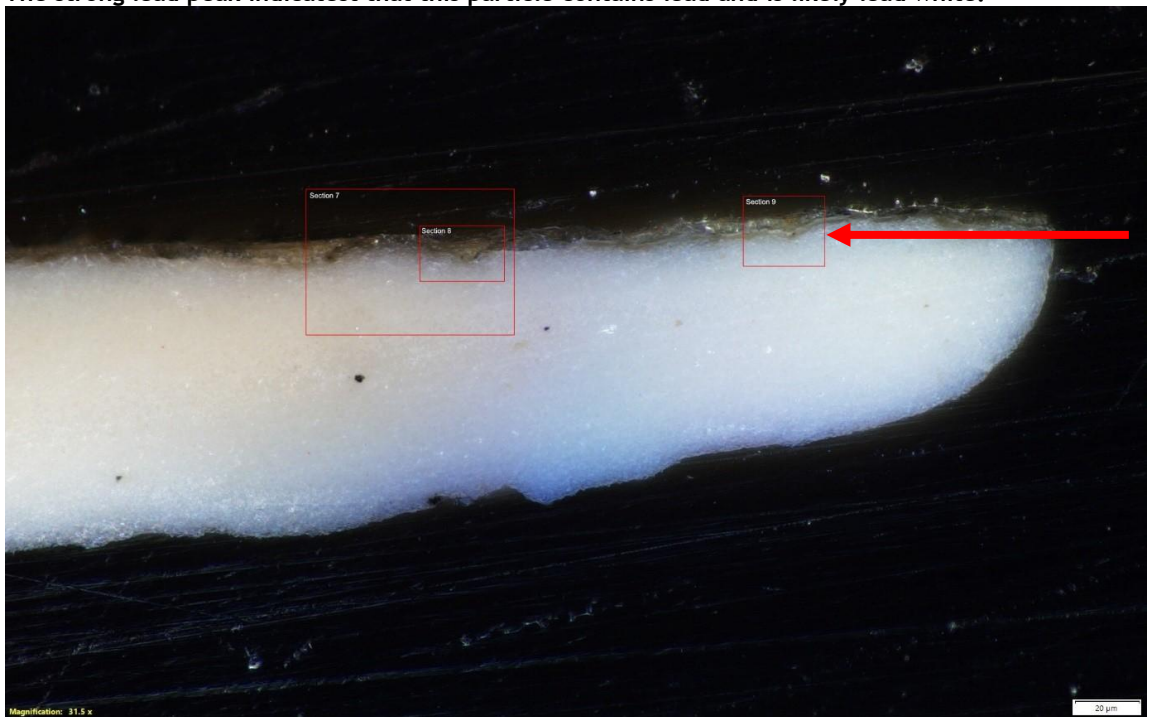


Figure 5.5 Right edge of the sample CM1 from *Cloister at Montivilliers* with indications of the sections that were analysed with SEM-EDX. The arrow points at section 9 where an element map was taken, 500 x 0.67x.



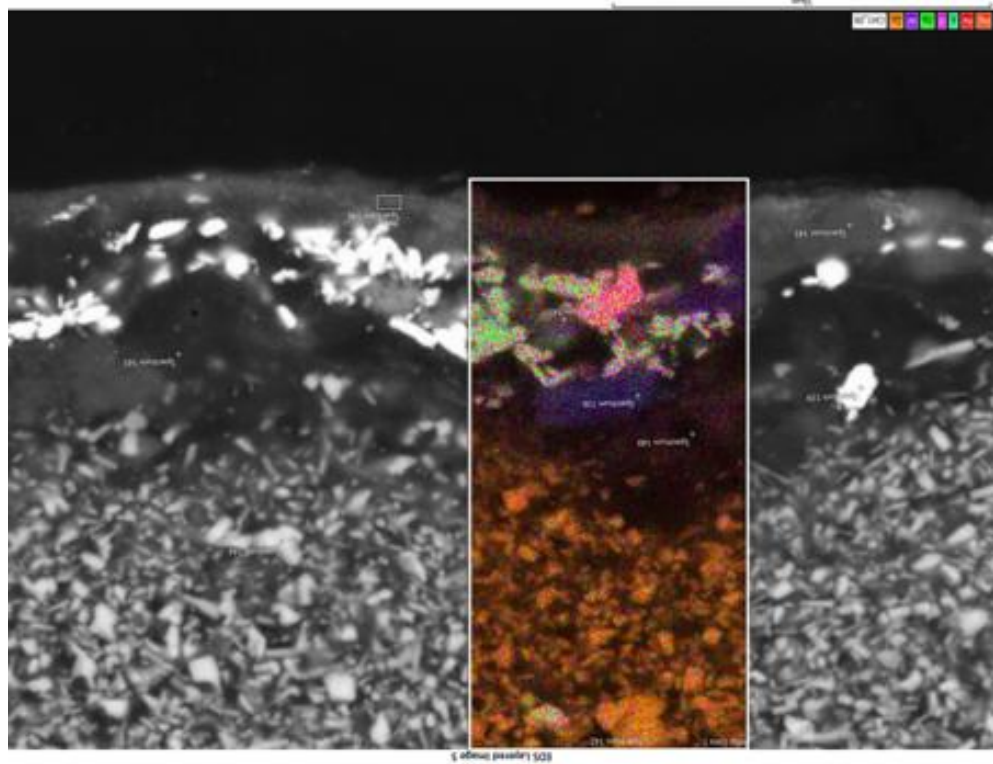


Figure 5.6 Element map of section 9 sample CM1 from *Cloister at Montivilliers* showing a vermilion particle in red. The zinc white ground is visible underneath the paint layers (orange). The presence of a potential lake pigment is indicated by the purple distribution map. (zinc=orange, mercury=orange-red, sulphur=pink, lead=bright green, aluminium=purple, potassium=blue-green, iron=red).

On the verso of *A French Harbour*, a double ground was identified consisting of a layer of chalk covered by a thin layer of lead white with a barium sulphate extender (Figures 5.7-5.9).

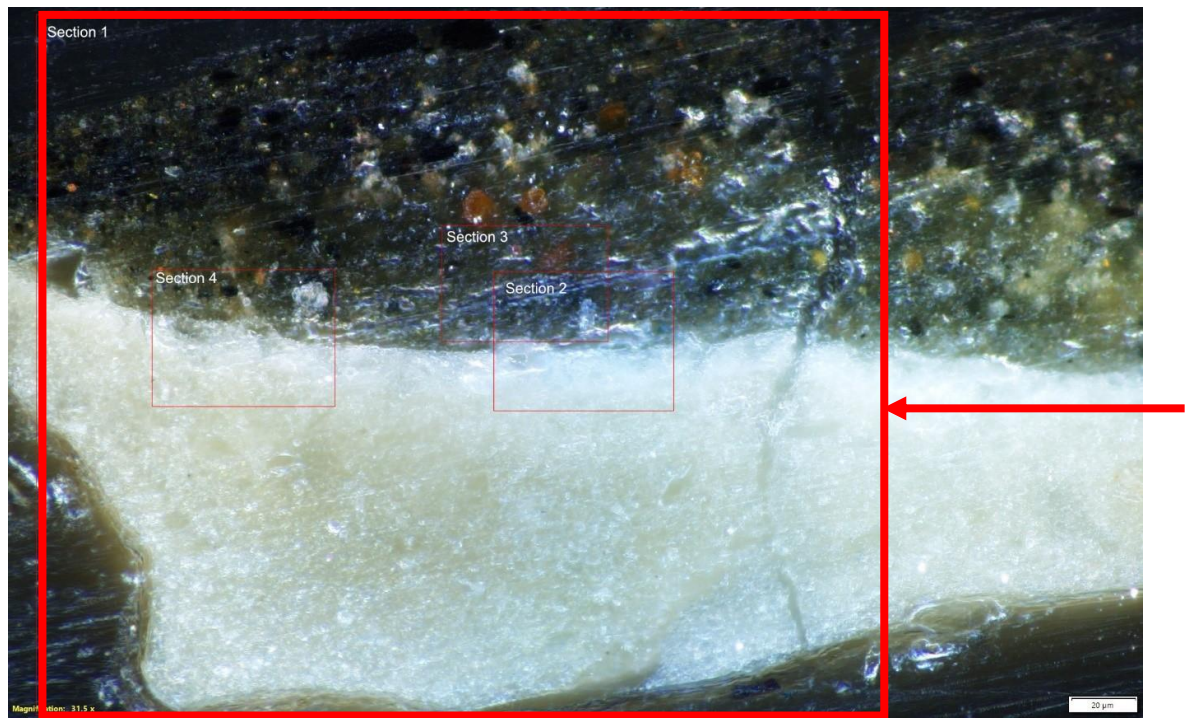


Figure 5.7 Sample FH5 taken from *A French Harbour* micrograph to the right of middle with indications of where SEM-EDX analysis was conducted, sections 1-4, 500 x 0.67x. The arrow points towards section 1 where the element map in figure 5.9 was taken.



Figure 5.8 Micrograph of the sample FH5 from *A French Harbour* with a red square indicating where the image of figure 5.7 was taken. A thin bright white layer is visible over a slightly creamy white layer, objective 200 x 0.67x.

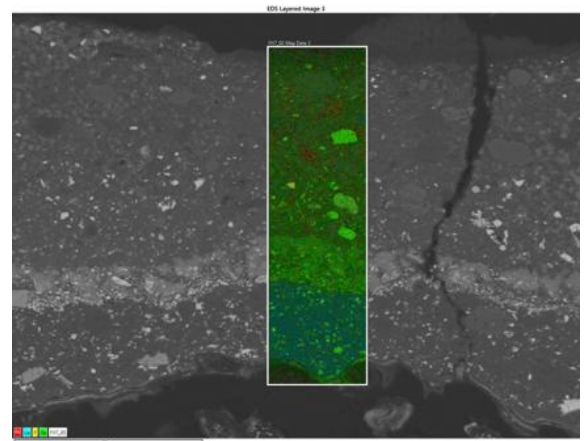


Figure 5.9 Element map of section 1 sample FH5 from *A French Harbour* (Iron=red, Calcium=light blue, Lead=bright green) showing a calcium containing first ground, covered by a lead white with barium sulphate ground.

The lead white layer could have been applied by the artist to adjust the tonality of the ground to a bright white ground. At this time, Cameron may also have preferred a smoother surface upon which to paint. A double ground hides the weave texture more and creates this smoother surface. A similar double ground has not been identified on any of the other works analysed. This could be an

indication that the use of double grounds was a practice he used earlier in his career. It is also of interest that the ground was on the verso, and a similar ground layer structure was not found on the recto of this painting. Further analysis on the grounds of Cameron's early works is needed to more securely state whether he had a preference for a double or single ground early in his career.

In Cameron's canvas orders at Roberson & Co, no requests for double grounds were identified. The colourmen did sell canvases with double grounds. In paragraphs 5.10.2 the various canvases are discussed in more detail and figure 5.33 shows a page from a Roberson catalogue listing some of the options for canvas, including some 'full primed' canvases and some that are labelled 'single primed', as well as listing 'grey' and a 'warm grey' prepared canvas. Unfortunately, the limited number of catalogues by Roberson available and the lack of details on the preparation of canvases in these catalogues limits the information available. In *The Artist's Assistant*, Carlyle discusses the single and full primed canvases that were available at Winsor & Newton, indicating that these types of canvases were not uncommon.<sup>303</sup>

The canvas of *Morning in Lorne* has been painted white on the verso presumably to protect the canvas. The detection of lead in all areas analysed with pXRF, including the readings taken from the verso, suggest that the ground layer and the layer on the verso contain lead white. Barium was also found suggesting that barium was used as an additive to lead white, a common occurrence in the 19th century.<sup>304</sup> Additionally, minor quantities of zinc were found in the spots analysed on the verso. This may have been an addition of zinc white to lead white to

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<sup>303</sup> Carlyle, 186.

<sup>304</sup> Bomford et al., *Art in the Making: Impressionism*.

adjust the tone of the paint.<sup>305</sup> Or it could relate to the use of zinc white as a mixing white on the recto of the painting, see 'Paint application'.

Even though there is no record of Cameron requesting a canvas with a toned ground layer, technical examination revealed that he made use of a toning layer at least once, in *Morning in Lorne* (Figure 5.11). The sky of this painting has a warm tonality which was achieved through the application of a yellow toning layer, containing chromium yellow and zinc white identified with pXRF, underneath the composition (Figure 5.10, and section 5.10.2).

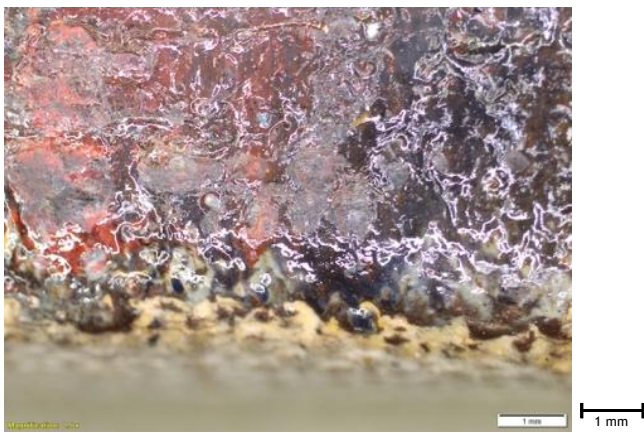


Figure 5.10 Micrograph of the yellow toning layer visible at edge of recto in *Morning in Lorne*, 15x.

<sup>305</sup> Carlyle, *The Artist's Assistant*, 207; Standage, *The Artists' Manual of Pigments*, 9.



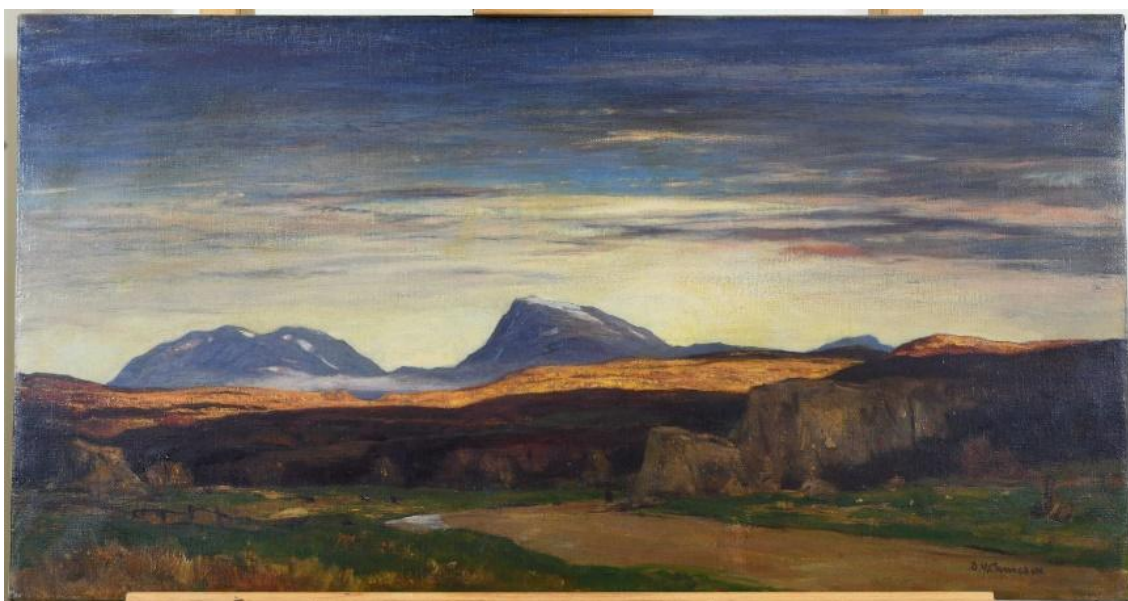


Figure 5.11 D.Y. Cameron, *Morning in Lorne*, oil on canvas, 92.4 x 48.8 cm, The Hunterian, Glasgow.

Only in one area, no chrome yellow could be definitively identified. In the brightest yellow area where the sun appears just behind the hills, starting to rise above, cadmium yellow was identified with pXRF (Figure 5.12). The choice for cadmium yellow in this area likely relates to the warmer tone of this pigment which is better suited for depicting the warm rays of sun just appearing above the hills.



Figure 5.12 Micrograph of *Morning in Lorne* showing the yellow underlayer underneath the pale blue sky just above the hills and horizon line, 6.7x.

## 5.5 Underdrawing and Sketching

To set out the composition, artists would traditionally draw on the ground with a dry medium, for instance charcoal, graphite, or red or black chalk. This could then be covered with a monochrome underpainting, an *ébauche*, which was stated in the nineteenth century to be part of good academic practice. Later in the nineteenth century, artists abandoned the monochrome underpainting and sketch in dry media in favour of sketching in coloured paint.

An underdrawing in a carbon-based black material, such as charcoal or carbon black paint, can be detected using infrared reflectography (IRR). IR reflectograms from the six case studies show only one work with an underdrawing, *Cloister at Montivilliers*. It may be that Cameron felt the need for a careful sketch of the architectural subject in this painting but did not feel the need for such a stringent approach when painting landscapes. As no other architectural subject works were analysed it cannot be stated with certainty that Cameron used underdrawing for all his architectural works. However, when examining another architectural painting, *En Provence*, in store, potential sketch lines could be identified along the outlines of the buildings. However, this painting has not been examined under magnification as part of this research or previously by the museum. Nor has infrared reflectography been conducted that could potentially show the underdrawing. Therefore it could not be conclusively stated that an underdrawing is present. In other street scenes, for example *La Rue Annette* no evidence of underdrawing could be seen when the work was studied in situ in store. The sharp outlines of this work do suggest that Cameron carefully set up his composition, potentially using the same approach he used in his landscape works.

In the landscape paintings, no evidence of underdrawing was found. However, the sharp outlines and few changes that were observed in these works, suggest

that Cameron did carefully prepare for these works. Careful examination of the paint surface revealed a rubbed in coloured layer underneath the brushstrokes. It is thought that this may be an indication of an underpainting. Having this guide to the overall scene, Cameron would have been able to assess the tonality of the work, as well as create the carefully painted, sharp outlines so typical of his later landscapes and some of his architectural works. This is further explored in the case study 'Setting up the Scene - *Morning in Lorne*'.

The approaches identified in Cameron's paintings, of underdrawing or underpainting, suggest that Cameron built up his compositions differently depending on the subject, architecture and landscape respectively. However, more research needs to be conducted to establish what approach was used in figure studies and portraits.

## 5.6 Pigments and Paints

Cameron's pigment palette has been described in *The Science and Practice of Oil Painting* (1924) by Speed, and recollected by Eric Sinclair Bell in 1965. The two records largely align with each other, although Speed's account contains more detail. Unfortunately, Speed does not describe how he gained this information. No correspondence between the two artists has been identified, nor is it known if they knew each other. However, given the publishing date and the presence of Speed's publication in Cameron's library<sup>306</sup>, it is possible that Speed visited Cameron in his studio or received the account directly from him.

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<sup>306</sup> NLS ACC8950 Item 31 Inventory and Valuation of Household Furniture, Silver Plate and Other Effects belonging to Sir D.Y. Cameron, R.A., R.S.A., L.L.D., within Dun Eaglais, Kippen, Stirlingshire Made for Fire Insurance Purposes

'D.Y. Cameron. Commencing on the right hand of the palette, near the thumb:

White

Naples yellow

Cadmium

Yellow ochre

Vermillion

Rose madder

Venetian red

Cerulean blue

Cobalt

French ultramarine

Used occasionally:

Genuine ultramarine

Burnt sienna

Ivory black

Emerald oxide of chromium

As a medium Mr. Cameron uses turpentine spirit and linseed oil very sparingly, and only at times. These are the only colours he uses; and he finds that with blue and red he can get his deepest tones, and only on the rarest occasions does he require anything darker than French ultramarine. He says the less vehicle used the better, with which I entirely agree. He also adopts the safe plan of having a second canvas stretched behind the one on which he paints. This protects it from any mechanical damage in handling, and also serves to prevent damp getting through at the back and destroying the priming of the canvas.'<sup>307</sup>

The second description is a recollection of Cameron's palette as seen during a visit by Eric Sinclair Bell, esq. (1884-1973) to the artist in August 1920. Bell, architect, etcher, and one of the trustees of Cameron's estate, provided this account on 7 July 1965. Bell and Cameron met during the modifications and decoration of the Church House of Kippen Parish Church in the 1920s.<sup>308</sup> This description was recorded by George Renfrew Wilson (1900?-?), author of an unpublished biography of Cameron.<sup>309</sup> Bell describes the palette starting at the thumbhole: 'green , red (rose madder?), brown (ochre), yellow, white, blue, red

<sup>307</sup> Speed, *Oil Painting Techniques and Materials*, 249-250.

<sup>308</sup> Stirling Archives, 'Kippen Parish Church - Session House 6th March 1929'.

<sup>309</sup> NLS ACC13488 Unpublished biography by George Renfrew Wilson.



(Indian?)'. Similar colours are included in both accounts, but the order in which they were organised is different. According to the description included in Speed's publication, Cameron's palette was neatly organised, starting with white and the brightest shades of yellow to red, and finally blue. The pigments of the same colour are grouped together. This neat organisation may truthfully describe Cameron's palette. However, it may also have been fabricated to present a neater organisation either by Speed or by Cameron if he himself gave Speed the details. Bell's account describes a less neatly organised palette, with two red pigments supposedly separated by brown, yellow, white and blue pigments. As this is a recollection from several decades after observing the palette it may not be entirely correct. Both descriptions of Cameron's pigment palette indicate that Cameron used a relatively small number of pigments, including both traditional pigments, such as ochres, and modern pigments for the time, such as cadmium yellow and cobalt blue.

Technical analysis of the case studies revealed that Cameron's pigment palette was relatively limited, and closely aligned with Speed's account: lead white, zinc white, cadmium yellow, chromium yellow, yellow ochre, vermillion, red lead, red iron oxide, a red lake pigment, cerulean blue, cobalt blue, chromium oxide green, emerald green, umber and charcoal blacks. The majority of the pigments were found in all or most of the paintings analysed suggesting that Cameron made use of the same pigments throughout his career. For instance, cobalt blue was identified in all paintings, except for *A French Harbour*, and cadmium yellow was identified in four out of six paintings: *Cloister in Montivilliers*, *Morning in Lorne*, *The Wilds of Assynt*, and in a sample from the verso of *A French Harbour*. The pigments Cameron used were typical of the late nineteenth- and early twentieth- centuries being a combination of well-known traditional pigments, for example iron oxides, and new pigments, including chrome yellow and cobalt blues. Similar colours could be found on Whistler's palette, or that of Holman Hunt and Rossetti of the Pre-Raphaelite Brotherhood. Unfortunately, it is not known whether other Glasgow Boys used these same pigments as no cohesive technical study of their work has yet been conducted.

The account books at Roberson & Co Ltd. showed that Cameron bought both tubed paints, as was common in the nineteenth century, see Chapter 4, and powdered pigments alongside linseed oil. This suggests that he may have made some of his paints himself or that he adjusted some of the tubed paints in his possession. Additionally, the acquisition of resins could indicate that Cameron varnished his paintings, or used these to alter his painting materials. The examination of Cameron's paint was not able to determine whether the pigments used were tubed paints or were prepared from powdered pigments by the artist.

## 5.7 Paint application

Cameron's style reflects the general style developments of the time, especially those of the Glasgow Boys. He appears to have been more interested in depicting 'modern' ideals early in his career. He depicted similar subjects as the other Glasgow Boys, namely rural and city life. In his early landscapes, rural subjects were depicted, similar to the work of the Hague and Barbizon School artists, as is explained further in the discussion on *Winter near Liberton, Midlothian*. The depiction of modern life and leisure activities, common subjects in the late nineteenth century, further aligns Cameron with the subjects depicted by his contemporaries both in Scotland, and abroad. Furthermore, Cameron had an interest in the more mystic and symbolic in the 1890s as he likely had observed in the work of Matthijs Maris and the Pre-Raphaelite Brotherhood. He was not the only Glasgow Boy to explore these subjects, see the case study *Fairy Lilian*. Cameron's early works, both figural and landscape, are generally typified by a reduced tonality, or an overall darker tonality. Interestingly, in *A French Harbour*, analysis with pXRF revealed the presence of mercury throughout the painting. It was thought this may relate to a toning layer containing vermillion. However, samples from this painting and study of the painting under magnification provided no evidence for a toning layer. Micrographs of the paint surface show that red particles can be found in all areas

of the painting. Therefore, it is suggested that the red pigment may have been mixed in the paint in all areas as a 'universal harmoniser'. Such a harmoniser was proposed by Whistler to ensure the tonal harmony within a painting. However, Whistler suggested black to be the harmoniser, not a bright red pigment like vermillion.

A move towards a brighter tonality can be seen around the same time that a shift in subject matter can be seen, around 1900. From this time onwards, purely architectural works seem to appear and figural works disappear from Cameron's work. The majority of the architectural works depict locations Cameron visited abroad, especially the street scenes. Of interest is the difference in level of detail and the different focus in architectural works in etching or in watercolour or oil, see 'case study *Cloister at Montivilliers*. Moreover, Cameron focused on depicting the Scottish highlands in his landscapes from this period onwards. Instead of portraying a 'realistic' version of the highlands, Cameron played with colour and focused on a more emotive, Romantic depiction of the landscape, see both *Morning in Lorne* and *The Wilds of Assynt*. This change in tonality and greater emphasis on the use of colour may be the combined influence of Impressionist work becoming available in Glasgow, and Cameron's exposure to Italian Renaissance art in his position at the British School in Rome. An additional source may be found in the work of the Pre-Raphaelite Brotherhood, who often used bright colours in their work.

Even though a significant change in tonality can be observed between his early and late works, Cameron made use of similar pigments throughout his career. The early works tend to be darker and have a reduced tonality. It was possible to identify with technical examination that Cameron employed pigments mixed with black earlier in his career, to create a more muted tone, whereas later in his career, he chose instead to paint in a seemingly unadulterated colour, or to mix bright pigments without the addition of black. An example of an 'unadulterated' colour can be seen in *Uplands in Lorne* where a stroke of what

seems to be a single colour in a white cloud upon closer examination is revealed to be a pigment mixture (Figure 5.13).



Figure 5.13 Left: *Uplands in Lorne* with indication where micrograph was taken; Right: Micrograph of a white cloud in *Uplands in Lorne* with yellow, blue and black particles, 45x.

A preference for the use of zinc white as a mixing white and lead white for 'purer' white areas has been observed. On the recto of *Morning in Lorne*, zinc white is present in higher quantities suggesting that it was used as a mixing white for the sky and for the highlights, for instance, the white areas on the purple hill on the left in the background. In *Uplands in Lorne*, pXRF and SEM-EDX analysis revealed the presence of zinc white and lead white in the light blue sky (Figure 5.15). The clouds in this painting are lead white, and the highlights in the hills are also made using mainly lead white, with some zinc white added.

In *Cloister at Montivilliers* and *Uplands in Lorne*, zinc white was used as a mixing white, most noticeably in the sky. The light blue colour of the sky in both works consists of cobalt and cerulean blue (cobalt stannate) mixed with zinc white and some lead white. The combination of these shades of blue with white creates a softer midtone between the two original blue colours. Under magnification, however, the two paint mixtures appear different. A greater variation in shades of blue in the sky of *Cloister at Montivilliers* is visible (Figure 5.14). This may be the result of the paint mixture not having been fully mixed or that some darker

blue was present on the brush when the paint was applied. In contrast, in the light blue sky of *Uplands in Lorne*, though darker blue particles are visible, no strokes of a darker blue paint can be identified (Figure 5.15).

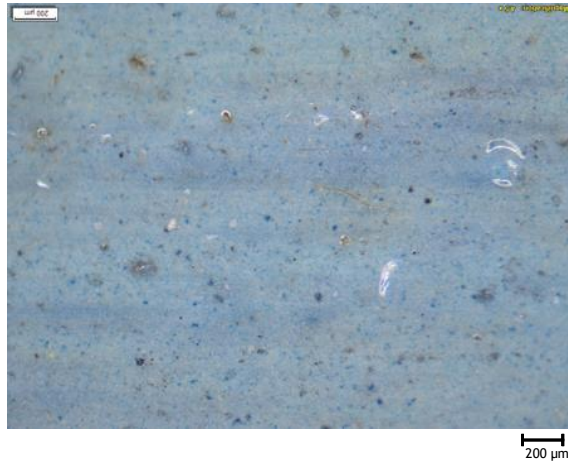


Figure 5.14 Micrograph of the sky of *Cloister at Montivilliers*; Mixture of white and blue paint creating an inhomogeneous mixture in which blue particles are visible, 45x.

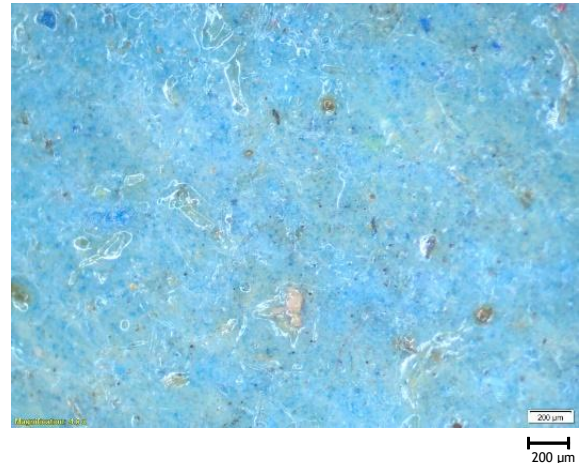


Figure 5.15 Micrograph of *Uplands in Lorne*'s light blue sky, mixture of blue and white paint in a homogenous mixture, 45x.

Earlier works from before 1900 present a relatively smooth surface with little impasto. Later works contain a greater variety of paint application; thinned, rubbed, thick and smooth, thick and impasto using either a brush or palette knife. It is unclear what prompted Cameron to change his approach to paint application. However, it appears that the influence of Whistler and Maris, prominent in his early figural works, is represented in a different way over time. In later works the atmospheric quality inspired by Whistler and Maris can still be observed in some landscapes, especially those depicting dark days or night, despite Cameron's preference for brighter colours and tones.

Additionally, later in Cameron's career, he played with texture; rubbing paint into the canvas weave, smoothing paint with a palette knife, and applying impastoed strokes. Rubbing paint into the canvas not only allowed for the canvas texture to be more prominent but also often revealed the colour of the ground. Creating an interplay with the light ground, the rubbed in paint and the

overlaying colours allowed Cameron to create effects of greater distance and focus in his works, see *Morning in Liberton*.

In later works, evidence of the manipulation of Cameron's paints was found in areas where it had been thinned, potentially with linseed oil, in *Cloisters at Montivilliers* or where a different medium had been mixed in, as was seen in the dark hills in *Uplands in Lorne*. Furthermore, he applied these pigments wet-in-wet, roughly mixed on the palette, and pure in highlights.

## 5.8 Varnish

It is unclear what Cameron thought about varnishing as no clear reference to this practice has been found in any of his writings. In his letters to art dealer James Connell & Sons, Cameron occasionally requests his pictures are 'rubbed'. It is unclear exactly what he meant with this, or what kind of pictures he refers to as he refers to his etchings, oil paintings and watercolours all as pictures. Similarly, he writes that some of his pictures ought to be glazed, potentially referring to his wish for his works to be placed behind glass. Again, it is unclear whether this applies to all of his works or merely to one medium. The acquisition of copal and mastic resin from Roberson, as described in paragraph 4.3.1, may relate to varnishing as these resins were used for this practice. In the nineteenth century, knowledge of the darkening of varnishes was available and therefore some artists, especially the Impressionists, abandoned the use of varnish wishing for their works to retain the fresh colours with which they were painted. However, a common practice in the earlier nineteenth century had been to varnish works when they were placed on exhibition to ensure that the colours were well saturated and the paint layers protected. Additionally, paintings were not always varnished by the artist but could also be varnished by an owner after the acquisition of the work at times on the suggestion of the artist.



With no evidence or record provided by Cameron, his works are the main source of information. Upon examination of his paintings, all appear slightly glossy. This could be the result of the use of oil as a medium but may also indicate the presence of varnish. Ultraviolet light fluorescence imaging of the paintings revealed a slight fluorescence was visible all four works examined in ultraviolet light: *Cloister at Montivilliers*, *A French Harbour*, *Uplands in Lorne* and *Morning in Lorne*. All paintings appear to have been coated with a synthetic varnish. The cleanest application is visible in *Morning in Lorne* (Figure 5.16).

The paint samples obtained from the works did not reveal anything significant about the varnish layers. With UV fluorescence no clear indication of a varnish layer could be detected.



Figure 5.16 UV Fluorescence photograph of *Morning in Lorne*.



Figure 5.17 UV Fluorescence image of *A French Harbour*.

The media used in the lining treatments of *A French Harbour* penetrated the paint and influence the fluorescence visible in the ultraviolet image, creating an overall messy image (Figure 5.17). Brush strokes are visible, likely relating to a varnish application although this cannot be stated with certainty. The painting may have received a partial cleaning to then be recoated in varnish. Areas, for instance in the centre of the painting, show a different fluorescence than the surrounding area. It seems as if more of the painting is visible in this area. This may be an indication of the cleaning treatment. Additionally, areas without fluorescence, for instance on the left side near the top, relate to losses that have been repaired, see also the X-radiograph and infrared reflectogram in the case study in section 5.10.4.



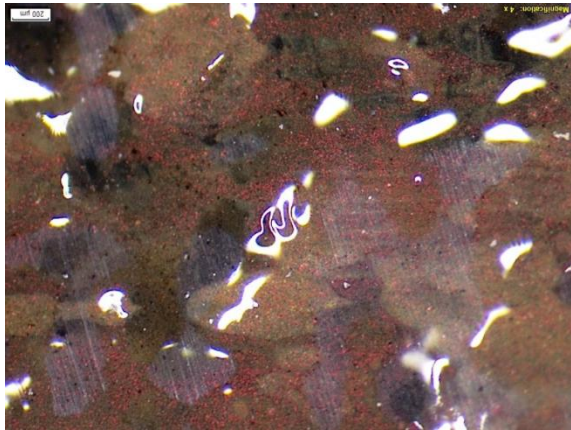


Figure 5.18 Micrograph of *A French Harbour*: Ground underneath group of figures showing cracking in the varnish layer, 40x.

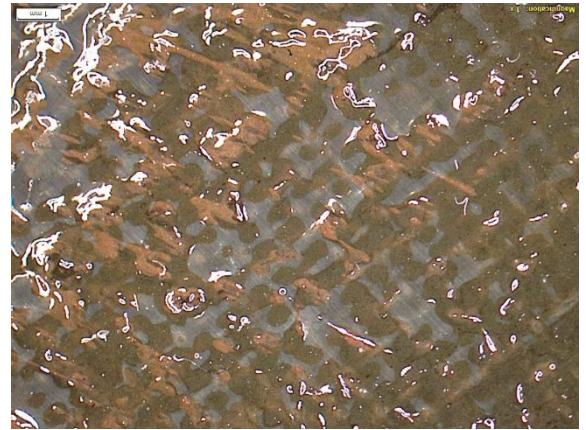


Figure 5.19 Micrograph of *A French Harbour*: Varnish cracking to the left of the group of figures, 10x.

Surface examination with a microscope further confirmed the identification of varnish on all four paintings. Micro-cracking in the varnish layer obscured the paint surface in *A French Harbour*, *Uplands in Lorne* and *Morning in Lorne* (Figure 5.18 and Figure 5.19). In the varnish applied to *Cloister at Montivilliers* air bubbles were visible and a scratch in the varnish layer runs diagonally near the top of the painting (Figure 5.20 -Figure 5.22).

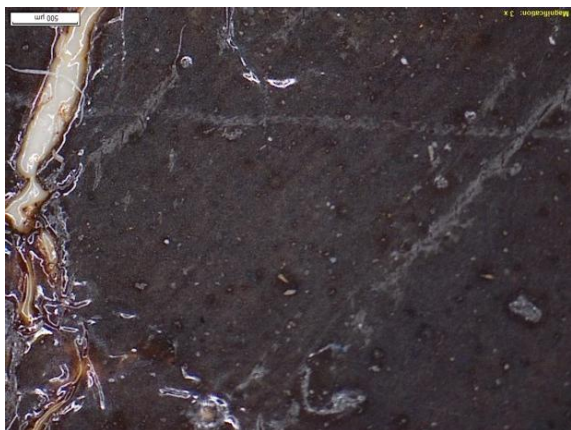
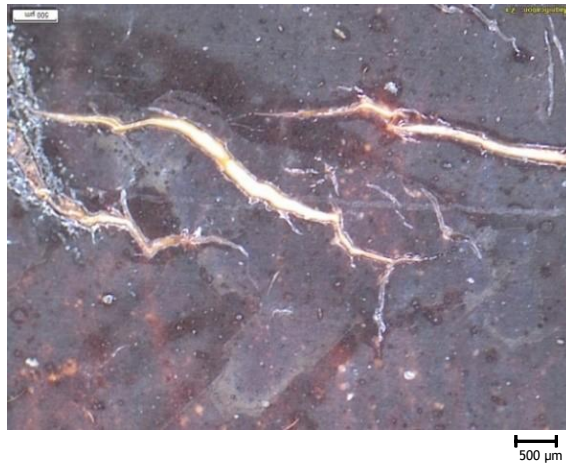


Figure 5.20 Micrograph of *Cloister at Montivilliers*: Diagonal brushstroke and scratch in varnish visible near the top right corner, 30x.



Figure 5.21 Micrograph of *Cloister at Montivilliers*: small matt area within varnish layer along the top edge, 25x.



**Figure 5.22** Micrograph of *Cloister at Montivilliers*: Air bubbles in varnish layer towards the right of the central beam in the ceiling, 20x.

Additionally, the combination of a glossy varnish which has darkened over time and as a consequence of the conservation treatment, make areas harder to view with the naked eye in *A French Harbour*. For the other paintings, the varnish did not significantly interfere with the legibility of the paint surface when examined with the naked eye. However, especially in the darker areas of the paintings, the varnish interfered with the legibility of the surface when examined with a microscope. The microcracking of the varnish, air bubbles, or inclusions such as fibres from a brush, as could be seen in *Morning in Lorne* (Figure 5.24), created an obstructed view of the paint surface. Often a slightly milky appearance was seen in such areas (Figure 5.23),. In general, the somewhat hazy appearance of the varnish prevents details from the paint layers from being clearly visible and identifiable.



Figure 5.23 Micrograph of *Morning in Lorne*: Milky looking varnish, 6.7x.



Figure 5.24 Micrograph of *Morning in Lorne*: Fibres or brush hairs stuck in varnish, 20x.

## 5.9 Condition

The paintings examined in this research were found to be in good condition. This, in combination with the results of the technical examination indicates that Cameron chose 'good' and stable materials. The current good condition of Cameron's oil paintings may also be due to a lack of popularity, resulting in Cameron's works being displayed and loaned less often. Therefore, the paintings may have been exposed to little wear and tear.

One of the issues observed within Cameron's works is related to the varnish and glazes used which impact the legibility of the paintings. This is especially prevalent in *A French Harbour*. This painting's legibility has been severely impacted by darkening and a glossy varnish. The darkening of the work is caused by both the yellowed varnish and the conservation treatment. A wax-resin strip-lining and a full lining with a transparent material were performed. No conservation record exists for the treatment, but the use of materials suggests



that the treatment is likely to have occurred in the 1970s or the 1980s when Melinex sheets were used, this is further discussed in section 5.10.4.<sup>310</sup>

Metal soap formation has been identified on all four Hunterian paintings. In these works, protrusions are visible, having formed underneath the paint layer (Figure 5.26 and Figure 5.27), or having burst through the top layer, as in *A French Harbour*, and *Uplands in Lorne* (Figure 5.25 and Figure 5.28). The metal soap formation is thought to relate to the zinc and lead white used for the grounds and as mixing whites in these paintings. These elements have been identified most commonly as the metal in soap formations.<sup>311</sup> Metal soaps are complex compounds of a metal linked to the oil in the paint layers. These soaps can migrate through the layers and form protrusions visible just underneath the surface or that break through the paint surface. This often leads to a “greying of the image” due to diffuse reflection and a subsequent loss in the depth of modelling created by the underlying paint layers that may have existed. However, in the case of the paintings examined in this research, the metal soaps do not interfere with the composition.

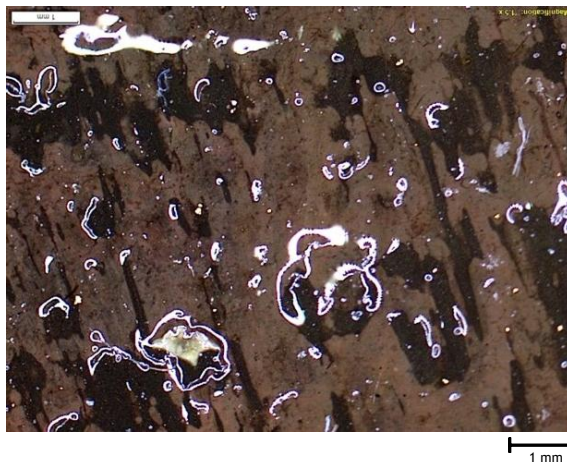


Figure 5.25 Micrograph of *A French Harbour*: A white protrusion visible in the bottom right corner, 15x.

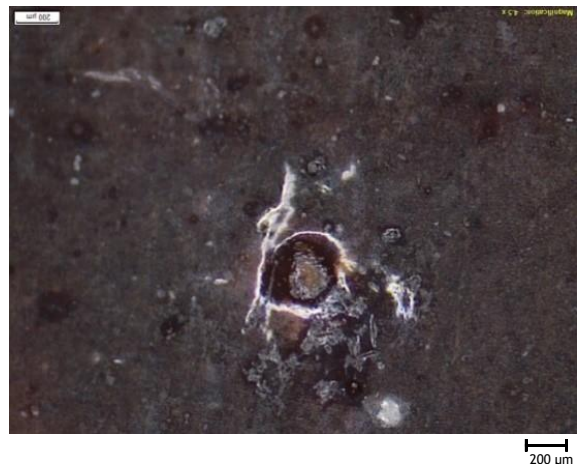


Figure 5.26 Micrograph of *Cloister at Montivilliers* Protrusion in the dark brown area to the right of the central beam in the ceiling, 45x.

<sup>310</sup> Berger and Zeliger, “Effects of Consolidation Measures on Fibrous Materials’.

<sup>311</sup> Casadio et al., ‘Metal Soaps in Art: Conservation and Research ’; Hermans, ‘Metal Soaps in Oil Paint Structure , Mechanisms and Dynamics’.

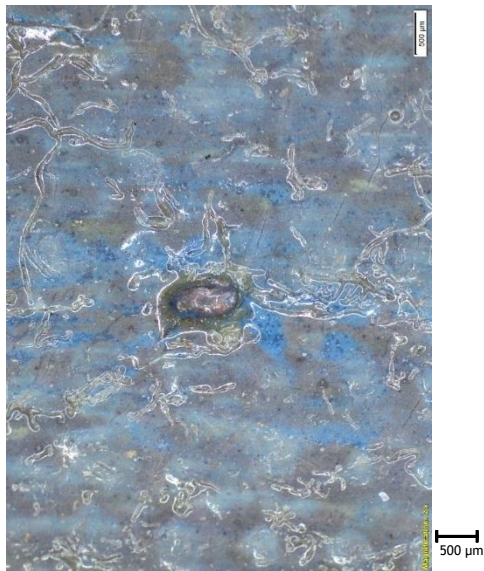


Figure 5.27 Micrograph of *Morning in Lorne* Protrusion, likely a metal soap, 20x.



Figure 5.28 Micrograph of *Uplands in Lorne* White protrusion in purple hill, 45x.

In works that have not been lined and for which no conservation treatments have been documented, for example in *Morning in Lorne* and *Fairy Lilian*, the canvas was observed to no longer be taut. The canvas is slightly slack in the corners, visible in the waves appearing in the canvas. The stretcher of *Fairy Lilian* has been keyed to such an extent that the stretcher is no longer structurally sound. This is currently being addressed through a conservation treatment.<sup>312</sup>

More detailed information about the condition of the paintings technically examined in this research can be found in Appendix XXII Technical Examination Documentation, which includes condition diagrams.

No records detailing previous conservation treatments or condition reports providing details on the painting's condition were available for the works

<sup>312</sup> Visit to the GMRC Paintings Conservation Lab where *Fairy Lilian* is being treated, 20/10/2023.

technically examined. This complicates the understanding of what has happened to the work, especially when it is clear that treatment has occurred.

## 5.10 Case Studies

### 5.10.1 Inspiration from the Continent - *Winter near Liberton, Midlothian*

The Glasgow Boys pushed against the Academic tradition of landscapes and genre paintings with moralistic messages as had been painted by the previous generation of Scottish artists. Nor were they interested in the recording of minute, scientifically accurate detail in their work as the Pre-Raphaelites had been. Instead, inspired by the art produced on the continent, the Barbizon and Hague schools, as well as the work of Jules Bastien-Lepage, they wished to depict nature as it was, providing an impression or a record of a moment in time, making art to be art, without morals or sentimentality. However, they never fully abandoned elements of the moral or of narrative.<sup>313</sup> This can be seen in Cameron's early work *Winter near Liberton, Midlothian* (Figure 5.29).

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<sup>313</sup> Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900', 379; Billcliffe, *The Glasgow Boys*.





Figure 5.29 D.Y. Cameron, *Winter near Liberton, Midlothian*, 1890, oil on academy board, 24.7 x 30.5 cm, Perth Museum and Art Gallery, Perth, Scotland.

Traditionally, landscape painting was considered low in the hierarchy of genres in art. It could include figures taken from history, mythology or religion to complete the *paysage historique*, whilst the *style champêtre* involved attention to the landscape as such, and the people and animals who lived there.<sup>314</sup> Even though all these elements were studied from nature and sketched in the open air, the final balanced composition no longer represented a landscape that could actually be visited. However, in the 1830s, following the example of British artists, among which John Constable, whose art was shown at the Salon in the 1820s, and the Dutch old master landscapists, French artists began to turn to contemporary scenes and depicted landscape as they saw it.<sup>315</sup> Instead of composed, perfect landscapes, artists depicted real, recognisable, rural

<sup>314</sup> Adams, *The Barbizon School & the Origins of Impressionism*, 35-36; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 12.

<sup>315</sup> Adams, *The Barbizon School & the Origins of Impressionism*, 35-36; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 12.



landscapes and peasant scenes.<sup>316</sup> They began to include rugged and wild elements, ruins and lowly buildings, turning towards a more realist and romantic approach. Sentiment and the individuality of the artist became important.<sup>317</sup> This included a change in the status awarded to naturalistic landscape, previously considered inferior to historical landscape.<sup>318</sup>

Artists of the Barbizon School, for instance Millet (Figure 5.30) and Courbet, painted landscapes and scenes from peasant life.<sup>319</sup> Peasants were considered a symbol for the unspoilt and untouched by the industrial revolution, and were read by period critics as evidence of socialist propaganda.<sup>320</sup> The works by the Barbizon School which depicted peasant life were evidencing sympathy with the hardship of peasant life, but also providing a sense of rural life as superior to urban life because of the perceived moral dignity of the peasant. This can be seen in works such as Courbet's *Stonebreakers*.<sup>321</sup>

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<sup>316</sup> Adams, *The Barbizon School & the Origins of Impressionism*, 8; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 17.

<sup>317</sup> Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 17.

<sup>318</sup> Adams, *The Barbizon School & the Origins of Impressionism*, 13; Herring and National Gallery (Great Britain), *The Nineteenth Century French Paintings: The Barbizon School*, 12, 16-17.

<sup>319</sup> Adams, *The Barbizon School & the Origins of Impressionism*, 139.

<sup>320</sup> Adams, 14.

<sup>321</sup> Adams, 139-142.



Figure 5.30 Jean-François Millet, *Des glaneuses*, 1857, oil on canvas, 83,5 x 110 cm, Donation sous réserve d'usufruit Mme Pommery, 1890, © Musée d'Orsay, Dist. RMN-Grand Palais / Patrice Schmidt

Jules Bastien-Lepage (1848-1884), a contemporary of the Impressionists, continued painting in a naturalist tradition.<sup>322</sup> Bastien-Lepage depicted peasant life in rural landscape. In his earlier work, and peasant scenes of the earlier Barbizon School, the figures are normally absorbed and seemingly unaware of being observed, consistent with in the earlier works of the Barbizon School, such as in Courbet's *The Stonebreakers* (1849) and Millet's *Des glaneuses* (1857) (Figure 5.30). However, in Bastien-Lepage's later works, for instance *Les Foins* (1877), the figures are at rest.<sup>323</sup> Instead of creating a deep landscape, Bastien-Lepage places his figures near the front of the picture plane and using a high horizon creates a relatively flat image.<sup>324</sup> Furthermore, his use of square

<sup>322</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*, 28-31; Young, 'The Motionless Look of a Painting: Jules Bastien-Lepage, *Les Foins*, and the End of Realism', 39.

<sup>323</sup> Young, 'The Motionless Look of a Painting: Jules Bastien-Lepage, *Les Foins*, and the End of Realism', 56-59.

<sup>324</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*, 28; Young, 'The Motionless Look of a Painting: Jules Bastien-Lepage, *Les Foins*, and the End of Realism', 45.

brushstrokes, a tonal palette with occasional bursts of pure colour, and variation in the degree of detail, reserved for the foreground and hands and faces, in the composition were to influence the Boys.<sup>325</sup> The influence of Bastien-Lepage can mostly be seen in the figural works of Cameron and the other Glasgow Boys, discussed in paragraph 5.10.5. However, the high horizon line that the French artist favoured has been imitated in many of the early landscapes of the young Scottish artists.

In the Netherlands, inspired by the Barbizon School, a group of artists called the Hague School (1860s-1880s) depicted similar subjects of rural life. The Dutch artists followed in the tradition of naturalistic landscapes, as started in the seventeenth century in work by for instance Salomon van Ruysdael (1602-1670) and Jan van Goyen (1596-1656).<sup>326</sup> However, the Hague School's freer style and emphasis on working from nature were inspired by the Barbizon School.<sup>327</sup>

Cameron and the Boys would have been able to see the work by the artists of the Barbizon and Hague Schools and Bastien-Lepage displayed at the International Exhibitions of 1886 and 1888 in Edinburgh and Glasgow respectively. Additionally, the reduced tonality of the Dutch skies found recognition in Scotland and in combination with a recognisable subject matter and wide fields made the work of the Hague School artists appealing to Scottish collectors and art dealers.<sup>328</sup> The Scottish collector John Forbes White (1831-

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<sup>325</sup> Hardie, *Scottish Painting: 1837 to the Present*; Billcliffe, *The Glasgow Boys*; Fowle, Hamilton, and Melville, *Impressionism & Scotland*; Hardie, *The Glasgow Boys in Your Pocket*; Stevenson and Walsh, 'Pioneering Painters: The Glasgow Boys'; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*; Hodge, *Glasgow Boys: Masterpieces of Art*; Knox, *The Glasgow Girls and Boys*.

<sup>326</sup> Gifford, 'Style and Technique in Dutch Landscape Painting in the 1620s'.

<sup>327</sup> Marius, Norman, and Teixeira de Mattos, 'Dutch Painters of the 19th Century', 113-114; Krul, 'De Haagse School En Het Nationale Landschap'; Suijver, 'A Reflection of Holland: The Best of the Hague School in the Rijksmuseum', 5.

<sup>328</sup> Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900', 378; Hardie, *Scottish Painting: 1837 to the Present*, 82; Billcliffe, *The Glasgow Boys*; Fowle, Hamilton, and Melville, *Impressionism & Scotland*; Billcliffe et al., *The Glasgow Boys: Schots Impressionisme, 1880-1900*.

1904) was the first to collect art by the Hague School and he arranged for the artist George Reid (1841-1913) to visit the Netherlands to study in the studio of Alexander Mollinger (1836-1867) and invited Jozef Israëls to visit Scotland arranging a tour for him, strengthening the connection between Scottish and Dutch art of the late nineteenth century.<sup>329</sup>

In Cameron's early landscape, and in that of the other Boys, rural life is depicted in a realistic manner. The work is not glorified, but represents life outside of the industrialised cities. The Glasgow Boys were said by Billcliffe to have focused on the rural life in the lowlands in protest to the glorified images of the Highlands painted by the older generation of Scottish artists.<sup>330</sup> They travelled in small groups to Cockburnspath and Kirkcudbright to paint rural life. Cameron did not travel with them at this time, probably because he was still a student at the Glasgow School of Art (1881-1884) and later in Edinburgh. However, he did travel to the countryside in Liberton, nearby Edinburgh, and Blackwaterfoot on the Isle of Arran, depicting the scenes here.

The results of their countryside expeditions can be seen in much of the early work of the Glasgow Boys, for instance in Guthrie's *A Funeral Service in the Highlands* (1881-1882, Kelvingrove Art Gallery and Museum), and *To Pastures New* (1882-1883, Aberdeen Art Gallery), as well as in E.A. Walton's *The Wayfarer* (1881, The Fine Art Society), George Henry's *Brig o'Turk* (1882, Kelvingrove Art Gallery and Museum), or James Paterson's *Moniaive* (1884, Hunterian Art Gallery). Cameron's *Blackwaterfoot* (1889, Private Collection)<sup>331</sup> and *Winter near Liberton, Midlothian* (c.1890) also represent this early realism. *Blackwaterfoot* depicts landscape in warm colours in which a mother and child are walking along a river, with a home on top of the hill, golden fields and a village in the far distance forming the backdrop of the scene. The warm tonality in the work

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<sup>329</sup> Morrison, 'Holland and France: Prototype and Paradigm for Nineteenth-Century Scottish Art'.

<sup>330</sup> Billcliffe, *The Glasgow Boys*, 27-29.

<sup>331</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 31 plate 11.

reminds of works by Barbizon School artists, such as Jean François Millet *Des Glaneuses*. The high horizon line appears to be inspired by Bastien-Lepage who favoured this as can be seen in *Les Foins* and *Poor Fauvette*. Even though in the paintings by the French artist the figures form the main subject, in Cameron's painting the figures are part of the scene but not the main focus, where nature is most prominent.

In *Winter near Liberton, Midlothian*, a figure at work can be seen next to an animal, a horse, and in the distance a homestead is visible, the whole set in a wintry white landscape. The tonal palette in this painting is reminiscent of the reduced tonal palette of the Hague School. As a consequence of the often-grey weather of the Netherlands which required a reduced tonal palette, the Hague School received the alternative nickname the Grey School<sup>332</sup>. In *Winter near Liberton, Midlothian* the blue-white of the snow and pale-grey sky are the main colours, comprised of cobalt blue and lead white. Small areas of brighter colours can be seen in the distance in the roof of the homestead and the trees where vermillion red and chrome green were used respectively.

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<sup>332</sup> Krul, 'De Haagse School En Het Nationale Landschap'; Suijver, 'A Reflection of Holland: The Best of the Hague School in the Rijksmuseum ', 5.



board to most closely resemble a quarto size academy board.<sup>334</sup> The small size of this early work and the light, easily portable support of academy board, could have allowed him to travel to the countryside and sketch and paint on location. It is unknown whether this work was painted *en plein air*, but it would have fitted in with what the other Glasgow Boys were doing at the time and would have followed in the traditions of the Barbizon and Hague Schools and Bastien-Lepage.

Unfortunately, the dates for Cameron's other oil paintings on board are not known. Additionally, often the description of the support merely mentions that the support is board, and does not specify whether it is the cheap academy or the more expensive mill board that was used. Therefore, it is not possible to state whether Cameron used academy boards only earlier in his career when he did not have the funds to acquire more expensive materials, or if he continued to use these supports until later in life.

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<sup>334</sup> Winsor & Newton, *Winsor & Newton's Catalogue of Colours and Materials for Oil and Water Colour Painting, Pencil, Chalk, and Architectural Drawing, &c*, 35.

### 5.10.2 Setting the Scene - *Morning in Lorne*

Technical examination of Cameron's oil paintings revealed information about how he prepared to paint. It appears he carefully selected his support, considering the stability of the support, considering the number of crossbars, as well as the texture. It may be the latter aspect which ensured canvas was Cameron's favoured support, combined with the opportunity to easily adjust its size and shape if required. The plain weave favoured by Cameron was the most common weave found within the collection of art works on canvas by British artists during this period in the Tate.<sup>335</sup> It was available commercially in a variety of weights and with a variety of preparation layers. The weave count of *Morning in Lorne* of 11/cm by 12/cm in a tight weave suggests the use of a heavier thread. This weave count was determined by counting the threads under a microscope along a ruler. It was not possible to determine warp and weft because no selvages of the canvas can be seen in these works.<sup>336</sup>

From the Roberson & Co Ltd. account books, Cameron's preference for a covered canvas to be stretched over another canvas (Appendix XIV and XV) can be gleaned. This type of canvas support describes what is known as a 'double canvas' or a 'loose lining'<sup>337</sup>: a prepared canvas that has been backed with a second prepared canvas. Both canvases were primed and prepared with a ground. When dry, the loose lining would be attached to the stretcher with the ground facing inwards. The primary canvas used for painting would be stretched over this canvas, with the ground facing outwards, and attached with tacks to the same stretcher. No adhesive was generally used between these two layers.<sup>338</sup> The loose lining protected the primary canvas from dirt, buffered moisture changes and limited damages through handling.<sup>339</sup> These 'double canvases' were

<sup>335</sup> Townsend, 'The Materials Used by British Oil Painters throughout the Nineteenth Century', 47.

<sup>336</sup> Vanderlip de Carbonnel, 'A Study of French Painting Canvases', 5.

<sup>337</sup> Hackney, *On Canvas: Preserving the Structure of Paintings*, 24.

<sup>338</sup> Hackney, 25.

<sup>339</sup> Hackney, 24.



not uncommon. They were available at various colourmen in London and were used by Turner and the Pre-Raphaelites John Everett Millais and Holman Hunt, among others.<sup>340</sup> Cameron's use of such double canvases is remarked upon in *The Science and Practice of Oil Painting* by the landscape painter Harold Speed (1872-1957) published in 1924, in which Cameron is included among important artists of the time: '[Cameron] adopts the safe plan of having a second canvas stretched behind the one on which he paints.'

Details of Cameron's canvas orders indicating the stretcher sizes and the canvases to be attached to the stretcher, No.2 and No.17 over a reversed No.1, as well as a loose stretcher (Figure 5.32).

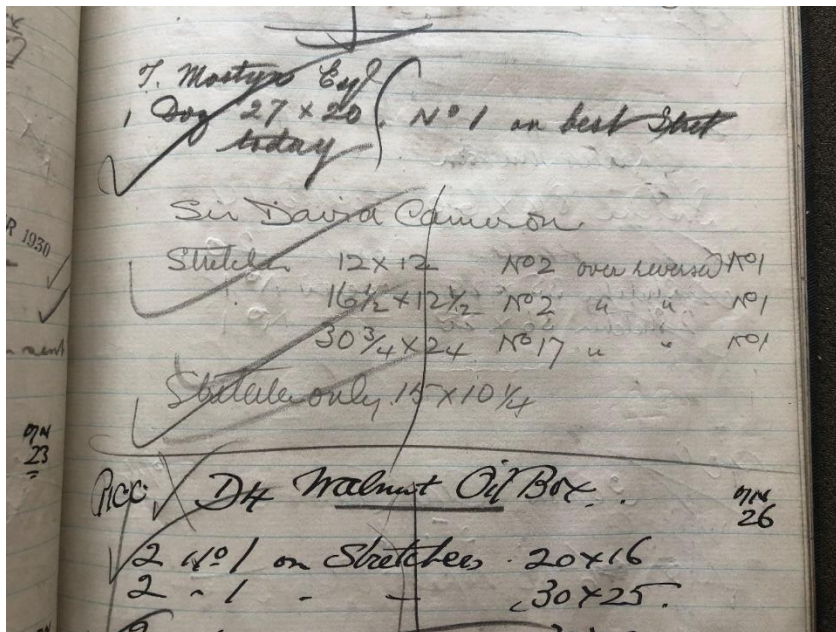


Figure 5.32 Photograph of an order by Cameron in Roberson's canvas order book.<sup>341</sup>

For his loose lining canvas, Cameron appears to have preferred a reversed no.1 canvas. For his painting canvas, his preference varied between no.2, no.3, no.12, no.17, no.18 and no.20A, with the majority of his orders requesting no.17 canvases. Only one order was found for covered canvases without any mention of

<sup>340</sup> Hackney, 24-25.

<sup>341</sup> Drawing materials ledger HKI MS 764-1993.

a loose lining. Roberson catalogues of the 1930s and 1950s include pricelists for canvases for oil paintings. Different types of canvas were available each with its own identifying number.<sup>342</sup> According to the list of canvases in the catalogue dating from approximately 1931-1932, illustrated in 'British Canvas, Stretcher and Panel Suppliers' Marks. Part 8, Charles Roberson & Co', a number 17 canvas was 'fine canvas with a sharp tooth', and a number 1 canvas was 'single primed' and available in all widths up to seven feet (Figure 5.33).

Superior Canvas of Pure Flax			
Carefully prepared in our Own Factory, for Oil Painting.			
In Rolls 6 yards long.			
Pattern Books sent on Application.			
No.			s. d.
1.	Single Primed, all widths to 7 ft...	per square yard	9 6
2.	Extra Fine Canvas, 54 in...	per yard run	16 6
3.	Fine Single Primed, 54 in.	" "	14 3
5.	Plain Canvas, Full Primed, 30, 54, and 60 in.	per square yard	12 0
7.	Twill Canvas (Ticken), 36, 54, and 72 in.	" "	11 0
9.	Roman Canvas, 36, 54, and 72 in.	" "	11 0
10.	No. 1 Canvas sized only, 54 in. (other widths to order)	" "	7 0
11.	Absorbent Gesso Canvas, 54 in.	" "	8 6
12.	Extra Strong Canvas, 54 and 72 in.	" "	14 0
13.	" " 45 and 62 in.	" "	11 0
14.	Sharp Toothed, Single Primed, 54 and 72 in.	" "	11 0
15.	Fine Canvas, Grey (Furse), 84 in.	per yard run	25 6
15a.	" " Warm Grey, 84 in.	" "	25 6
16.	Strong Coarse Grain, 144 in.	" "	55 0
17.	Fine Canvas, Sharp Tooth, 84 in.	" "	25 6
18.	" " Smooth Grain, 84 in.	" "	25 6
19.	Sharp Tooth Brown Tone (Lavery), 54 and 72 in.	per square yard	12 0
20a.	Fine Canvas, Sharp Tooth, 78 in.	per yard run	20 0
21.	Extra Strong Canvas, 96 in.	" "	36 0
22.	Strong Mural Canvas, Rough, 54, 96, and 108 in.	per square yard	15 0
23.	" " Medium, 120 in.	per yard run	52 6
35.	Strong Canvas, Good Quality, 54 in.	" "	12 0
36.	School Quality, Single Primed, 42 and 84 in.	per yard run	7s. & 13 6
37.	Strong Grain Hemp, 67 in.	per yard run	16 0
" Whistler "	Coarse Open Texture, Grey, 72 in.	" "	16 0
" Jute "	Canvas, Coarse, 84 in.	" "	16 0
" Water-colour "	Canvas, White, 54 in.	per square yard	12 0

Figure 5.33 Photograph of a page in a Roberson & Co Ltd. catalogue of c.1931-1932 of a list of canvas types available for oil painting, ©National Portrait Gallery, 2020.<sup>343</sup>

<sup>342</sup> Simon et al., 'British Canvas, Stretcher and Panel Suppliers' Marks . Part 8, Charles Roberson & Co', 20.

<sup>343</sup> Simon et al, 20.



Figure 5.34 Double canvas visible on verso *Rocks and Ruins*.

Examination of the oil paintings on canvas found proof of this ‘double canvas’ preparation method. A ‘double canvas’ can be seen on the painting, *Rocks and Ruins* (1913, NGS) (Figure 5.34). This painting predates Cameron’s Roberson account suggesting that Cameron’s preference had already been established earlier. No loose lining has been identified on the earliest painting on canvas studied, *A French Harbour* (1894). However, this painting has undergone a conservation treatment in which a transparent, stiff material has been adhered to a wax-resin lining (identified with FTIR) (see section 5.10.4 and Figure 5.35). A loose lining may have been removed from this work if it was present. Unfortunately, no treatment records were available that could have provided more insight into this suggestion.



Figure 5.35 Verso of *A French Harbour* showing the transparent lining.

No other double canvases were found on the works examined and seen in collections. However, the canvas for *Morning in Lorne* has been primed on the verso as well as on the recto (Figure 5.36). Similar priming can be seen on the verso of *The Wilds of Assynt*. Painting the reverse of a canvas made it less susceptible to dirt and moisture changes achieving a similar (but less effective) role as the 'double canvas'.<sup>344</sup> Therefore, it is probable that Cameron made the conscious decision to work on canvases primed on both sides, similar to how he requested 'double canvases'.

<sup>344</sup> Hackney, *On Canvas: Preserving the Structure of Paintings*, 24.





Figure 5.36 Verso of *Morning in Lorne*.

Even though Cameron carefully considered and chose his supports, weave faults were identified in the canvas used for *Morning in Lorne*. The canvas can be seen to be thicker and the weave more clearly apparent in areas around the hill in the distance (Figure 5.37) and within the purple hill (Figure 5.38).



Figure 5.37 Micrograph of *Morning in Lorne*: Weave fault in canvas, 10x.



Figure 5.38 Micrograph of *Morning in Lorne*: Weave fault in canvas, 6.7x.

Having chosen the support for his work, Cameron considered the composition he intended to paint. To create the warm tonality of a morning sky as can be seen



*Morning in Lorne* provides a good case study of how Cameron set up his compositions. This painting, likely dating from after 1920, is typical for landscapes later in Cameron's life. Made on a plain weave canvas with a white priming applied to both recto and verso, the support is a good example of Cameron's preferred support. To set out the composition, Cameron is believed to have thinly painted an underpainting or sketch in the same colours he intended to use for the final composition, rubbing the paint into the canvas, leaving a very thin layer, an impression of the scene. This would have allowed him to judge whether the colours and the tonal balance of the composition were what he had intended. With the overlaying paint layers, he could easily adjust tonality where required and build upon these underlying layers (Figure 5.40 and Figure 5.41).



Figure 5.40 Micrograph of *Morning in Lorne*: Scraped back paint underneath a more opaque brushstroke in the hills in the foreground, 6.7x.



Figure 5.41 *Morning in Lorne*; micrographs of the more pronounced canvas around the outlines of the hills (magnification: top 6.7x; bottom 15x;). Includes a red stroke underneath the blue hill (red outline) and a yellow layer underneath the light blue sky (black outline).

Without having to draw the outlines freehand Cameron would have been able to create the sharp outlines of uninterrupted brushstrokes to the hills and sky now visible and typical of his landscape paintings. Evidence of a potential rubbed in layer can also be seen along the edges of the hills, in *Rocks and Ruins* (Figure 5.42), *The Hill of the Winds* (Figure 5.43), and *Cir Mhòr*<sup>345</sup>, and other features, such as the chimneys in *La Rue Annette* (Figure 5.44). Here the outline of the sky and that of the architecture or hills do not overlap and show that though covered by a thin layer of paint, the canvas weave between these outlines is more prominent. When studied closely, along the edges of the chimneys in *La Rue Annette* and the castle in *Rocks and Ruins* (Figure 5.42) a slight vacancy is left between the outlines of the architecture and the sky. This vacancy is not simply exposed ground but has been covered in paint that appears rubbed in. The rubbed in layer was covered by a second layer to add in the detail.

<sup>345</sup> Visit to the Glasgow Museums Resource Centre Store, 21/09/2023.



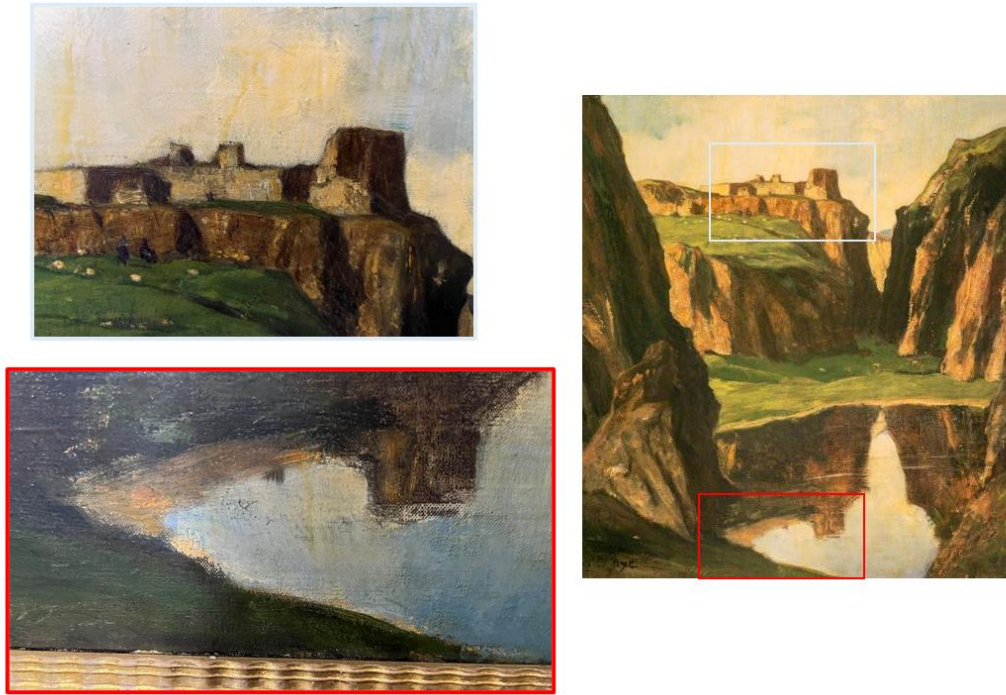


Figure 5.42 D.Y. Cameron, *Rocks and Ruins*, 1913, oil on canvas 51 x 46 cm, National Galleries of Scotland, Edinburgh; two detail photographs showing the more pronounced canvas weave around the outlines of the castle (light blue outline) and the not fully covered ground layer along the edge of the lake (red outline).

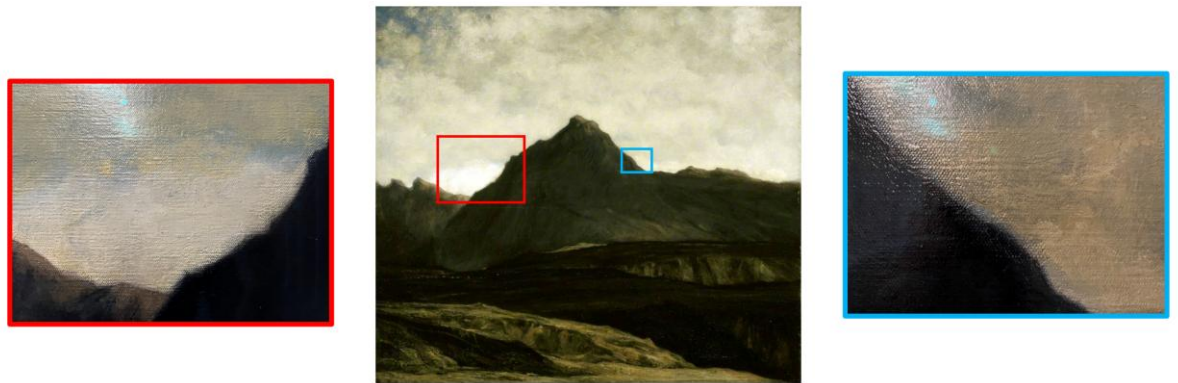


Figure 5.43 D.Y. Cameron, *The Hill of the Winds*, c.1913, oil on canvas, 116.8 x 132.7 cm, National Galleries of Scotland, Edinburgh; two detail photographs showing the more pronounced canvas weave along the outline of the hill.



Figure 5.44 D.Y. Cameron, *La Rue Annette*, c.1922, oil on canvas, 51 x 35.5 cm, National Galleries of Scotland, Edinburgh; a detail photograph showing the more pronounced canvas weave around the outlines of the chimneys.

Upon this coloured underpainting, Cameron applied the same colours in thicker strokes, smoothing some of the brush application with a palette knife. Often he outlined the hill with an uninterrupted brushstroke (Figure 5.40). This suggests that this outline was drawn after the rough blocking in of the colour. Through the use of generalised fields of colour to depict the hills, he had moved on from the Realistic landscapes he made early in his career. These later landscapes appear to be simplified versions of the real views he visited and sketched. This was remarked upon by critics who stated that the bright colours used by Cameron were not realistic and not a true depiction of the landscape, a criticism made of earlier landscape painters, including Nasmyth. However, Cameron was not interested in a realistic, direct copy of a real scene. He wished to convey the history and the beauty of a landscape through the use of shape and colour, as he described in his speech 'Notes on the Romance of Scottish History'<sup>346</sup>:

<sup>346</sup> NLS ACC8950 It.26 Speech 'Notes on the Romance of Scottish History, 1.

'Romance in history, as in the arts, is that spell of mystic beauty, haunted by strangeness of form and elusive colour, remote from the facts and feelings of common life. It does not imply lack of strength, but associates itself with very noble, exalted, and ever austere shapes veiled perhaps by distance, or muted by the fading light and gathering darkness, not of those shadows of the centuries, often profound in colours strangely lit, there emerge great figures or actions which we associate with the world of Romance.'

He emphasises that translation of a scene is necessary when depicting great art in his speech 'The Church and Art' (unknown date between 1933-1945):

'Art is not at its highest in recording facts, no matter how brilliantly executed, but finds its ultimate place as a translator into sound and forms + colour (of) [sic], the emotions and imaginings and revealing them to those from whom they are hidden, but in whose hearts the precious seeds are waiting.'<sup>347</sup>

The quotes from both speeches show Cameron's interest in spirituality and emotion over a factual depiction of the scene set out in front of him. There is a distance between what is seen and how it ought to be translated into art.

The translation of a scene into colours and shapes can be seen in *Morning in Lorne* in which the colours appear exaggerated and almost unnatural and the landscape oversimplified. Yet, the work has a strong presence and is emotive.

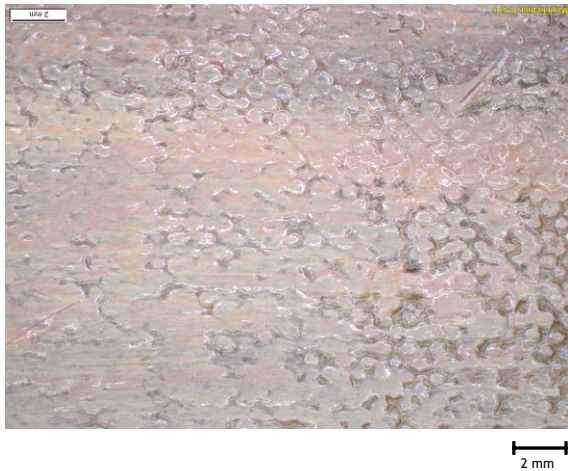
The sky of *Morning in Lorne* (Figure 5.11) features a wide variety of shades and pigments to create the sunrise. The sun can be seen rising behind the hills, creating a horizon of pale yellow which chases the pinks and reds to replace the dark blue night.

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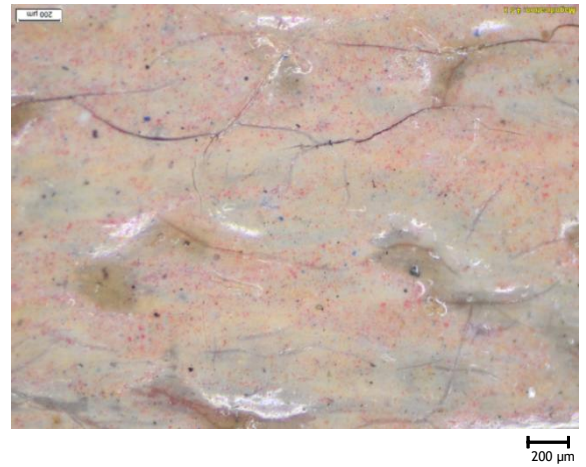
<sup>347</sup> NLS ACC8950 item 26 Speech 'The Church and Art', 4

Cadmium yellow was identified in the brightest area, just above the hills (Figure 5.12), where this yellow forms an underlayer for a thin pale blue layer.

The reds and pinks in the sky contain vermillion. The red was mixed with white and applied wet-in-wet over yellow and blue (Figure 5.45 and Figure 5.46). The bright red stroke in the sky covers any underlying paint and appears to be mostly vermillion.



**Figure 5.45** Micrograph of the light yellow and pink sky in *Morning in Lorne*: indication of flattened paint application covering part of the canvas weave, 6.7x.



**Figure 5.46** Micrograph of the pink in the sky in *Morning in Lorne*: includes red and blue pigment particles and shows a yellow undertone, 45x.

The light blue sky is a mixture of cobalt blue and white, and is mixed wet-in-wet with the darker blue to create a gradient towards the top of the painting (Figure 5.47). The darkest blue at the top of the painting is a mixture of cobalt blue and vermillion, creating a deep tone (Figure 5.48).





Figure 5.47 Micrograph of the sky in *Morning in Lorne* showing the wet-in-wet application of a light and dark blue, 6.7x.

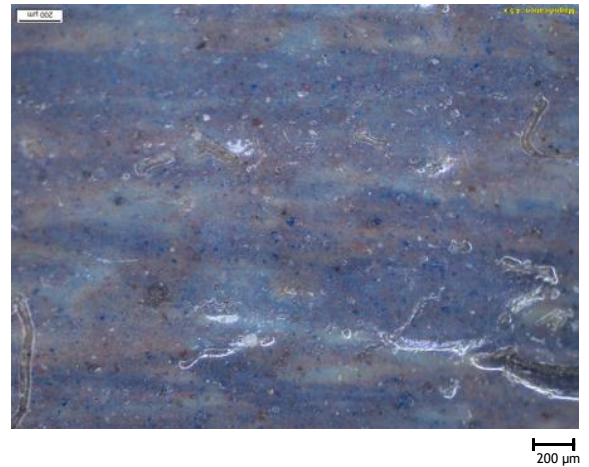


Figure 5.48 Micrograph of the red particles in the dark blue sky in *Morning in Lorne*, 45x.

A note of interest is the presence of the canvas weave texture in areas of the sky and in the hills along the skyline (Figure 5.45). The impasto of the brushstrokes is reduced, it is most likely that a palette knife was used to smoothen the paint (Figure 5.45 and Figure 5.47). No conservation treatments are known to have been performed on this painting. The texture of the canvas is the consequence of Cameron's technique. It is possible that Cameron rubbed in paint and covered this by very lightly brushing a heavily loaded brush across the surface and then smoothing this out with a palette knife, resulting in the paint sinking between the canvas weave in some areas but not everywhere. Or the paint was roughly mixed on the palette and applied with a knife.

The pigments found in the sky of *Morning in Lorne* are echoed in the landscape. The largest hill in the background, a blue-purple, a combination of cobalt blue and vermillion, rises from the warm horizon line into the cooler blue of the sky. The warm vermillion red and cadmium yellow hills on the horizon are the focus point in this painting, highlighted by the rising sun. Then, moving towards the foreground, these reds and yellows of the midground hills turn to browns, iron oxides, and, along the edge most in the foreground, thinned chromium oxide green paint. In the shadowed hills, a brown iron oxide is mixed with cobalt blue.

The lake visible in the foreground is depicted in browns, iron oxides, and cool whites, lead white with zinc white.

In this landscape, especially in the midground hills, Cameron uses a juxtaposition of colours, creating a sharp delineation between the rows of hills. The use of blue-purple hills in the background, with a warm yellow tone for the midground hills, could be considered a typical example of complementary colours being placed side by side to emphasise them. This was a practice commonly used by the Impressionists.



Figure 5.49 Raking light from the left of *Morning in Lorne*.

Overall, Cameron applied his paint quite smooth, as can be seen in the raking light image (Figure 5.49). However, in his landscapes, he occasionally makes use of impasto with strokes placed on top of a thin or smooth layer. The interaction of thin and thick paint application may have been of interest to Cameron as in *Morning in Lorne* he has placed a palette knife mark on a rubbed down layer of brown paint (Figure 5.50). There is a strong contrast between this mark and the brown layer through which the pale colour of the ground is visible, especially on top of the canvas weave. An additional note can be made about the colours used

for these strokes which create impasto. In both *Uplands in Lorne* (Figure 5.51) and in *Morning in Lorne* the strokes have been made in a lighter colour than that underneath it, emphasising the contrast.



Figure 5.50 *Morning in Lorne*: Micrograph of the palette knife mark over the scraped back paint in the brown hill, 0.67x.



Figure 5.51 Micrograph of the bottom right corner of *Uplands in Lorne* which has a few slightly impasto brushstrokes, 1x.

This approach to composing a hill landscape has been observed in many of Cameron's landscape paintings. In the foreground, brown hills with yellow ochres and hints of green are placed against a midground backdrop of the warmest and brightest tones where the light hits the landscape. The warm tones are made of yellows, cadmium and chrome yellow, and reds, often vermillion. The far distance is made up of cool blue tones, emphasising the warm midground tones using complementary colours. In some works, a bright green, a chromium oxide, has been identified as well, for instance in *Uplands in Lorne* (Figure 5.148), *Morning in Lorne* (Figure 5.11) and *The Wilds of Assynt* (1936) (Figure 5.52). This green was also seen in other landscapes not technically examined in this research, including *Loch Lubnaig* (c.1933) (Figure 5.53), *Cir Mhòr* (1912) (Figure 5.54), *Dawn on Rannoch* (Figure 5.55), and *Ben Ledi: Late Autumn* (Figure 5.56).





Figure 5.52 D.Y. Cameron, *The Wilds of Assynt*, 1936, oil on canvas, 102.1 x 127.9 cm, Perth Museum and Art Gallery, Perth, Scotland.

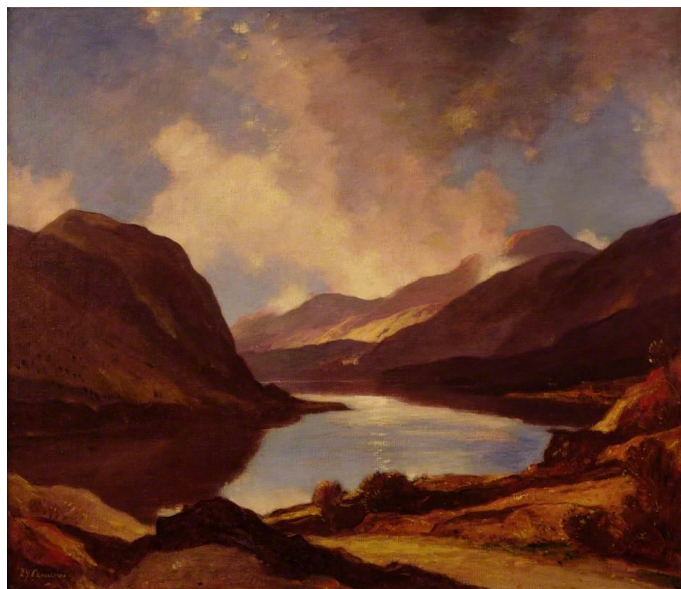


Figure 5.53 D.Y. Cameron, *Loch Lubnaig*, c.1933, oil on canvas, 76.2 x 90.2 cm, The Fleming Collection, London.





Figure 5.54 D.Y. Cameron, *Cir Mhòr (The Large comb)*, 1912, oil on canvas, 114.9 x 130.2 cm, Glasgow Museum Resource Centre, Glasgow.

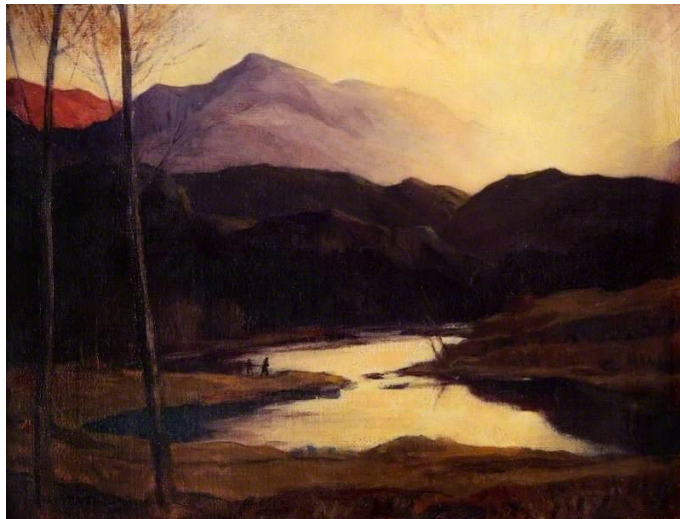


Figure 5.55 D.Y. Cameron, *Dawn on Rannoch*, oil on canvas, 35.6 x 48.3 cm, Glasgow Museums Resource Centre, Glasgow.



Figure 5.56 D.Y. Cameron, *Ben Ledi: Late Autumn*, oil on canvas, 35.6 x 36 cm, National Galleries of Scotland, Edinburgh.

### 5.10.3 Subjects across Media - Cloister at Montivilliers

It appears that at around the same time as landscapes became a more prominent feature in Cameron's oil paintings, so did paintings of architecture. Even though featuring more strongly in his etching, across all three media used by Cameron - etching, watercolour and oil - different types of architectural subjects can be seen: depictions of buildings, interiors, street scenes, and buildings as part of a landscape.

In Cameron's etchings, individual architectural features, for instance doorknockers, statues or gargoyles, have been depicted, for instance *The Little Devil of Florence* (1907) (Figure 5.57). This subject is not seen in the other media and may reflect awareness of the distinctive architectural and topographical etching of Paris by Charles Meryon that were widely admired in the 19<sup>th</sup> century. Additionally, in etching Cameron depicts street scenes from foreign cities he visited as well as church interiors.



**Figure 5.57** D.Y. Cameron, *The Little Devil of Florence*, 1907, etching touched with drypoint on paper, 37.7 x 22 cm, National Galleries of Scotland.

The majority of the architectural subjects in oil and watercolour depict buildings or foreign streets. His interest in depicting street scenes from abroad can be seen in for instance *La Rue Annette* (c. 1922, National Galleries of Scotland), *En Provence* (1922, National Galleries of Scotland), *La Roche, Belgium* (Museums Sheffield), *The Courtyard, Venice* (Gracefields Art Centre), and *Old Paris* (The Fleming Collection). This may show an interest in not only depicting nature, but also depicting the urban environment. In general, in keeping with his 'Romantic' outlook, Cameron appears to have favoured buildings with strong historical or religious ties, for instance Durham Cathedral, Stirling Castle or sites visited on

his travels such as Luxor, Egypt, archaeological sites in Rome, or abbeys in France.

It is particularly in Cameron's belief that art was at its highest when it served a function, especially in a religious context, that Cameron differed from the practice of the Glasgow Boys. Throughout his life, Cameron was a highly religious man, growing up in the Presbyterian church where his father was a minister. Later in life, however, he went against the ideals he was taught in his youth and advocated for the return of art and beauty in the church. He believed that a beautiful place of worship would allow for better worshipping and art in the church could be an aid to those who cannot otherwise relate as well to the subjects discussed. This was a topic on which he spoke publicly on several occasions, including in his last speech delivered on the day of his death 16 September 1945. In this speech he argues for the return of art to the church to help express the truth and beauty of worship:

‘Truth and Beauty must go forward hand in hand conquering and to conquer. Art was [sic] a great peacemaker, friend and enchanter. It longs for the Church's sympathy; would that the Church longed for its help. It came with the dawn of civilization and found all its highest expression in the service of the Church. Can we recover that ancient friendship and unity of appeal?’<sup>348</sup>

Cameron did not only lecture on the reintegration of beauty and the church. He actively participated in this reintegration. He was greatly involved with the local parish church in Kippen near Glasgow and contributed to the redecoration of this church both financially and by designing the new decorative scheme.<sup>349</sup> On a wider scale he was vice-convenor of the Advisory Committee for Artistic Questions for the Church of Scotland, an organisation which, at the time, was

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<sup>348</sup> NLS ACC8950 Item 26 ‘A Cry from the Heart’

<sup>349</sup> Smith, D.Y. Cameron: The Visions of the Hills, 104.; NLS ACC.8950 It. 3

keen to promote the reintegration of decoration in the church, and advised churches on their refurbishment.<sup>350</sup>

Despite his belief that art could be an aid to worship, Cameron did not paint any Biblical scenes himself nor did he produce paintings to decorate churches. However, church interiors and facades, and a cloister do form the subject of several of Cameron's etchings, watercolours and paintings, such as the oil painting *Cloister at Montivilliers*. These show the influence of contemporary artists as well as that of Rembrandt and Michelangelo, who according to Cameron produced great examples of what art could contribute to or be in religious contexts and what he felt should be emulated.

To Cameron, the ideal artist for the depiction of religious scenes was Rembrandt, who managed to depict the life of Christ and other Biblical scenes with emotional depth, and through the inclusion of imperfect figures made the scenes both moving and relatable. Michelangelo, too, was greatly admired by Cameron. However, as Cameron states, he prefers the realistic contemporaries of Rembrandt to the idealised figures of Michelangelo:

‘His [Michelangelo] forms were God-like ideals, Rembrandt’s were men. Michael Angelo [sic] corrected all deformities and created noble beauty, magnificent in line, but Rembrandt looked upon the halt, the maimed and the blind, and suffered with them.’<sup>351</sup>

It is this depiction of the common man in a religious context, and the suffering Rembrandt himself had endured during his life, which Cameron believed to make

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<sup>350</sup> Smith, 41, 107.

<sup>351</sup> University of Glasgow Special Collections MS Wright C2, 1944, p.3

Rembrandt's art the best of all.<sup>352</sup> As Cameron stated in his speech 'Rembrandt', the Dutch artist was 'realising the Divine in Man and Man in the Divine'.<sup>353</sup>

Cameron's interest in the artist is reflected in his library where a dozen books and folios about Rembrandt's life and work, his etching, and reproductions of his work could be found on the shelves. However, he did not only look to Rembrandt as the exemplary for Christian art, but also to find inspiration for his own art. In his etchings the use of light and dark is often reminiscent of Rembrandt.<sup>354</sup> After his travels to the Netherlands in 1892, Cameron created the Holland set of etchings which included a homage to Rembrandt in the work *A Rembrandt Farm* depicting a Dutch farm in wider landscape.<sup>355</sup> Cameron's etchings were regarded during his lifetime as being on a level rivalling that of Whistler, Meryon and Rembrandt and his name as one that ought to be included among the names of the Masters.<sup>356</sup> In the article 'Modern British Etchers: D.Y. Cameron' in *The Magazine of Art*, 1903, the author lauds Cameron's skill in etching, writing that he creates his best work when he creates 'a vision of loveliness', i.e. when he turns his attention to higher subjects, such as landscapes.<sup>357</sup>

The influence of Rembrandt, and contemporaries including Meryon can be seen in Cameron's church etchings. It is interesting to note that Cameron's depiction of religious sites in etching often has a strong ambiance to it. In the church interiors depicted in etchings, it was remarked upon that these showed remarkable sense for light and dark and the depiction of an emotive image in etching. In the etchings, drawings, and watercolours of church interiors (Figure

<sup>352</sup> University of Glasgow Special Collections MS Wright C2, 1944, p.3

<sup>353</sup> University of Glasgow Special Collections MS Wright C2, 1944, p.10

<sup>354</sup> Wedmore, 'The Etchings of D.Y. Cameron', *The Art Journal*, 1901, 291; Lumsden, *The Art of Etching: A Complete & Fully Illustrated Description of Etching, Drypoint, Soft-Ground Etching, Aquatint & Their Allied Arts, Together with Technical Notes upon Their Own Work by Many of the Leading Etchers of the Present Time*, 310; Smith, *D.Y. Cameron: The Visions of the Hills*, 29; Cameron and Rinder, *D.Y. Cameron: An Illustrated Catalogue of His Etched Work, with Introductory Essay & Descriptive Notes on Each Plate*, xxxiii.

<sup>355</sup> 'Modern British Etchers: D.Y. Cameron', *The Magazine of Art*, 1903, 270.

<sup>356</sup> Wedmore, 'The Etchings of D.Y. Cameron', *The Art Journal*, 1901, 292.

<sup>357</sup> 'Modern British Etchers: D.Y. Cameron', *The Magazine of Art*, 1903, 270.

5.60, Figure 5.61, Figure 5.62 and Figure 5.63), people are seen to populate the space and the interplay of light and dark in the etchings invoke emotions.<sup>358</sup> However, in the two oil paintings of church interiors, *Interior of Durham Cathedral* (before 1920) (Figure 5.58) and *The Norman Arch* (c.1918) (Figure 5.59), it seems Cameron worked in a precise manner, which is not seen to the same extent in other architectural oil paintings.

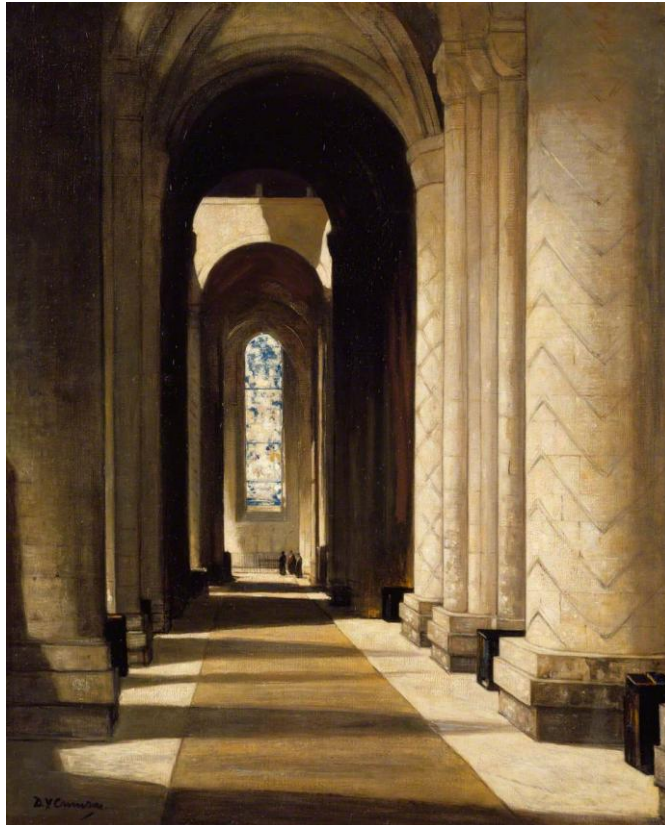


Figure 5.58 D.Y. Cameron, *Interior of Durham Cathedral*, before 1920, oil on canvas, 92.2 x 75.1cm, Royal Academy of Arts, London.

<sup>358</sup> Baudelaire and Mayne, 'The Painter of Modern Life and Other Essays ', 12-13.



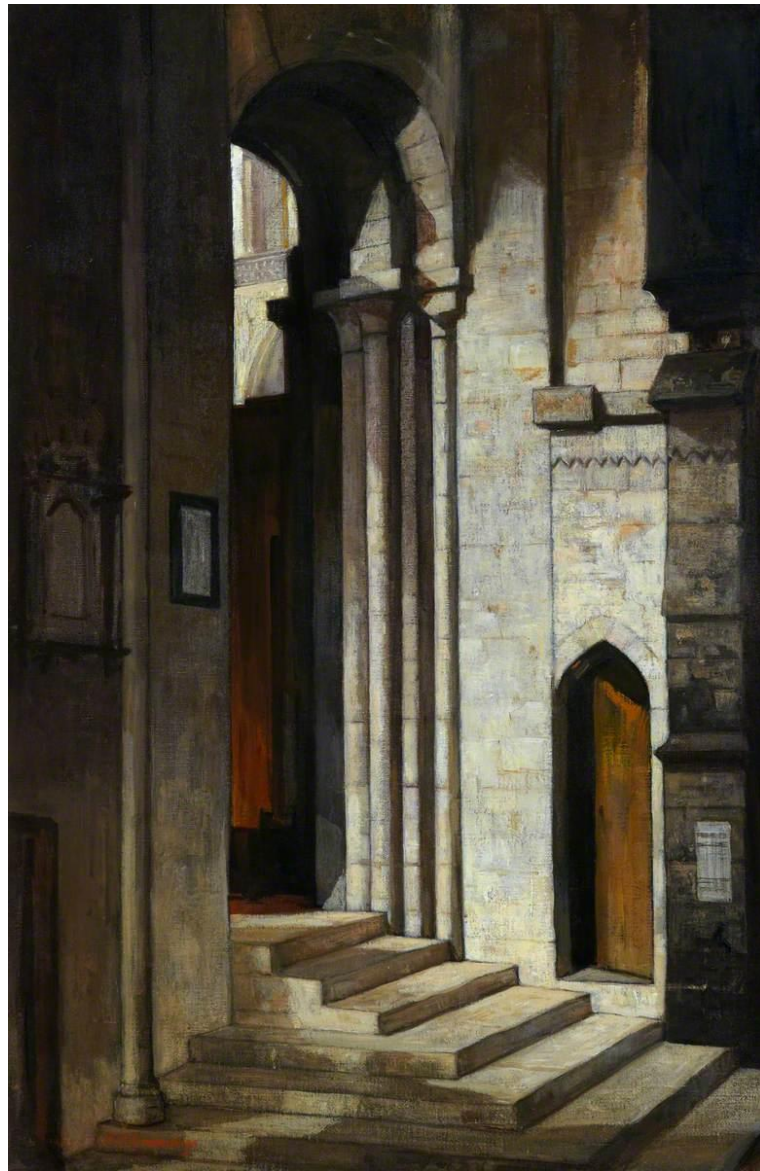


Figure 5.59 D.Y. Cameron, *The Norman Arch*, c.1918, oil on canvas, 87.3 x 57.1 cm, Royal Scottish Academy of Art & Architecture.





**Figure 5.60 D.Y. Cameron, *The Five Sisters, York Minster*, 1907, print, 38.8 x 18 cm, long loan to National Galleries of Scotland.**



**Figure 5.61 D.Y. Cameron, *Winchester Cathedral*, 1925, etching and drypoint on paper, 41.6 x 27.6 cm, National Galleries of Scotland.**



**Figure 5.62** D.Y. Cameron, *Church Interior*, 1902-1906, watercolour, 70 x 55cm, Kirkcaldy Galleries, Fife.



**Figure 5.63** D.Y. Cameron, *St Mark's, Venice*, 1894, pencil on paper, 11.9 x 70.4 cm, National Galleries of Scotland.

Considering how infrequently Cameron depicted church interiors in oil, it is interesting that he submitted this subject for his diploma works for the RA and the RSA. If he made these works with this specific purpose in mind this may have been of influence on Cameron's stylistic choices. The two church interiors in oil can hardly be said to be truly representative of the majority of his oeuvre or even of his style. Where often, Cameron plays with colour, light and shadow, emphasizing the spirit of a place, these diploma works are austere and show a turn more towards the realistic depictions of church interiors as seen by Johannes Bosboom, and earlier seventeenth century Dutch artists, although they show a more dramatic tonal exaggeration with strong contrasts of light and dark. This is a departure from the overall stylistic development that had been ongoing in Cameron's art; a turn towards colour and abstraction of shape, ignoring fine

detail. The development of style generally observed in Cameron's works appears to have been used in a different church interior, of which the location is unfortunately unknown. In a review of the oil painting *St. Mark's, Evening* exhibited at the Society of Oil Painters in 1901, it is the use of colour that is praised, not the sentiment of the work.

'The work of another Scotsman is arresting. If Mr. D.Y. Cameron in his 'St. Mark's, Evening,' here illustrated, does not render the sentiment of that glorious shrine in Venice, and this, after all, is a secondary matter, he gives us a work of surpassing colour charm. From the shadowed aisle in the foreground, we look towards the eastern end of the church. The white robes of the priest on the steps, between side altar and pulpit, the notes of strong red and yellow and green, are merged as if inevitably into the golden, glowing light, whose quality is mellow, nay, melodious. The relationships between colour and colour, between deep shadow and late sunlight filtered through the windows of St. Mark's, have been sensitively felt, and are well conveyed.'<sup>359</sup>

In subject matter, and time of day, described to be near dusk, *St Mark's Evening* Cameron may have been influenced by Whistler's and Sickert's nocturnes. Another influence may have been Ruskin's *Stones of Venice* which directed the attention of artists towards Venetian motifs. Cameron had several works by Ruskin in his library, not all of which have been named by title (Appendix VI). It is possible that this book by Ruskin was owned by Cameron or that he was aware of it.

The painting *Cloister at Montivilliers* most closely aligns with the church interiors described above in subject, as all depict the interiors of religious buildings. However, both church interiors show far more attention to detail than that seen in *Cloister at Montivilliers*. The style used in this painting in general seems to fit more in with the overall development of Cameron's style towards colour and decoration and aligns more closely with the description given in the

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<sup>359</sup> 'The Society of Oil Painters', *The Art Journal*, 1901.

review of *St. Mark's Evening*. A watercolour and etching depicting the same cloisters exist and are discussed in more detail, see below.

### 5.10.3.1 *The Three Cloisters*

Following his visit of the cloisters in Montivilliers, France, in 1903, Cameron made an oil painting (Figure 5.64), a watercolour (Figure 5.65) and an etching (Figure 5.66) of the same subject. The scene depicted, however, is different in each of the media. The viewpoint utilised in the oil painting resembles the view when one is looking out of the cloisters, whereas the watercolour and etching provide a view into the abbey from the cloisters. A further note of interest is the change in time, aiding in the understanding of what Cameron encountered during his visit and what he later embellished or omitted.

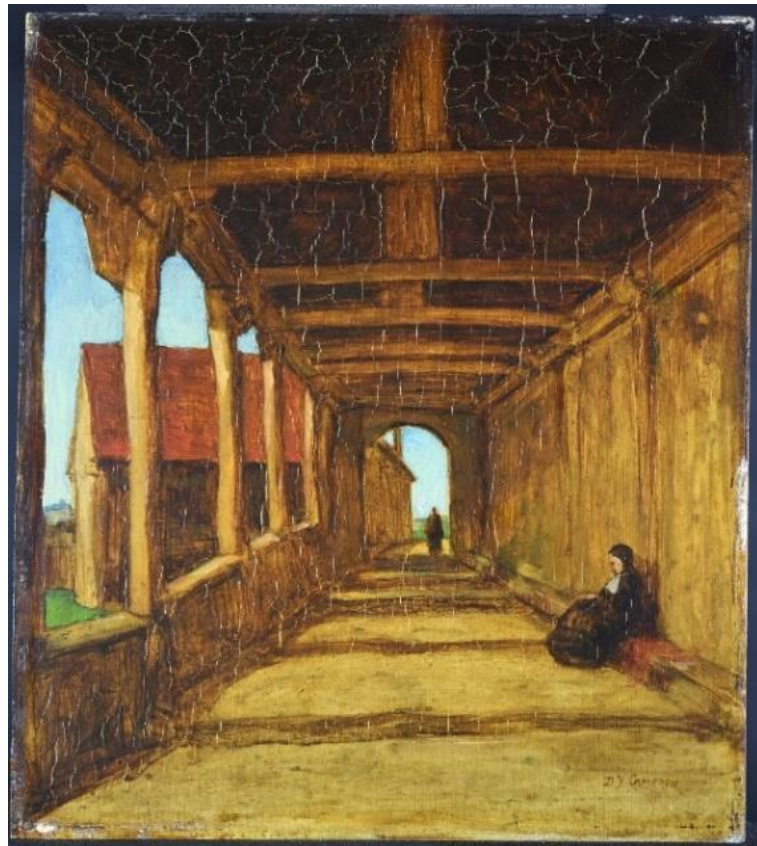


Figure 5.64 D.Y. Cameron, *Cloister at Montivilliers*, 1903-1908, oil on panel, 28.4 x 25.2 cm, Hunterian Collection, Glasgow.



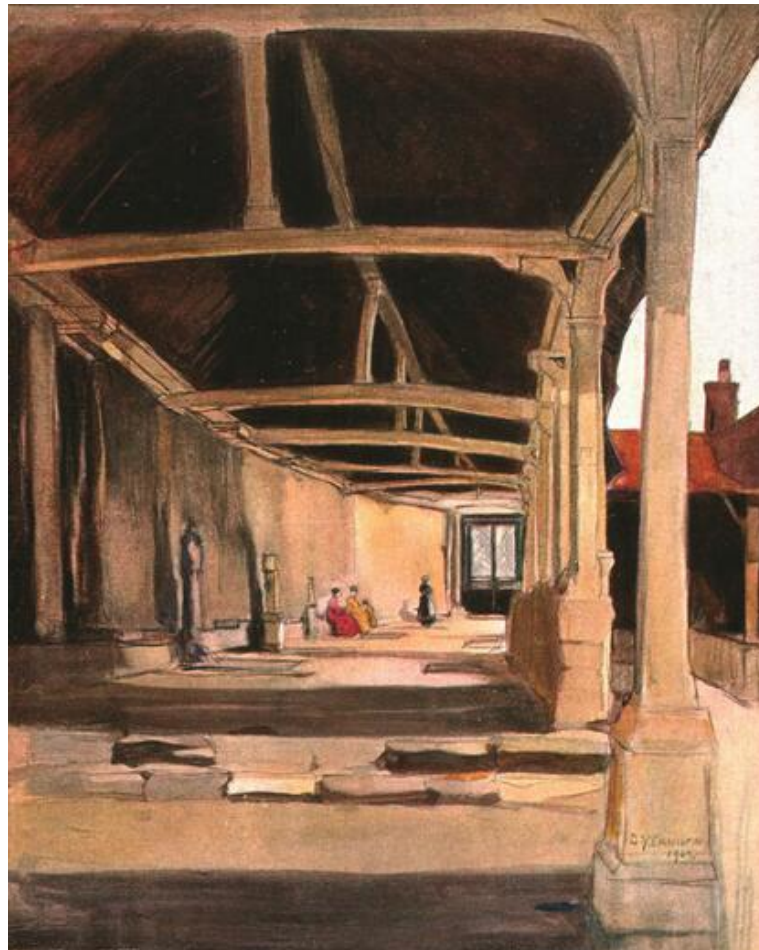


Figure 5.65 D.Y. Cameron, *The Cloisters, Montivilliers*, 1903, watercolour, Glasgow Museums Resource Centre, ©Alamy.

In the watercolour, figures in contemporary dress can be seen in the cloisters and it is likely that this is a depiction of the cloisters as Cameron encountered it during his visit. In the etching, figures, likely nuns, are depicted seated on the bench and trees and two sets of figures walking around can be glimpsed through the doorway. In choosing to depict nuns, Cameron provides an impression of what the abbey might once have looked like when it was a functioning abbey. A similar impression can be seen in the oil painting which depicts two nuns in the cloisters of an abbey, where a bright red roof, light blue sky, and bright green grass gives the impression of a sunny day. Despite its similarities and the clear links between the etching and the oil painting, for instance the placement of the nuns seated in the cloisters, there are various obvious differences. Most interesting to note is the differing level of detail in the etching and the oil painting. The detail of what is beyond the archway, likely church pillars, and the

building in the background in the etching contrast strongly with the broad depiction of figures and architecture in the oil painting.



Figure 5.66 D.Y. Cameron, *Montivilliers*, 1903, etching, Boston Library, ©Boston Library.

Even though the oil painting does not show as much detail as the etching, it was carefully planned, as is evidenced by the detailed underdrawing (Figure 5.67) thought to be executed in graphite. Whether or not the practice of underdrawing is more widespread amongst Cameron's architectural subjects is unknown. Further study of Cameron's works, and technical examination of architectural works will shed more light on this. The underdrawing of *Cloister at Montivillier* is faintly visible through the thin paint and in areas where the ground has been left exposed. Even though the composition was thought out, changes have been made to elements in the composition suggesting that

Cameron was able to and did explore the composition even after an initial drawing. Overall, the final painting is closely aligned with the underdrawing, but Cameron made changes to the perspective and added the second nun entering the cloisters in the background.



Figure 5.67 Infrared reflectogram of *Cloister at Montivilliers*, showing the detailed underdrawing, F8 exp.30ms.

Additionally, changes have been made to this work which are not related to the underdrawing. When considering the thickness of the paint and studying the surface texture of this work in raking light, a different surface texture can be seen from the overall panel to the areas of sky in *Cloister at Montivilliers*. The ribbed texture seen throughout the painting is not visible in areas of thicker paint, nor is it visible in the sky areas (Figure 5.68). The ground has formed itself to the ribbed surface of the wood grain and carries this texture through to the paint surface. The ground was likely commercially applied, potentially with a brush, further emphasising this texture.

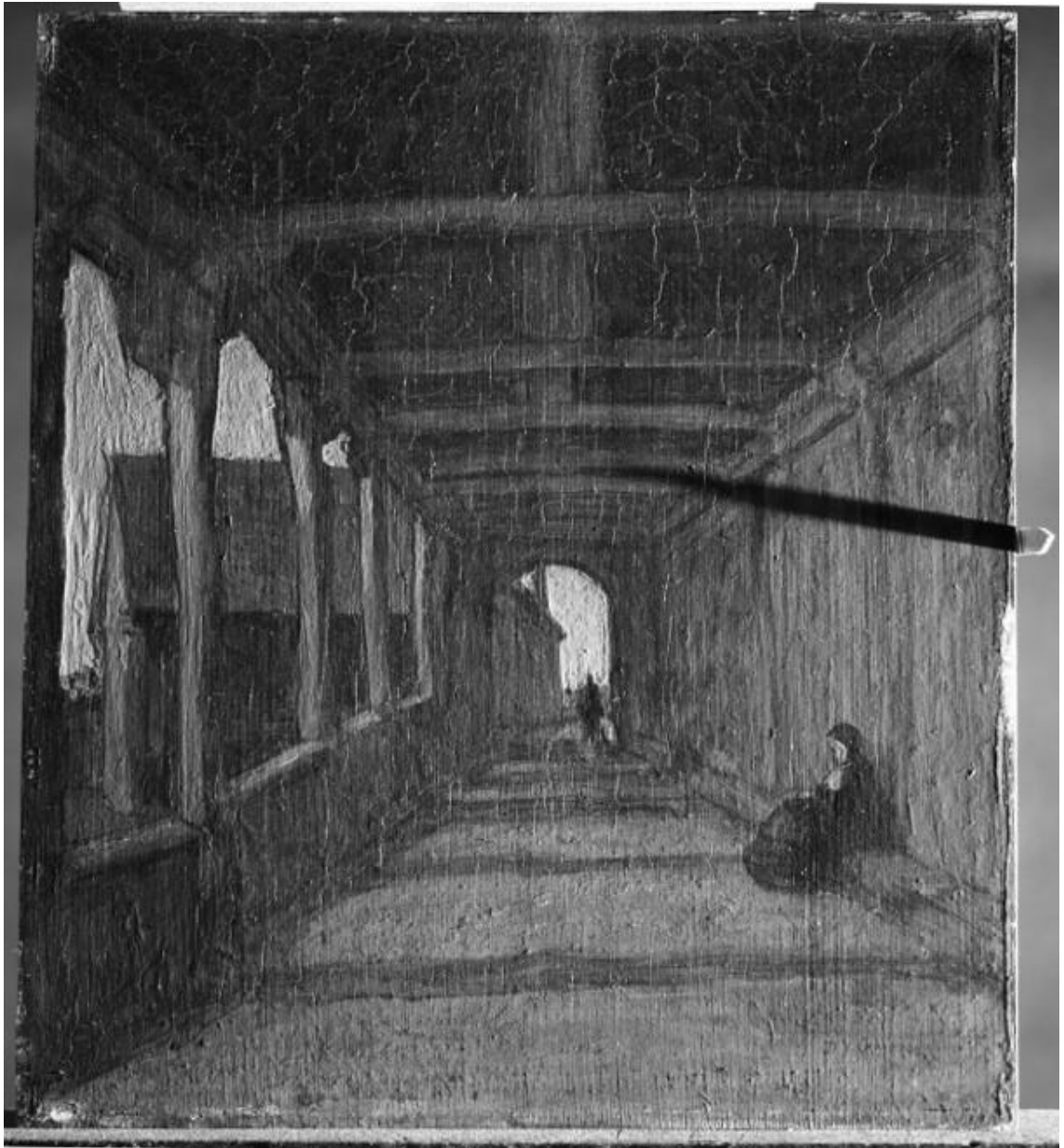


Figure 5.68 Raking light from the right of *Cloister at Montivilliers*.

The differences in surface texture are due to the way in which Cameron painted this picture. It appears that the sky was painted after the architecture, illustrated by the slight gap in which the ground is visible, between the sky and the surrounding architecture (Figure 5.69). Additionally, in these areas, the underdrawing (Figure 5.67) can be glimpsed with a microscope, for instance along the outline of the nun entering the cloister (Figure 5.70). The panel can also be seen here just above the proper left shoulder of the nun. This stiff, opaque mixture for the sky paint, containing zinc white and cobalt blue and



cerulean blue, was applied thinly on top of the ground layer (Figure 5.14). Due to its stiffness, the brushstrokes have created a slightly uneven surface texture.

A possibility that has been proposed but for which no sufficient evidence was found is that the sky areas have been thinned down after applying paint to these areas in an unsatisfactory manner. However, the difference in surface height is minimal and may simply be the result of paint application, especially in the areas where a paint mixture with lead white has been used in the pillars.

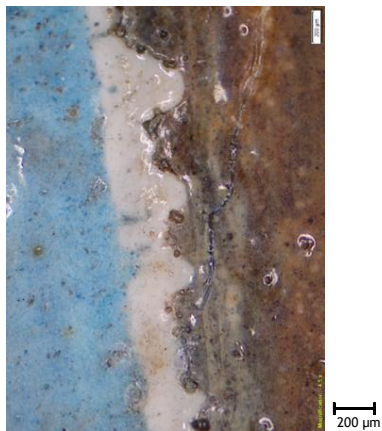


Figure 5.69 *Cloister at Montivilliers* Micrograph showing the edge where the sky meets the architecture, 45x.



Figure 5.70 Micrograph of *Cloister at Montivilliers*; the nun entering the cloisters with the scraped ground around the edges of the nun visible and exposed ground for the white of the habit, 6.7x.

Cameron applied the paint relatively thinly onto the commercially prepared hardwood panel allowing the zinc white ground to provide a brightness to the colours applied on top giving the work a brighter tonality. According to nineteenth century painting manuals published in Britain, mahogany and oak, both hardwoods, were the most common type of wood used for artists' panels.<sup>360</sup> It is probable that one of these type of woods was used for this panel. The panel

<sup>360</sup> Carlyle, *The Artist's Assistant*, 187.

consists of three boards glued together. The edges of the panel have been bevelled and are neatly finished.

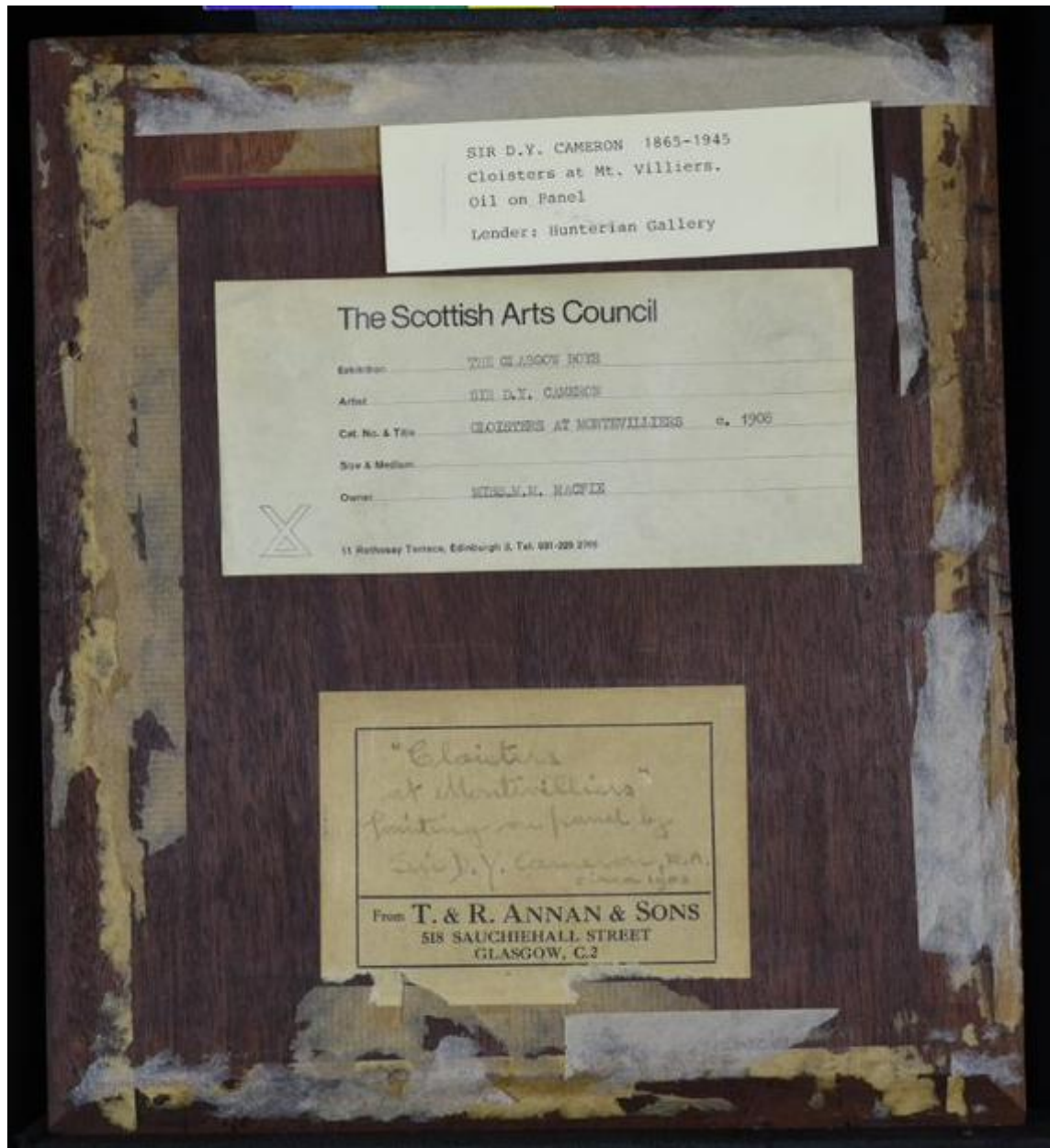
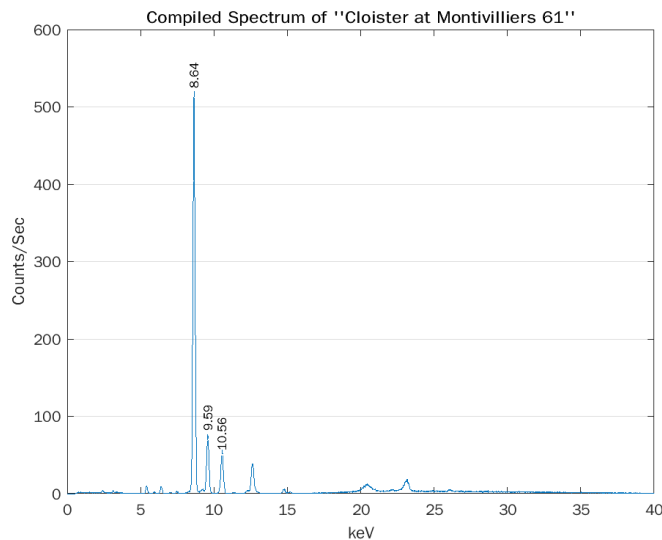


Figure 5.71 Verso *Cloister at Montivilliers*.

The architecture and the nuns have been thinly painted, whereas the red roof of the building, the sky and the grass are more opaque. The highlights in the balustrades are also more opaque due to the inclusion of white in the paint mixture. These highlights were added in short brushstrokes.



**Figure 5.72** pXRF Spectrum of *Cloister at Montivilliers* site 61: The peaks at 8.64 and 9.59 keV indicate the presence of zinc (Zn). The peaks at 10.56, 12.63 and 14.78 keV are indications of lead (Pb). There is a trace of sulphur (S) indicated by the peak at 2.34 keV. There appear to be traces of chromium (Cr) indicated by the peak at 5.42 keV and iron (Fe) indicated by the peak at 6.41 keV.

The thin paint application of the architecture is visible in brushstrokes of the shadows of the pillars in which it can be seen that the paint has slightly pooled at the bottom of the stroke (Figure 5.73). The brown tone is a combination of red, green, and black pigment particles (Figure 5.74).



**Figure 5.73** Detail photograph of the thinned paint application in the shadow of the pillars running across the path. The thicker edge at the bottom of the stroke shows the fluidity of the paint.

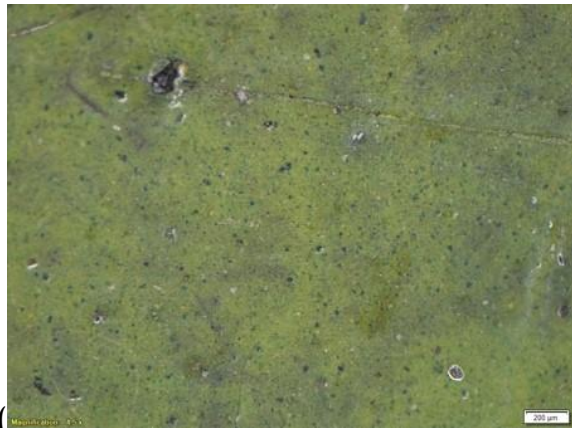


**Figure 5.74** Micrograph of the red, green and black particles in the central beam in *Cloister at Montivilliers*, 45x.



Figure 5.75 Micrograph of the grass patch in *Cloister at Montivilliers* with square yellow particles, 45x.

The grass is painted using a mixture of a chromium containing yellow, potentially chrome yellow (lead-chromate) or zinc yellow (zinc-lead chromate) (Figure



5.72), and chromium oxide green (

Figure 5.75). This is the green pigment also identified with pXRF in the dark brown architecture, i.e. the ceiling. This paint was not fully mixed as under magnification the mixture does not appear homogeneous. Potentially, an iron oxide was also part of this mixture as iron was detected with pXRF.





Figure 5.76 Micrograph of *Cloister at Montivilliers*; Bottom edge of the red roof showing a more opaque red over a thinned red, 10x.



Figure 5.77 Micrograph of *Cloister at Montivilliers*; Thin red paint next to the seated nun, 6.7x.



Figure 5.78 Micrograph of *Cloister at Montivilliers*; The red roof, 45x.

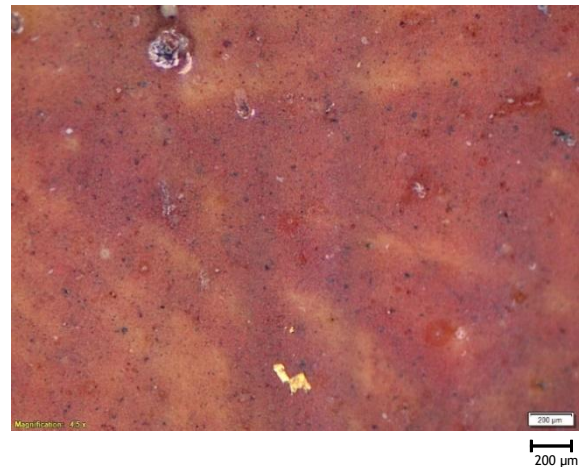


Figure 5.79 Micrograph of *Cloister at Montivilliers*; Thin red paint next to the seated nun, 45x.

The red paint used near the seated nun (Figure 5.77 and Figure 5.79) and that used for the roof (Figure 5.76 and Figure 5.78) are similar, although that near the seated nun has been thinned (Figure 5.77). The same reds were used to paint the roof of the building, with a thick stroke outlining the shape (Figure 5.76); vermilion and red lead. The use of this mixture may be the result of an adulteration of the vermilion. Red lead was a cheaper material than vermilion and could have been added to reduce the costs of the paint manufacturing. The drying properties and light fastness of the two pigments may also have been a factor in deciding to mix the two pigments together. Vermilion is a more light

permanent pigment whereas red lead has good drying properties. Mixing the two together may have allowed for a light stable paint with good drying properties. The tone of the two pigments is slightly different, with red lead having a more orange hue, but they are not so different in hue that the colour would be significantly altered by mixing them. As the red areas in the painting were analysed with pXRF and no samples could be taken, the distinction of how these two pigments have been mixed could not be determined further.

*Cloister at Montivilliers* stands slightly apart from the other architectural works seen in museum collections because of its support, it is the only architectural work on panel studied, and in the thin paint application. The other paintings studied, for example, the street scenes *En Provence* (1922) (Figure 5.80) and *La Rue Annette* (Figure 5.44), viewed in the NGS store, show a thicker, more opaque paint application on canvas.



Figure 5.80 D.Y. Cameron, *En Provence*, 1922, oil on canvas, 67.3 x 83.2 cm, National Galleries of Scotland, Edinburgh.

However, in comparison to drawings of architecture and architectural features all of these architectural paintings appear lacking in detail. Cameron's drawings

of architecture show great attention to detail, depicting a rosette window in a church or the fine details of pillars of an entranceway. These details are often visible in Cameron's etchings of buildings and architectural features. Often the focus of the etching is in most detail, which dissipates towards the edges. This reminds somewhat of Whistler's approach of picking a focus point and working outwards from this point. The focus point receiving the most attention and it fading away towards the edges of the work. In contrast to these highly detailed etchings of streets and buildings, the oil paintings, and some of the watercolour works, appear generalised. Despite this the subject matter is still clear and it seems that the focus in these works is more on an impression or the depiction of a sentiment than an accurate record of the location or building depicted, a commonality with how Cameron depicted landscapes.

#### 5.10.3.2 Street Scenes

The observation that less detail is added to the composition in oil than in etching has also been observed within the large number of the architectural works created by Cameron depicting street scenes. In these street scenes, Cameron has paid attention to the shadows created by architectural features, people inside the buildings, and details of shopfronts, as can be seen in *Old Paris* (c.1910) and *Rambelli, near Rome* (1922) (Figure 5.81). Similarly to his landscapes, he used fields of colour with slight variations to depict highlights and shadows. Included in these scenes are people traversing the street or visiting the buildings depicted, for example in *Old Paris* and in *La Roche, Belgium* (Figure 5.82). Comparing these street scenes to similar scenes depicted in etchings for instance the etching *La Roche* (Figure 5.83), the similarities and differences to the depiction of these subjects in different media becomes apparent.





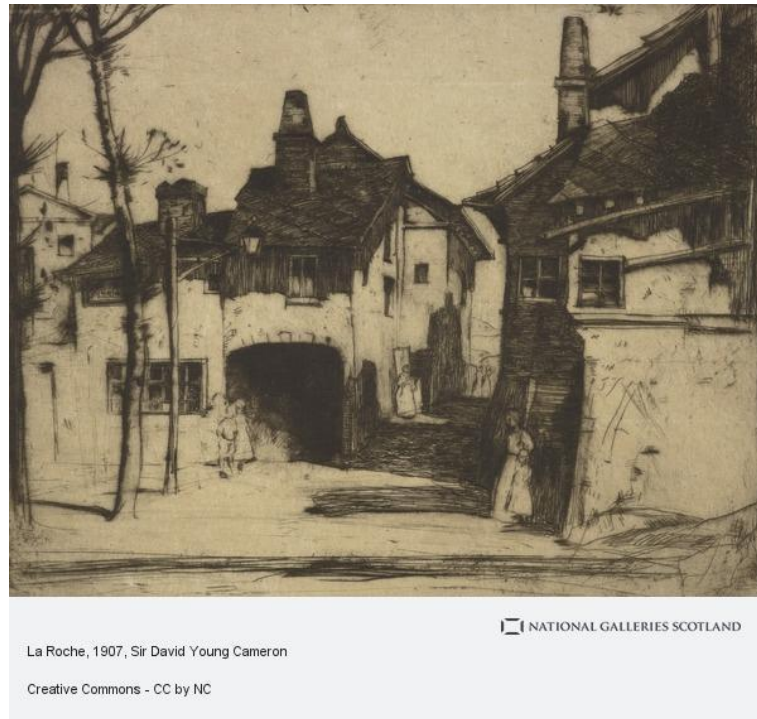
Figure 5.81 D.Y. Cameron, *Rambelli, near Rome, Italy*, 1922, oil on canvas, 60.2 x 73 cm, Birmingham Museums Trust.



Figure 5.82 D.Y. Cameron, *La Roche, Belgium*, before 1935, oil on canvas, 49.5 x 75.2 cm, Museums Sheffield.

In the etchings, Cameron is more detailed but also appears to focus more on one element. In the watercolours and oil paintings, the sense of the place is conveyed. Attention is paid to the atmosphere, expressed in strength of colour, and bold contrasts of shadow and light. The omission of fine detail seen in watercolour and oil further aids in the creation of a more emotive depiction of the scene than the record of fine detail and somewhat distanced view seen in some of Cameron's etchings.





**Figure 5.83** D.Y. Cameron, *La Roche*, 1907, etching and drypoint on paper, 16.7 x 21 cm, National Galleries of Scotland.

In comparison to similar subject illustrations in etching and watercolour, the oil paintings are often the least detailed and the etchings provide the most detail. It is interesting to see how Cameron is more clinical in his etchings, more exact. It seems that in works in which he could play with colour, in his oil and watercolour paintings, the details became less important and focus instead was placed on a more subjective view of a place, more emotive than his etchings, for example in *A Street in Cairo* (Figure 5.87) and *Old Paris* (Figure 5.86). This is not to say that Cameron did not play with light and shadow in his etchings. However, the street scenes such as *The Rialto* (Figure 5.85) or *Custom House* (Figure 5.84) are clean images with precise detail and are not blurred by emotion or subjectiveness. They appear to be records of a place more than a depiction of that place. It is not known if these works were made to serve as book illustrations or as other documentary evidence of these locations. Cameron did provide illustrations for books, including *The District of Menteith* by R.B. Cunningham Graham (1930), and therefore it may be that some of the Venice etchings were made with a similar purpose.



Figure 5.84 D.Y. Cameron, *Custom House*, 1899, etching touched with drypoint on paper, 17.5 x 26.9 cm, National Galleries of Scotland.



Figure 5.85 D.Y. Cameron, *The Rialto*, 1900, etching touched with drypoint on paper, 30.5 x 21.3 cm, National Galleries of Scotland.

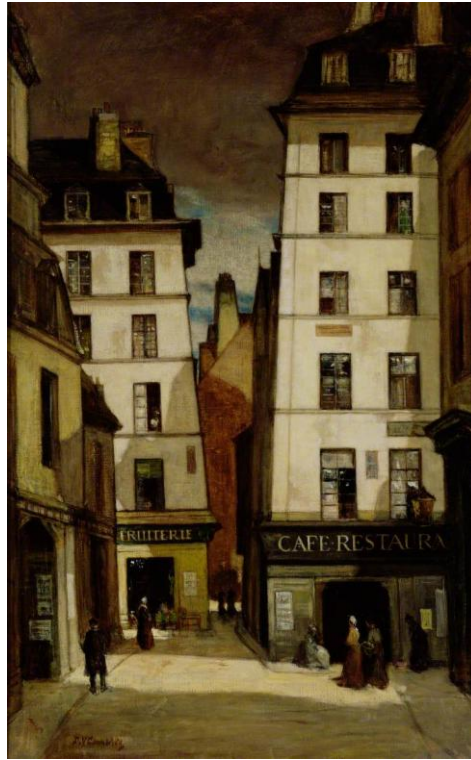


Figure 5.86 D.Y. Cameron, *Old Paris*, c.1910, oil on canvas, 88.9 x 52.1 cm, The Fleming Collection, London.



Figure 5.87 D.Y. Cameron, *A Street in Cairo*, watercolour, 65 x 49cm, Fife Collections Centre, Glenrothes.



5.10.4 Recycle and Reuse - *A French Harbour*

Figure 5.88 D.Y. Cameron, *A French Harbour*, 1896, oil on canvas, 89.2 x 127.1 cm, The Hunterian, Glasgow.

A particular type of landscape depicted by Cameron exclusively in the 1890s is harbour scenes. In these paintings, Cameron depicts a harbour from the viewpoint of someone standing in the harbour. One of these harbour scenes, *A French Harbour* (Figure 5.88), depicts a harbour populated with people and boats with yellow sails (Figure 5.89), consisting of iron oxide yellow, chrome yellow, vermillion, charcoal black, and umber in the shadows, against a backdrop of lead white houses with vermillion red roofs, and nearly indistinguishable hills, sea, and sky containing similar pigments of lead white, umber, and a chrome green and/or yellow. Whether only one or both of these chrome pigments are present in these areas cannot be determined based solely on pXRF analysis. A visually interesting aspect of this work is the midground

where a boat is moored at the dock and has been highlighted by pure strokes of red (vermillion), green (chromium oxide green) and yellow (likely iron oxide with some chrome yellow).

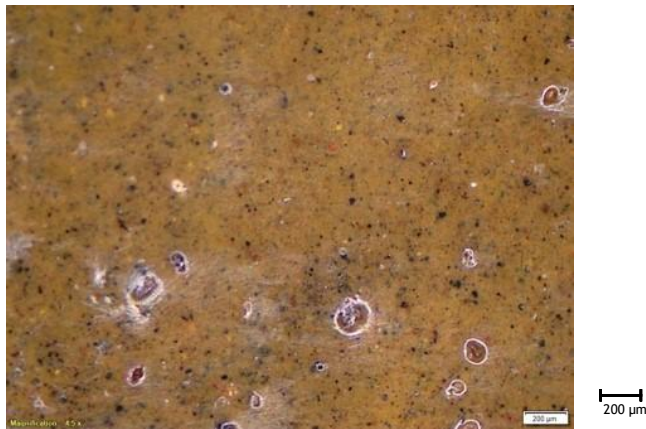


Figure 5.89 Micrograph of square black particles with rounded edges in the yellow sail on the left side of *A French Harbour*, 45x.

This type of harbour scene showing people in contemporary dress at work or going about their business, can be considered both a landscape and a depiction of contemporary life. Aside from *A French Harbour*, three other harbour scenes of this period attributed to Cameron have been found: *Safe Haven*, *Amsterdam Harbour*, and *South Coast Harbour*. A fifth harbour painting was found listed in the exhibition catalogue of the Munich Secession of 1896, *Der Alte Haven* (The Old Harbour/Haven).<sup>361</sup> No image of this work was included in the catalogue and no record of this work could be found. Therefore, it cannot be stated with certainty that this work is indeed a fifth work, or if it is one of the other works exhibited under a different name.

The renaming of a work was found to have happened with *Safe Haven* (Figure 5.90) which was exhibited at the Munich Secession of 1894 as *A Scottish Haven* (Figure 5.91). *A French Harbour*, the only work of the harbour group currently in a public collection, has a label on the verso stating that the title was once A

<sup>361</sup> Zentralinstitut Für Kunstgeschichte, 'Die Münchner Künstlervereinigungen "Secession"'.

*Fishing Village with Figures and Boats*. It is unclear when this would have been the title, as the title *A French Harbour* was used for the painting in the Royal Scottish Academy exhibition of 1895.



Figure 5.90 D.Y. Cameron, *Safe Haven*, oil on canvas, 63.5 x 109 cm, Unknown location. Photograph LotArt, last sale December 4 2020.



Figure 5.91 Photograph of a page from the Munich Secession Catalogue of *A Scottish Harbour*, oil on canvas, 63.5 x 109 cm. Courtesy of Bavarikon, Kultur und Wissensschätze Bayerns (<https://www.bavarikon.de/?lang=en>).

Both *Amsterdam Harbour* and *Der Alte Haven* were exhibited in the same year, 1896, indicating that these two at least are different works. *Amsterdam Harbour* (Figure 5.92), was exhibited as *Amsterdam* in the 1896 Munich Secession, according to the exhibition label on the verso 'Amsterdam, D.Y. Cameron, 134 Bath Street, Glasgow' and the catalogue. Cameron had his studio at 134 Bath Street from 1892 until 1895, and in 1892, visited the Netherlands with his friend James Craig Annan, which may have prompted him to paint this scene. Therefore, *Amsterdam Harbour* was most likely produced in the period 1892-1895.





Figure 5.92 D.Y. Cameron, *Amsterdam Harbour*, 63.5 x 107 cm, Unknown location, Photograph ArtNet, latest sale June 14 2017.

Another harbour scene mentioned by Smith is *South Coast Harbour*, c.1896 (oil on canvas, 62.2 x 95.2 cm, private collection). This scene is similar to the other harbour scenes identified. The viewpoint is within the harbour. It is a bright scene, a light blue sky. The water in this work too is lighter than that of *A French Harbour* and *Safe Haven* but was painted in a similar manner. Again the houses are quite simple, light sandstone white buildings with orange brown roofs. This time they are a little closer and windows have been painted. Figures can be seen walking along the dock and in the foreground two figures stand on the sandy shore. In the boat behind them, a figure can also be seen.

According to Smith in these waterfront scenes the more traditional artists of the Hague School, Jacob Maris, Hendrik Willem Mesdag, and J.H. Weissenbruch, exerted influence.<sup>362</sup> However, contemporaries of Cameron painting similar subjects in the 1880s and 1890s offer a further interesting comparison. The work by Frank Brangwyn (1867-1956) who also painted waterfront scenes in the 1880s

<sup>362</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 33.



and early 1890s provides such a comparison. Brangwyn's earlier work in style resembles the tonality found within Hague School painting, muted cool tones, for instance *Harbour Scene* (c.1887) (Figure 5.93). In the 1890s Brangwyn turned towards a brighter palette, however, using strong strokes of colour to contrast with the more muted background, for example *A Trade on the Beach* (1892, Musée d'Orsay, Paris),<sup>363</sup> and *Venice* (1897) (Figure 5.94).



Figure 5.93 Frank Brangwyn, *Harbour Scene*, c.1887, oil on canvas, 44 x 56.5 cm, Jerwood Collection.

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<sup>363</sup> The painting is illustrated in Brangwyn et al., 'Frank Brangwyn 1867-1956', 58. It is part of the Musée d'Orsay collection which unfortunately does not have an image of the work available.



Figure 5.94 Frank Brangwyn, *Venice*, 1897, oil on canvas, 76.2 x 101.6 cm, Victoria and Albert Museum, London.

The painting *A Trade on the Beach* by Brangwyn, based on studies drawn in Tangiers, has been compared to the work of the Glasgow Boys Crawhall and Lavery, who also visited Africa.<sup>364</sup> However, it may be that in style and subject matter, Brangwyn's work offers a closer comparison to the work of Cameron. In comparing *A French Harbour* with *A Trade on the Beach*, it was observed that the overall tonality of Brangwyn's work is brighter than that of Cameron but both works have employed areas of colour contrasting strongly with the background. A focus on the figures in the foreground against a less well-defined middle-distance and background further unite the two paintings. Other harbour scenes by Brangwyn, especially from the orange-black colour schemes employed by the artist in the 1890s, are reminiscent of Cameron's works with the same subject. As the artists produced these works at roughly the same time, it is not possible to indicate if one influenced the other, or whether they drew inspiration from a common source which resulted in a similar stylistic expression.

Another comparison that can be drawn regards the tonality in Cameron's harbour scenes which is somewhat like that described to be used by Jules Bastien-

<sup>364</sup> Brangwyn et al., 'Frank Brangwyn 1867-1956', 59.

Lepage: a reduced tonality with bright strokes applied with square brushes. This is especially evident in *A French Harbour* in which bright yellow, green and red strokes have been applied in the midground and in the figures. The works, however, do not seem to be fully realistic. It appears that Cameron has observed and then simplified some of the forms, especially the buildings in the background and the rough shapes of figures and boats. Here Whistler's influence may play a role. Whistler stated that nature already possesses and presents all beauty and that it is up to the artist to take this in and reveal it to those who cannot see it themselves. Whistler believed that the artist needed to translate the subject onto a canvas.

'Nature contains the elements in colour and form, of all pictures, as the keyboard contains the notes of all music. But the artist is born to pick and choose, and group with science these elements, that the result may be beautiful - as the musician gathers his notes, and forms his chords, until he brings forth from chaos glorious harmony.' - James McNeill Whistler, 10 o'Clock Lecture <sup>365</sup>

The four works of which we have images all show similarities in approach to the subject. However, *Amsterdam Harbour* and *South Coast Harbour*, have an overall brighter tonality than the other two scenes. Furthermore, the prominent juxtaposition of the complimentary colours red and green may suggest Cameron experimented with colour relationships. As described in chapter four, there was great interest in colour science and the relationship between colours in the nineteenth century, resulting in a multitude of publications. It is possible that Cameron, like other artists in this period, including Van Gogh and Gauguin, explored the possibilities of colour contrasts in these harbour scenes. The brightness of *South Coast Harbour* stems from the bright, light-blue sky, whereas in *Amsterdam Harbour* the water is the brightest tone, and the sky shows similarities to *A French Harbour* and *Safe Haven*. Whether this difference in

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<sup>365</sup> Hopkinson, Whistler, and Hunterian Art Gallery (University of Glasgow), *James McNeill Whistler at The Hunterian Art Gallery: An Illustrated Guide*, 10; Whistler and Thorp, *Whistler on Art: Selected Letters and Writings 1849-1903 of James McNeill Whistler*, 84.

tonality is the result of different pigment use or paint application or of overall darkening due to a yellowing varnish or conservation treatment, cannot be stated with certainty. It appears that the painting was varnished perhaps during Cameron's lifetime or shortly thereafter. This varnish was later potentially removed or covered by a modern varnish which too has yellowed. It is known that *A French Harbour* has received conservation treatment which influences the legibility of the work, partly due to the increased darkening of the varnish reducing the overall tonality. As the other three works were identified in Smith's monograph and on auction websites, and any observations were made of images, what has affected the tonality of *Safe Haven* and *Amsterdam Harbour* cannot be stated.

Although Cameron seems to have taken a particular interest in harbour subjects in the 1890s, he returned to the harbour as a motif also in a number of later works, though with a different compositional approach. In *Glencaple*, a ship docked on a river is seen in a wider landscape (Figure 5.95). The scene is observed from a distance. Similarly, in a work entitled *A Dutch Harbour*, which dates from the same time as the harbour scenes, 1892, shows the view from the beach onto a harbour in the distance (Figure 5.96). This change in viewpoint separates these works from the small group of harbour paintings described earlier, with their strongly Whistlerian and Brangwynesque emphasis on close-up engagement with the life of the harbour.



Figure 5.95 D.Y. Cameron, *Glencaple*, c.1905, oil on canvas, 76.2 x 102.2, National Galleries of Scotland.

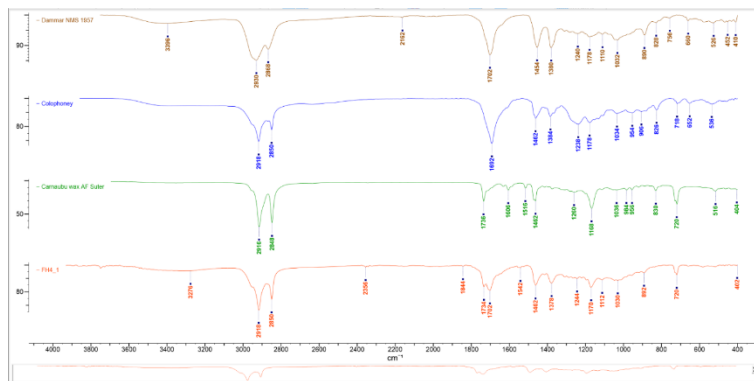


Figure 5.96 D.Y. Cameron, *A Dutch Harbour*, 1892, oil on canvas, 64 x 110 cm, Lot-Art, last sale 9 March 2023.

#### 5.10.4.1 Reuse of Material

Cameron did not only revisit the same subject multiple times, in the case of *A French Harbour* he reused his support. The uneven threads and open weave of the canvas, with a weave count of 14/cm by 14/cm may be indicative of an

*étude* or student canvas.<sup>366</sup> This canvas appeared to be relatively thin and of lower quality than that observed on Cameron's later oil paintings. Considering this painting was made early in Cameron's career, not long after he had completed his artistic training, it is understandable that he made use of cheaper canvas as his financial situation may not have allowed him to acquire the higher quality materials. This may also be the reason why Cameron decided to reuse the canvas.



**Figure 5.97** ATR-FTIR Spectrum Sample FH4 from *A French Harbour*: Sample of the lining adhesive present in excess along the foldover edges of the painting (shown in transmittance).

The use of a transparent lining material during a wax-resin strip-lining, identified with ATR-FTIR (Figure 5.97), and full lining has allowed the verso of the work to remain visible. The treatment likely occurred in the 1970s or 1980s when Melinex sheets were used for lining.<sup>367</sup> No conservation record exists for the treatment that could confirm this estimation. The treatment has flattened some of the impasto in the painting, caused wrinkling in the foreground (Figure 5.98), and the media likely penetrated the canvas. Residue of the lining media is visible along the edges and has caused them to be extremely brittle. During the conservation treatments, a repair has been made to this canvas where a loss was visible (Figure 5.99). This loss becomes visible in the ultraviolet induced

<sup>366</sup> Stoner and Rushfield, *Conservation of Easel Paintings*, 140.

<sup>367</sup> Berger and Zeliger, "Effects of Consolidation Measures on Fibrous Materials'.



fluorescence photograph (Figure 5.17), the infrared reflectogram (Figure 5.100) and in the X-radiograph (Figure 5.101).



Figure 5.98 Detail photograph of *A French Harbour*: Foreground with wrinkling caused by conservation treatments in raking light from the left.



Figure 5.99 Detail photograph of verso *A French Harbour*: Loss in the canvas and the repair made.

*A French Harbour* is the only known work by Cameron with a painted verso. The composition on the verso has been covered with black and yellow-brown paint, making it impossible to understand what the composition may have been with the naked eye. Neither infrared reflectography, nor X-radiography was able to give further data on what the composition may have been (Figure 5.100 and Figure 5.101). No clear outlines can be discerned nor can any second composition be distinguished from the harbour scene depicted on the recto.





Figure 5.100 Infrared Reflectogram of *A French Harbour*, F8 exp50.

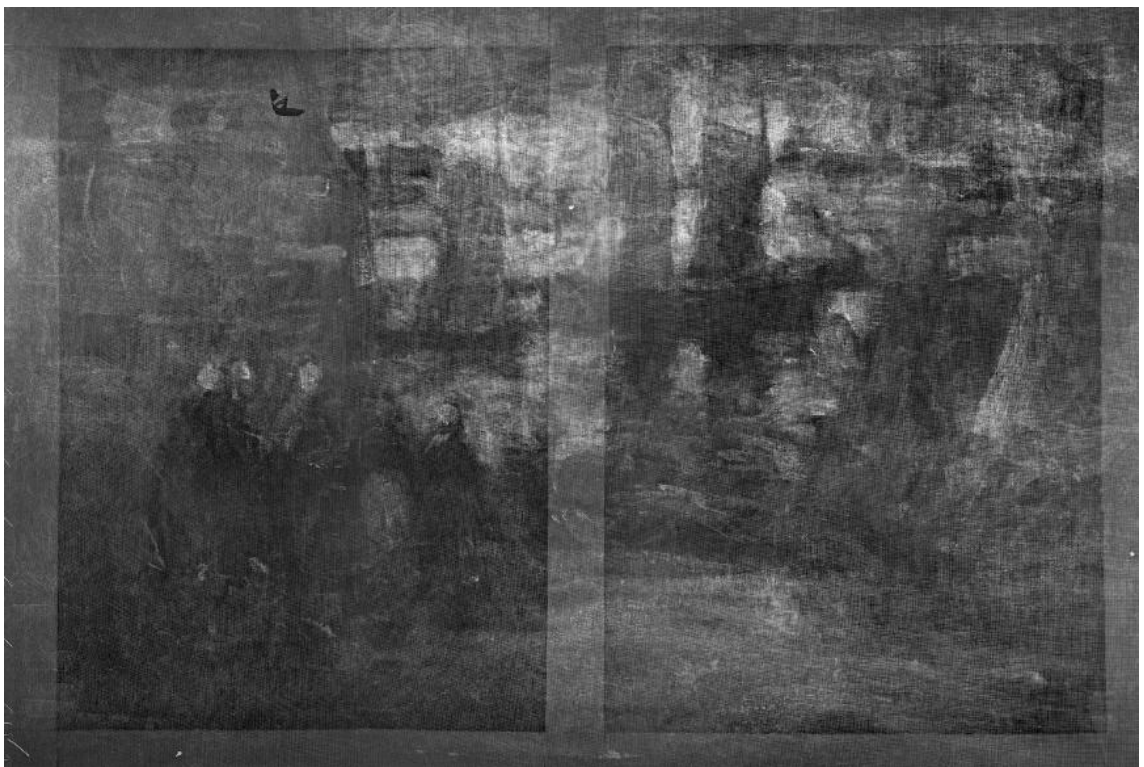
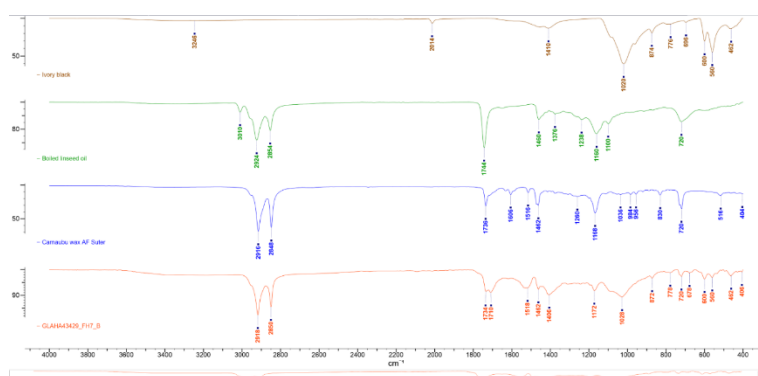


Figure 5.101 X-radiograph of *A French Harbour*.

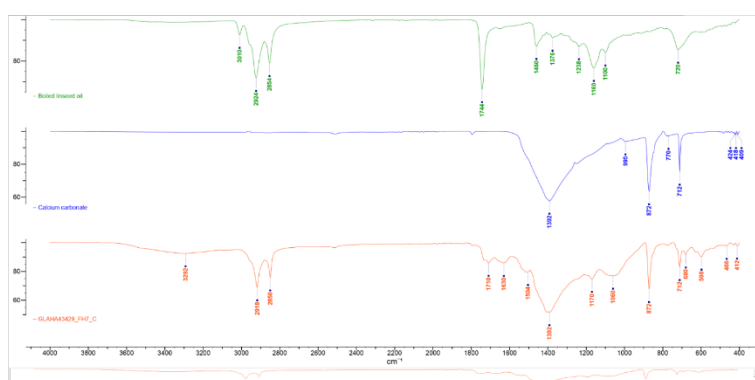
It is not surprising that the infrared reflectogram did not reveal much as the black paint covering the verso is likely to be a carbon pigment, which is infrared absorbing. A cross-section from the extreme edges of the canvas shows the preparation, and the paint layers present on the verso underneath the black paint layer. The presence of two ground layers discussed in section 5.4, indicates that this side of the canvas was prepared for painting, and the inclusion of the expensive cadmium yellow pigment in the paint layers suggests that the composition was taken beyond a rough sketch before it was abandoned.

ATR-FTIR analysis of a sample (FH5B1) taken from the verso identified the black to probably be ivory black (Figure 5.102). The phosphate peak at  $1020\text{ cm}^{-1}$  in the fingerprint region of the ivory black reference spectrum is also visible in the sample spectrum although it is weaker at  $1028\text{ cm}^{-1}$ . It is the shape of the peak with its slight shoulders that further indicates the presence of ivory black. The wax peaks at  $2916$  and  $2848\text{ cm}^{-1}$  are visible as well in the sample spectrum, although slightly shifted to  $2918$  and  $2850\text{ cm}^{-1}$ . Additionally, in both the sample spectrum and the Carnauba wax spectrum, a peak can be seen at  $720\text{ cm}^{-1}$ . Although this peak can also be seen in the boiled linseed oil spectrum, the shape of the peak in the sample spectrum is similar to the Carnauba wax spectrum, suggesting something similar was used in the lining



**Figure 5.102** ATR-FTIR Spectrum of sample FH5B1 from *A French Harbour*: Spectrum of the verso of a sample taken from the edges of the painting. The verso has black paint and a lining adhesive. In the spectrum above a comparison through stacking of the spectra of the sample spectrum (orange) is made to spectra of ivory black (brown), boiled linseed oil (green) and carnauba wax (blue) standards.

The sample FH5C was analysed with ATR-FTIR (Figure 5.103) and revealed that an oil paint was used and a calcium carbonate, likely from the ground was identified. The carbonate peak at  $1392\text{ cm}^{-1}$  of the reference spectrum (blue) can clearly be identified in the sample spectrum (orange). The peaks associated with boiled linseed oil, as seen in the referenced spectrum at 2924, 2854 and at  $1744\text{ cm}^{-1}$ , though slightly shifted in the sample spectrum, are all visible at 2918, 2850, and as a shoulder peak at  $\pm 1710\text{ cm}^{-1}$ . The relatively low carbonyl peak at  $1710\text{ cm}^{-1}$  may be the result of interference or shifting due to the inclusion of some medium from the lining that penetrated through the layers.



**Figure 5.103** ATR-FTIR Spectrum of sample FH5C from *A French Harbour*: Spectrum of the recto of a sample taken from the edges of the painting. A comparison through stacking of the sample spectrum with standard spectra of Boiled linseed oil (green) and calcium carbonate (blue).

The black paint that covers the composition on the verso reaches the extreme edges of the canvas. This suggests that the canvas may have initially been on a larger stretcher after which it was resized, turned over and re-stretched on a different stretcher. Therefore, it is likely that the stretcher upon which the canvas is currently stretched is not the original stretcher used for the painting on the verso. It is unknown if Cameron painted the verso or if he re-used a canvas of one of his artist friends. As this painting was made early in his career it is possible that Cameron had to be more economical about his use of material and disliking the initial composition on the verso, decided to cover the composition, re-stretch and re-use it.

The cross-section showing the canvas preparation on the verso, does not contain similar layers for the recto. As this sample was taken from the extreme edges of the canvas, the absence of ground on the recto of this sample may be the result of the ground application being applied only to the recto by Cameron after the canvas was stretched, not going beyond the fold over edge. However, cross-sections taken from the edges of paint on the recto did not provide a clear indication of a ground layer on the recto either. It may be that these samples do not contain all layers present in the painting on the recto as they were taken from the edge of the painted surface. Microscopic examination of the recto revealed the canvas, and through the open weave the ground applied to the verso, but no clear ground could be identified along the edges of the recto of the painting (Figure 5.104).



Figure 5.104 Micrograph of *A French Harbour*: Bottom edge on the left-hand side, shows the sinking of the ground in between the canvas weave with only a pigmented layer still visible on top of the weave, 20x.

A scratch in the paint layers in a sail in the middle distance shows that underneath the upper paint layers a white layer and underneath that a black layer are visible (Figure 5.105 and Figure 5.106).

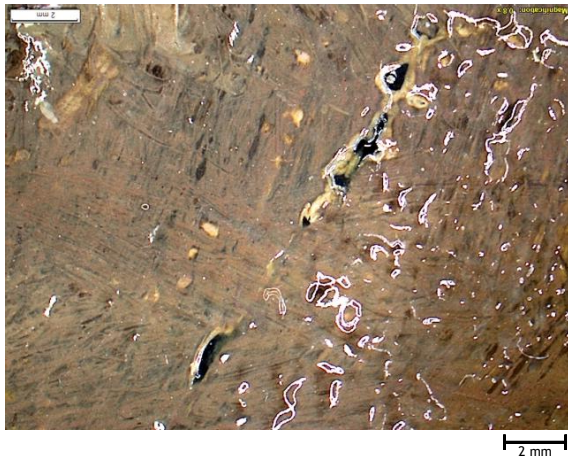


Figure 5.105 Micrograph of *A French Harbour*: Abrasion in paint layer, 8x magnification.



Figure 5.106 Micrograph of *A French Harbour*: Abrasion in paint layer, 45x magnification.

It is difficult to see if this black layer is the layer that was applied to the verso, or a separate black layer applied to the recto underneath a white ground layer because the canvas cannot be seen in this area. This could be an indication that some ground was applied to the front but is no longer clearly visible along the outer edges of the composition on the recto. The lining treatments may have caused the ground applied to the recto to sink in. This makes it difficult to determine if the ground visible in the open weave is sunk in ground from the recto or the ground applied to the verso.

#### 5.10.5 Depicting Figures Fantastical and Real - *Fairy Lillian*

In the 1890s Cameron created a number of figural works, including portraits. It is clear when studying these works that Cameron was greatly influenced by various artists, both contemporary and historical. In the figural work *Fairy Lillian*, 1894-1895, on *étude* canvas, typified by the uneven, open weave, the influences on Cameron at this time can be observed (Figure 5.107). The work, depicting a young woman or girl standing against a flat brown background in a crimson and white dress, with golden jewellery and decorations, was displayed in the 1895 RGI exhibition. In a review in the *Dundee Courier* it was stated that: “Fairy Lillian’ is an exquisite bit of work by D.Y. Cameron’.<sup>368</sup>

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<sup>368</sup> *Dundee Courier*, February 6 1895.





Figure 5.107 D.Y. Cameron, *Fairy Lilian*, 1894-1895, oil on canvas, 87.6 x 60 cm, Kelvingrove Art Gallery ©Glasgow Museums.



The subject matter of this work was alluded to in a review in the *North British Daily Mail* of February 1896 the poetical representation of the subject in *Fairy Lilian* is mentioned:

'Let the visitor pass to the 'Fairy Lilian' of D.Y. Cameron, an artist who first made his name as an etcher and who is now doing excellent work in colour. His 'Fairy Lilian' recalls the poet's vision of the maiden with 'crimson-threaded lips' here jewelled and robed in scarlet and gold, with lace falling from the shoulder infolds light as gossamer. It is a dream-like presentation of an ideal maiden swathed in soft mystery. The colour is extremely refined, and beautiful in its very indefiniteness.'<sup>369</sup>

This review refers to the poem by the Victorian poet Alfred Tennyson entitled 'Lilian', first published in 1830. The interest of Cameron in this author is characterized by the number of books of poetry and the autobiography by Tennyson he had in his library. In the poem a woman with 'baby roses in her cheeks' and 'crimson threaded lips' is described.<sup>370</sup> Cameron appears to have taken the theme of crimson and roses throughout this work, dressing the young woman or girl in red robes. Perhaps in reference to her flying away, Cameron has depicted her in an ephemeral manner, her outlines soft as if she is not fully with the viewer. This poetical subject matter has been repeated in other 'fairy' subjects, for instance *Fairy Madeline* (Figure 5.111 and Figure 5.112), which may be based on another Tennyson poem, 'Madeline', *The White Butterfly* (unknown, Figure 5.108), *A Girl with Flowers* also known as *Anemones* (unknown, Figure 5.109 and Figure 5.110), and in the figure study *When Lovers Meet* (Figure 5.113), a romantic scene depicting two young people in historical clothing meeting in a forest.

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<sup>369</sup> *North British Daily Mail*, February 1896.

<sup>370</sup> Tennyson and Collins, *The Early Poems of Alfred, Lord Tennyson*.



Figure 5.108 D.Y. Cameron, *The White Butterfly*, prior to 1897 (c.1894 according to Smith), oil on canvas?, photograph of image in Witt library, London.



Figure 5.109 D.Y. Cameron, *Anemones*, c.1893, oil on canvas, Unknown location. Photograph from image in Witt library, London. Colour reproduction in Smith, p.32.



Figure 5.110 D.Y. Cameron, *Anemones*, colour reproduction, Artnet, August 30 1994.

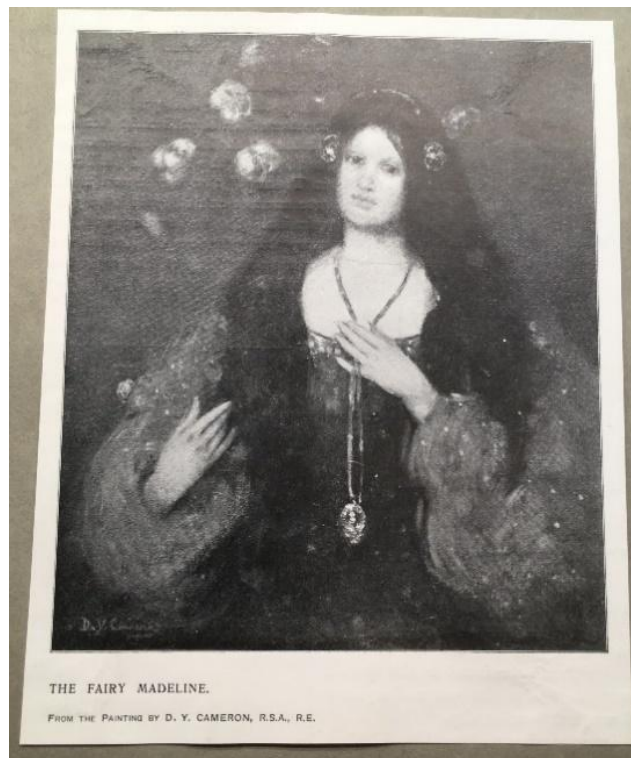


Figure 5.111 D.Y. Cameron, *The Fairy Madeline*, oil on canvas?, photograph of image in Witt library, London.



Figure 5.112 D.Y. Cameron, *The Fairy Madeline*, oil on canvas, auction websites: Sold with the titles *The Gold Chain*, *The Silver Chain*, and *The silver locket*, latest sale June 16 2022.



Figure 5.113 D.Y. Cameron, *When Lovers Meet*, 1886, oil on canvas, 52 x 77 cm, Unknown location. ©ArtNet, latest sale April 25 2018.

The depiction of a fairy or story as a subject finds origins with the work of Pre-Raphaelite proto-Symbolist ideology, and their focus on depicting stories and poetry, among which Tennyson's poems.<sup>371</sup> Cameron may also have drawn

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<sup>371</sup> Layard, *Tennyson and His Pre-Raphaelite Illustrators: A Book about a Book*.



inspiration from the work of Frances and Margaret Macdonald, who were also creating symbolist works in the 1890s, and who he might have met through his sister Katherine, who was a friend of these artists.<sup>372</sup> Cameron was not the only Glasgow Boy to depict Symbolic imagery. *The Brownie of Blednoch* by Hornel is based on the poem with the same title by William Nicholson. David Gauld created highly decorative works, at times appearing almost like stained glass, depicting saints or allegories, as in *Music*. In works by Thomas Millie Dow in which mystic figures, for instance in *Sirens of the North* (Dundee Art Galleries and Museums), and allegories, for instance *The Herald of Winter* (1894) were depicted. George Henry and Hornel expressed their interest in the symbolic in a different way and focused on the spiritual showing great interest into Celticism. This found expression in their joint works *Bringing in the Mistletoe* (1890) and *The Star in the East* (1891, Kelvingrove Art Gallery and Museum). In individual work by Henry, for instance *Spring* (Figure 5.114) and *Autumn* (Paisley Art Institute), symbolic and mystic imagery can also be seen.



Figure 5.114 George Henry, *Spring*, oil on canvas, 111 x 104 cm, Paisley Art Institute.

<sup>372</sup> Smith, D.Y. *Cameron: The Visions of the Hills*, 59-61.

These Symbolist works by the other Glasgow Boys date from the late 1880s to the early 1890s, and predate by a few years the fairy paintings by Cameron. The Glasgow Boys appear to have been slightly ahead of Cameron in their interest in the symbolic. However, note must be made that only one fairy painting has remained in public collections and no works by Cameron in the 1880s have been identified in public collections therefore limiting our understanding of Cameron's subject matter during his student days.

The sense that the figure in *Fairy Lilian* is not quite present, reminds of the figures in Bastien-Lepage's works of peasants at rest against a high horizon, such as *Poor Fauvette* (Figure 5.117). In these works, as in *Fairy Lilian* and *Figure Study* (Figure 5.115), the figure stares off in the distance, contemplating or absorbed by inner thoughts, not fully present in the moment. The pose of figure at rest or absorbed in thought against a high horizon was also adopted by the other Glasgow Boys in paintings such as *Idling on the Sands, Forvie* by Alexander Mann (1882) and *A Daydream* by Walton (1885), showing the admiration of the Boys for Bastien-Lepage.<sup>373</sup>

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<sup>373</sup> Billcliffe, *The Glasgow Boys*; Fowle, Hamilton, and Melville, *Impressionism & Scotland*, 28-31.



Figure 5.115 D.Y. Cameron, *Figure Study*, oil on canvas, 89 x 44 cm, Paisley Art Museum and Gallery ©Paisley Museum and Art Galleries, Renfrewshire Council Collections.



Figure 5.116 Matthijs Maris, *He is Coming*, 1874, oil on canvas, 45.1 x 33 cm, National Museum Wales, Cardiff.





Figure 5.117 Jules Bastien-Lepage, *Poor Fauvette*, 1881, oil on canvas, 162.5 x 125.7 cm, Kelvingrove Art Gallery and Museum.

The ephemeral quality of the work, instead, reminds of Maris as in *He is coming* (Figure 5.116), who suggested that ‘conceptions’ imagined by the artist ought to be used as the subject of a work. Fridlander describes how Maris thought about these ‘conceptions’:

‘The conception of a work to be executed appears (one knows not how), visualized in the consciousness of the artist. Then, before putting a stroke upon canvas, copperplate, or paper, its image must be visualized, one must see it all complete in the mind’s eye, and hold it in one’s mind all through one’s work, and know exactly what one is aiming at. And for him [Maris], imagination in the artist consisted in the power of visualizing such a conception so clearly and plainly as to enable him to draw or paint from the image in his mind, perhaps with the intervention of a simple sketch, as though he were working from something material outside himself.’<sup>374</sup>

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<sup>374</sup> Fridlander, ‘Matthew Maris’, 119-120.

Even though *Fairy Lilian* was not imagined solely by Cameron, considering it is based on a poem, the depiction of the figure is imagined. The flat background is reminiscent of Maris' later works in which the figure and background can no longer be easily distinguished, for instance *Grief* (1887). However, Cameron does not take the merging of figure and background as far as Maris did. The innocent-looking, young, female figure, are similar to those seen in earlier works by Maris. The soft, loose hair and not fully sharp face of *Fairy Lilian* can be seen in *He is Coming* and *Butterflies* (Figure 5.118) by Maris. David Martin had already highlighted the similarities between Cameron and Maris in the painting *Fairy Lilian* (1894-95) in both subject matter and paint handling in his publication from 1897.<sup>375</sup> This same type of figure also appears in Henry's *Spring* in which the figure with strawberry blond hair appears to be almost floating in the landscape.



Figure 5.118 Mattheijs Maris, *Butterflies*, 1874, oil on canvas, 64.8 x 99.1 cm, Glasgow Museums (The Burrell Collection).

The way in which the figure both emerges from yet is not fully separate from the background is reminiscent of Whistler's full-length portraits in which the figure seems to emerge from yet remain part of the background, as can be seen in *Arrangement in Yellow and Grey: Effie Deans* (1876-1878, Rijksmuseum), *Harmony in Blue and Violet: Miss Finch* (c.1885) or *Harmony in Red: Lamplight* (1884-1886). Both Lavery in *Dear Lady Disdain* (Figure 5.119), depicting an

<sup>375</sup> Martin and Newbery, *The Glasgow School of Painting*, 2.

allegory of an emotion, and Cameron in *Fairy Lilian*, influenced by Whistler, have chosen dark backgrounds from which their figures emerge, clothed in bright colours. In these works no sharp outlines separating the figure from the background can be seen and the tonality and colour scheme of the works appear harmonious. As Whistler said 'Paint should not be applied thick. It should be like breath on the surface of a pane of glass'.<sup>376</sup> The thin paint application in *Fairy Lilian*, especially around the edges of the figure, and in the transparent parts of the sleeves, give the illusion that she is not quite a solid being. This is taken further in the hair and face which are slightly blurred. However, Cameron's choice of bright red against a deep brown background does not allow him to create the same fading together of figure and background as can often be seen in Whistler's works or in Lavery's work.



Figure 5.119 John Lavery, *Dear Lady Disdain*, 1890, oil on canvas, 59 x 49.1 cm, Berwick Museum and Art Gallery.

The dark and shadowy background has also been influenced by Velazquez, whose influence might have reached Cameron through Whistler or through the rising

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<sup>376</sup> Bacher, 'With Whistler in Venice, by Otto H. Bacher ', 31.

interest in the Spanish artist after the publication of his biography by R.A.M. Stevenson in 1895.<sup>377</sup> The influence of Velazquez is even more apparent in Cameron's portraiture, for instance in in *Dorothy Maude Kay* (Figure 5.120).



Figure 5.120 D.Y. Cameron, *Dorothy Maude Kay*, 1898, oil on canvas, 86.4 x 101.6 cm, Private Collection. Image Witt Library, curatorial information Bill Smith.

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<sup>377</sup> This publication was listed in the inventory of Cameron's library, NLS ACC8950 Item 31.





Figure 5.121 D.Y. Cameron, *Battledore and Shuttlecock*, oil on canvas, 34.3 x 42.5 cm, Glasgow Museum Resource Centre ©Glasgow Museums.

The flat background of these artists appears again and again in Cameron's figural works. Although, few works have the same empty background as *Fairy Lilian*, but the high horizon or simplified background can be seen as well in *Figure Study*, *Battledore and Shuttlecock* (Figure 5.121), *The Bride* (Figure 5.122), and *When Lovers Meet*. In *Battledore and Shuttlecock* it seems almost as if Cameron is attempting to combine modern life imagery with the symbolist, fairy imagery from the early 1890s. Additionally, in the Japanese inspired works, *The Kimono* (Figure 5.123) and *The Geisha Girl* (Figure 5.125), influenced potentially by E.A. Hornel and George Henry (Figure 5.124 and Figure 5.126), fellow Glasgow Boys who had travelled to Japan in the early 1890s, this flat and decorative background can be observed.



Figure 5.122 D.Y. Cameron, *The Bride*, 1897, oil on canvas, 125.7 x 87.0 cm, Art Gallery of South Australia, Adelaide. Photograph of image in Witt library, London. No photograph was available from the art gallery.



Figure 5.123 D.Y. Cameron, *The Kimono*, oil on canvas, unknown location. Photograph Bonhams Auction House, last sale 24 August 2007.



Figure 5.124 George Henry, *Japanese Lady with a Fan*, 1893-1894, oil on canvas, 61 x 40.6 cm, Kelvingrove Art Gallery and Museum.

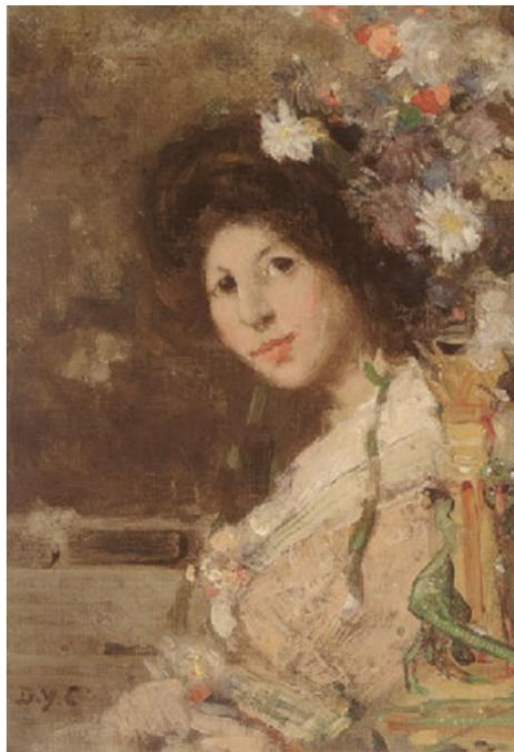


Figure 5.125 D.Y. Cameron, *The Geisha Girl*, oil on canvas, 46 x 34 cm, Unknown Location. Photograph ArtNet, latest sale September 1 1999.





Figure 5.126 E.A. Hornel, *Japanese Girl*, oil on canvas, 49.4 x 39.8 cm, The Stewartry Museum.

There are few known exceptions in figural works to these flat backgrounds. Two such exceptions are *The Avenue* (Figure 5.127), and *The Bridge* (c.1899, Figure 5.129). In these works, rather than the detailed depiction of elements in the landscape, and the mysterious landscapes of dawn or twilight, observation of the interplay of light on the subject and how this influenced colour formed the main subject, as can also be seen in the work of the Impressionists, and the Glasgow Boys, such as Guthrie's *Midsummer* (Figure 5.128).<sup>378</sup> The overall tonality of Cameron's works is more muted than the work of the Impressionists, and the curve of the bridge is more decorative and reminiscent of Art Nouveau influences.

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<sup>378</sup> Bomford et al., *Art in the Making: Impressionism*, 23-25; Adams, *The Barbizon School & the Origins of Impressionism*, 186.

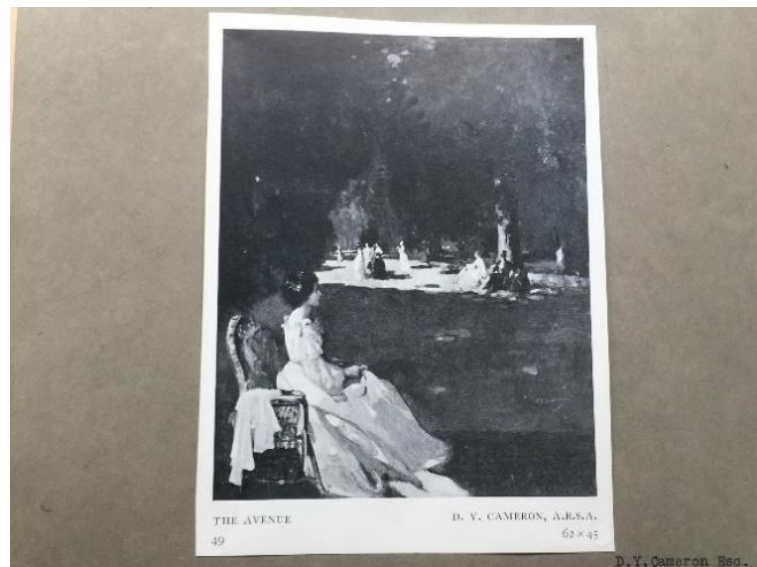


Figure 5.127 D.Y. Cameron, *The Avenue*, oil on canvas?, photograph of image in Witt library, London.



Figure 5.128 James Guthrie, *Midsummer*, 1892, oil on canvas, 101.8 x 126.2 cm, Royal Scottish Academy, Edinburgh.



Figure 5.129 D.Y. Cameron, *The Bridge*, c.1899, oil on canvas, 77.0 x 181.0 cm, Alte Pinakothek, Munich. ©Alte Pinakothek.

Combining these various influences into one work, as he did in *Fairy Lilian*, may have been somewhat of a struggle for Cameron as is evidenced by him needing to adjust the dimensions of the work during the painting process.<sup>379</sup>

Approximately 5 centimetres from the bottom edge, a series of holes can be seen (Figure 5.130). These holes relate to an old tacking margin which was used when the canvas was stretched on a smaller stretcher.



Figure 5.130 Detail photograph of *Fairy Lilian* showing the impression of a previous stretcher bar and tacking holes.



Figure 5.131 Detail photograph of *Fairy Lilian* the top edge of the canvas with the impression of a previous frame and tacking holes.

<sup>379</sup> Visit GMRC Painting's Conservation Studio where *Fairy Lilian* is being treated, 20/10/2023.

The lack of cracking along the creases indicating an old fold over edge, and the paint seen inside the tacking holes suggest that the canvas was re-stretched on a taller stretcher before the painting was made. A short extension of the canvas was also noted along the top edge where the flattened fold over edge can be seen on the recto of the canvas, but was previously stretched on top of the stretcher bar (Figure 5.131). This second taller stretcher was also slightly wider than the 'original' stretcher. The narrow bands of exposed white ground running vertically along the left and right sides show that the commercially prepared ground had been folded around a narrower stretcher when the brown toning layer was applied by the artist. During this re-stretching the canvas edges were trimmed down to the foldover edges and have been attached to the sides rather than the back of the stretcher as has been observed in all the other canvas paintings. *Fairy Lilian* was examined with the naked eye only and could not be studied in more detail with a microscope while it was in the conservation studio to address structural issues with the stretcher which has been keyed so far its integrity is no longer intact. The dimension adjustments make it clear that Cameron was still experimenting with the required size for this subject and perhaps was less certain about his vision for this figural work than he was when he painted other subjects, such as harbours or landscapes, in which no changes to support size have been observed.

This may be a contributing factor to why Cameron did not continue with these figural subjects into the twentieth century. Smith states that Cameron was not as confident and comfortable with depicting figures.<sup>380</sup> Moreover, the somewhat negative reception of some of his more romantic style works from the 1890s may also have contributed. For instance, in the anonymous review of the Colnaghi exhibition, it was implied that Cameron's breadth of handling and lack of detail

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<sup>380</sup> Smith, *D.Y. Cameron: The Visions of the Hills*, 37.



might be considered shallow and decorative in comparison to the Barbizon School artists and contemporaries:

'I should think his [Cameron's] relation to nature is rather that of the eighteenth century English painters than that of Velasquez, Rembrandt, or the modern men of the French school, Carolus Duran, Sargent, Bonnat, Manet, and the rest.'<sup>381</sup>

A similar anonymous review was written in the *Manchester Guardian* in which the tones are praised but the structure and quality of the brushwork is questioned:

'The small exhibition of pictures by Mr. D. Y. Cameron at Messrs. Colnaghi's Galleries in Pall Mall suggests rather than displays capacity in the artist. Mr. Cameron is a better colourist than painter; he is a still better draughtsman and etcher. In his pictures the cool schemes and the studied, Velasquez-like tones which he affects are always grateful to the eye. But when one looks into the painting itself one too often finds that the structure is flimsy, the brush-drawing only at times respectable, the command of texture never first-rate ... Mr Cameron relies too easily on the accomplishment that he undoubtedly possesses, and does not seem to be vigorously in search of firmer ground on which to build up his future.'<sup>382</sup>

The most scathing review of Cameron's abilities as a figure painter and portraitist was written by the eminent critic of the day R.A.M. Stevenson in the *Pall Mall Gazette*:

'He lacks the special virtues of the portrait maker - subtlety of modelling, preference of structure before style, love of intimate character rather than grand manner.'<sup>383</sup>

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<sup>381</sup> 'Exhibitions', *The Art Journal*, 1889, 30.

<sup>382</sup> 'Colnaghi', *Manchester Guardian*, 17 April 1899.

<sup>383</sup> Stevenson, *Pall Mall Gazette*, 18 April 1899.

After the Colnaghi exhibition, Cameron only exhibited the portrait *Dorothy Maude Kay* once more in 1900 at the RGI but showed no other figural works again. It may be that the scathing reviews Cameron received, especially that by the renowned Stevenson, influenced his decision to no longer exhibit portraits or other figure studies.

### 5.10.6 A Romantic at Heart - The Wilds of Assynt

Cameron's later works are a return to the early nineteenth century Scottish artists who depicted the grandeur of the highlands. However, his style continued to develop similarly to that of many of his contemporaries; an increased interest in colour and abstraction of form, as can be seen in *The Wilds of Assynt* (1936). This is not to say that the influence of the older artists cannot also be seen in the style. The spotlight on a specific element of the landscape, often a historical building, is reminiscent of Rembrandt, who as we have seen, was an artist greatly admired by Cameron.<sup>384</sup> The use of colour, especially where intense skies of dawn or dusk are depicted, remind us of Turner and the emotive clouds and skies in his land- and seascapes.<sup>385</sup> It is the ability to play with and convey sentiment through colour that is the reason for Adam Palgrave to describe Cameron as an expert landscape painter in *The Connoisseur* (1904):

‘One of our greatest painters of landscape now is D.Y. Cameron ; no one it seems to me has retained so much of the greatness of the past masters, and has grafted so much of the new spirit. He has a genius for light and shade, which long apprenticeship to etching has given him. He has a wonderful gift for the exact arrangement of masses of colour. He is dignified without being pompous, rare without being peculiar. I have never seen anything of Cameron's which has gained its end by being extraordinarily out of the way in treatment, nor have I been compelled to look at his work because of some quaint composition or meaningless advertisement of eccentric colour. He has not fallen into the dreadful fit of reproducing his successes, or the very usual slackness of many of our landscape painters. So many of our painters produce landscapes which look like advertisements of holiday resorts, mere geographical and geological charts of the country, where they have spent their painting year. Many of the mighty have fallen into the hands of the ready dealer, and sin to the point of boredom, as Sidney Cooper sinned. What it is to produce a soulless landscape! It is as bad as producing the dummy portraits which yearly

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<sup>384</sup> Cameron wrote an address on Rembrandt as the greatest Christian artist (1933-1945), NLS ACC8950 Item 26.

<sup>385</sup> Cameron had several books about Turner in his library and seems to have been greatly interested in this artist.



plaster the walls of the Academy. It is even worse, for where sitters fail Nature is ever more beautiful, more soulful than she is painted.<sup>386</sup>

This colour used to convey different light conditions and times of day as well as a romantic sentiment is also remarked upon in the review of Cameron's work exhibited in 1902 at the New Gallery and the Society of Oil Painters:

'I would direct attention to the landscapes of Mr. D.Y. Cameron, 'The Valley,' deep and rich in tone, is a true pictorial evocation of that romantic sentiment alluded to by Stevenson, when he said that in passing from Fielding to Scott "we become suddenly conscious of the background." The Valley invites the imagination along the hill-ramparted road, towards some such goal as that of those ancient wayfarers whose wanderings are perhaps commemorated in our word romance. 'Early Spring in Tuscany,' which, by the courtesy of Mr. Cameron, and of the owner, Mr. W. Warburton Wingate, we reproduce, is of a different kind. The aim here has been to express the joyous uprising of the earth-spirit in a land of beautiful memories. The wide Italian highway is flanked by slender poplars, not yet in leaf; under shelter of the hill to the left, beyond the red-roofed house, are blossoming fruit trees; the slopes of the hills are bathed in colour. The design, as might be expected from an etcher so able, is at once structural and delicate; the blithe green of the wayside grass, the notes of purple and faint violet, the mist-grey poplars graciously receding, the serene blue sky, are wrought to rare beauty of colour. But the best remains. Early spring in Tuscany is a time of sunflood. The artist has gone a long way towards achieving that fragment of the impossible which shall reveal in form and colour the rapture with which sunlight falls on an awakening earth, the joy with which earth welcomes the ever-vibrant although aeon-old call to new activity. Were there no other picture here, the gallery should be visited to see this work of Mr. Cameron.'<sup>387</sup>

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<sup>386</sup> Palgrave, 'Landscape in England', *The Connoisseur*, 1904, 137-140.

<sup>387</sup> 'The New Gallery and the Society of Oil Painters', *The Art Journal*, 1902, 92.



Figure 5.132 D.Y. Cameron, *The Wilds of Assynt*, 1936, oil on canvas, 102.1 x 127.9 cm, Perth Museum and Art Gallery.

Both the expert use of colour and the conveying of a Romantic sentiment can be observed in *The Wilds of Assynt* (Figure 5.132). This late landscape is a perfect example of how Cameron depicted the Highlands or landscapes including buildings with historical connotations. It follows the building up of the composition as described in 'Cameron's Landscape Painting Methodology'. The depiction of the Highlands containing links to historical events relates to the theory proposed by Archibald Alison in his 1790 essay *Essays on the Nature and Principles of Taste* that a landscape is beautiful through its association with history or the events that it has witnessed.<sup>388</sup> This Romantic theory would lead to the depiction of historic sites and the inclusion of ruins and historic buildings within landscapes, for instance in the work of the Scottish artist Horatio

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<sup>388</sup> Irwin and Irwin, 'Scottish Painters at Home and Abroad, 1700-1900', 356; Hardie, *Scottish Painting: 1837 to the Present*, 26; Macmillan, *Scottish Art: 1460-1990*, 154.

McCulloch (1805-1867). Occasionally, the landscapes were used to provide social commentary on for instance the Highland Clearances or the changing position of rural villages and the increasingly industrial cities; the Clearances can be seen in William McTaggart's *The Emigrants* (1883-1889, Tate, London) and the issue of rural depopulation is reflected in the work of David Wilkie.<sup>389</sup>

The tradition of depicting landscapes with historic ties is continued in *The Wilds of Assynt* (1936) in which the ruins of Ardvreck Castle at Loch Assynt are depicted in the centre of the composition. Cameron paid careful attention to the architecture in this composition, as he is observed to have done consistently. The ruins may be slightly simplified, but the specific building can be easily recognised. Comparing this painting to modern day photographs of the ruins show how well the ruins are depicted in the painting. Ardvreck Castle had been home to the Macleods of Assynt and later the Mackenzies of Assynt. A legend involving the clan Macleod, the Jacobites and the royalists takes place at the castle. It is believed that the royalist James Graham was held here by the Covenant Macleod, Laird of Assynt. A more fabled tale is that Graham was graciously received by Macleod or his wife, only to be betrayed for a large sum of money and executed in Edinburgh.<sup>390</sup> The castles in *Douart* and *A Castle by the North Sea* also have strong ties to clan history.

Cameron had a strong interest in clan history, and Scottish history more generally evidenced by books in his library (Appendix VI), making it not impossible for him to have known of clan legends and the historic importance of the castles and therefore have chosen to depict these sites in his landscapes.<sup>391</sup> Additionally, he was a proud Scotsman, writing in a letter to David Croal Thomson on 8 December 1914 that he was glad his parents moved to Scotland

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<sup>389</sup> Hardie, 23; Macmillan, *Scottish Art: 1460-1990*, 177, 191-92, 217-18, 249-51; Macdonald, *Scottish Art*, 97-100, 105-6, 121-24; Normand, '55° North 3° West: A Panorama from Scotland'.

<sup>390</sup> 'Ardvreck Castle'.

<sup>391</sup> The inventory of his library shows a multitude of volumes dedicated to Scottish history, with several volumes dedicated specifically to clan history.

before his birth for now he escaped being an English Presbyterian and was 'not a Scot - but a "Hielandman"'.<sup>392</sup> His sentiment regarding his Scottish heritage may have provided Cameron with a further impulse to return to the depiction of Highland landscapes in a Romantic way, as the Scottish artists he admired had done: Chalmers, Orchardson, and Pettie.<sup>393</sup>

The great emphasis on colour, however, in Cameron's works, set his landscapes apart from the previous generation. The landscapes are based on actual views which were sketched by the artist with careful attention paid to the colours observed, as discussed in 'Cameron's landscape painting methodology'. In translating the sketch to painting, Cameron favoured depicting a certain mood or atmosphere rather than depicting a 'scientifically' accurate depiction of the view. Aspects were embellished, omitted, or imagined. The observed scene was filtered through the sensibilities of the artist, as was remarked upon in a review of Cameron's work:

'Mr. Cameron possesses the inestimable gift of intent contemplation; his etchings are something far other than snap-shots executed with the needle. Towards this or that scene he exposes, so to say, the sensitized plate of his personality; adventitious details are eliminated, essential beauties, significances, contrasts, correspondences, remain.'<sup>394</sup>

Using a 'spotlight' effect, the castles or historic buildings are depicted as focus points in a wider landscape. The addition of these buildings, and the occasional figure, aids in relating the scene to history as well as providing a sense of scale. The inclusion of these architectural features, occasionally prominently, suggests

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<sup>392</sup> Tate Archives, London, TGA 9122/1/8/19-20.

<sup>393</sup> NLS ACC8950 Item 1 Letter from W.M. Frazer to Cameron 30/11/41.

<sup>394</sup> 'Autumn Exhibitions', *The Art Journal*, 1902.

that to Cameron these buildings were integral to the work, as in *A Castle on Mull* (Figure 5.143).

These elements of history and spotlight focus can be seen in other landscapes as well, for instance in the paintings depicting cities, ruins, and in Cameron's war paintings. In the paintings depicting Roman ruins in Rome. *Thermae of Caracalla* (Figure 5.133) and *The Baths of Caracalla* (1924, Figure 5.134), the play of light is important. The focus in these works is always on the midground where parts of the historic architecture is clearly in focus, as can also be seen in *The Wilds of Assynt*.



Figure 5.133 D.Y. Cameron, *Thermae of Caracalla*, oil on canvas, 78 x 119, Paisley Art Institute Collection at the Paisley Museum and Art Galleries.



Figure 5.134 D.Y. Cameron, *The Baths of Caracalla*, 1924, oil on canvas, 105.5 x 90.2 cm, Harris Museum & Art Gallery, Preston.

The few cityscapes that Cameron painted, including *Dark Angers* (1903, Figure 5.135) and *St Andrews* (1905, Figure 5.136), are darker in tonality but the same approach has been used. In *Dark Angers* the bridge forms the brightest point in the painting as if lit by a spotlight. This strangely bright bridge has been remarked upon by Rinder in a review of the work as a conflicting element in the scene:

‘Immediately to the left hangs one of two canvases by Mr. D.Y. Cameron ‘*Dark Angers*’ is among the most impressive exhibits at the Institute - impressive, that is, as distinct from enchanting. In design it is new and dignified: river spanned by four-arched bridge in the foreground, towers and old-time buildings crowning the background height. The colour-scheme is one of low tones - snuff browns and greys, reminiscent of Velasquez. It is in the not sufficiently sombre lighting of the bridge, in the rendering of the



unshadowed water, that Mr. Cameron has introduced conflicting elements into an otherwise fine work.'<sup>395</sup>



Figure 5.135 D.Y. Cameron, *Dark Angers*, 1903, oil on canvas, 68.6 x 129.4 cm, Manchester Art Gallery.



Figure 5.136 D.Y. Cameron, *St Andrews*, 1905, oil on canvas, 107.7 x 158.7 cm, Walker Art Gallery, Liverpool.

In both these works, the dark tonality is reminiscent of Velazquez and Whistler. The influence of Whistler is more easily visible in *St Andrews* in which the sun, low on the horizon behind the city, creates a misty effect. This effect was

<sup>395</sup> Rinder, 'The London Galleries', *The Art Journal*, 1903, 59-30.



described by Whistler as the most 'exquisite song' of Nature meant for the artist alone:

'and when the evening mist clothes the riverside with poetry, as with a veil - and the poor buildings lose themselves in the dim sky - and the tall chimneys become campanile - and the warehouses are palaces in the night - and the whole city hangs in the heavens, and faireyland is before us - then the wayfarer hastens home - the working men and the cultured one - the wise man and the one of pleasure - cease to understand, as they have ceased to see - and Nature, who for once, has sung in tune, sings her exquisite song to the Artist alone, her son and master - her son in that he loves her, her master.'<sup>396</sup>

This description by Whistler can also be applied to *Nightfall, Luxor* (1910, Figure 5.137) which is most similar to a Whistler nocturne, for instance *Blue and Silver: Screen, with Old Battersea Bridge* (1871-1872), in the blurry outline of the columns. It could also be applied to the landscape *Cir Mhór*, which depicts hilltops with the sun low behind them, either early in the morning or just before dark. This work is also reminiscent of James Ferrier Pryde (1866-1941), who Cameron may well have met during his time in Edinburgh, as Pryde was a student at the same time.<sup>397</sup> The strong juxtaposition of the tall columns with the tiny figures creates a dramatic effect, also seen in several of Pryde's works, for instance *An Ancient Harbour* (1923, oil on canvas, National Galleries of Scotland). This juxtaposition can further be seen in Cameron's landscapes of the Highlands. When figures or animals are included in these landscapes they appear as mere specks against the vastness of the landscape, which can be observed in *The Wilds of Assynt*.

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<sup>396</sup> Whistler, *The Gentle Art of Making Enemies: As Pleasingly Exemplified in Many Instances*, 144.

<sup>397</sup> Smith, D.Y. *Cameron: The Visions of the Hills*, 17.



Figure 5.137 D.Y. Cameron, *Nightfall, Luxor*, 1910, oil on canvas, 101.6 x 68.5 cm, Walker Art Gallery.

Cameron was one of the official war painters for Canada employed to record the life of Canada's armed forces on the front lines.<sup>398</sup> In this role, he executed two oil paintings *Flanders from Kemmel* and *The Battlefield of Ypres* (1919).

Moreover, he was employed to create a work for the British Pictorial Propaganda Committee. Besides these commissioned works, Cameron painted several smaller landscapes of what he encountered along the front lines. Each of these landscapes, follows the same midground focus that was observed in other landscapes, both of the Highlands and cities. Some of these works feature buildings, for instance *The Battlefield of Ypres* (1919, Imperial War Museum London, Figure 5.138), *Bailleul* (c.1919, Dundee City Art Gallery), and *A Village in Normandy* (c.1919, private collection). With exception of the *Garment of War* (c.1926, Edinburgh City Art Centre, Figure 5.139) executed several years after the war had ended, the paintings present relatively tranquil scenes which do not

<sup>398</sup> Smith, D.Y. Cameron: *The Visions of the Hills*, 81-85.

immediately stand out as war paintings. They show an interest in colour and guiding the viewer to a focus point in the painting, the building among the sows in *The Battlefield of Ypres*, and the turbulent clouds in *A Garment of War*. The sky in this work is reminiscent of Turner, and perhaps shows better the reality of war. It may have taken several years for the harsh realities of the war to have sunk in, and for him to have been able to paint such an emotive scene.



Figure 5.138 D.Y. Cameron, *The Battlefield of Ypres*, 1919, oil on canvas, 182.8 x 317.5 cm, Imperial War Museum London.



Figure 5.139 D.Y. Cameron, *A Garment of War*, c.1936, oil on canvas, 121.9 x 167 cm, City Art Centre Edinburgh.

In all of Cameron's war paintings, a generalisation and interpretation through the sentiments of the artist can be seen in which elements have been omitted or altered. This is especially evident when these war paintings are compared to paintings by other war artists. Cameron's still somewhat idyllic landscapes represent an aftermath or a certain quiet, depicting ruins, or the empty shell of buildings, with the exception of *A Garment of War*. In contrast, the art made by for example Christopher Richard Wynne Nevinson (1889-1946) presents the harshness of war, depicting soldiers in peril, hurt or marching. Even in landscapes of war areas, the effects of war are more clearly indicated, for instance in *A Front Line near St Quentin* (1918) (Figure 5.140). Explosions can be seen in the distance and a barbed wire fence is prominently placed in the foreground. Similar themes are explored by Paul Nash (1889-1946), who depicts the destruction of war in *The Mule Track* (1918) (Figure 5.141). These young artists depict the raging of war as it is ongoing, and do not shy away from the



harshness of this depiction. Even in the paintings of an ongoing war, Cameron cannot hide his Romantic tendencies.



Figure 5.140 C.R.W. Nevinson, *A Front Line near St. Quentin*, 1918, oil on canvas, 45.9 x 31.2 cm, Manchester Art Gallery.



Figure 5.141 Paul Nash, *The Mule Track*, 1918, oil on canvas, 60.9 x 91.4 cm, Imperial War Museums.

Cameron was not alone in turning to painting landscapes, specifically the Highlands, with a Romantic connotation, including historic buildings or using a spotlight to highlight a certain area. Other Glasgow Boys too returned to the Highlands and the Romantic later in their career after having condemned this art and favoured realistic landscapes early in their career. A reviewer of the annual exhibition at the Royal Scottish Academy (RSA) wrote in the *Studio* of 1906 that a return of castle, ruin, and city, typical of the Romantic landscapes of Horatio McCulloch and the cityscapes of Edinburgh by Alexander Nasmyth, can be seen in the work of the young Scots who once so avidly condemned these scenes:

‘[...] and in two pictures [*A castle in the Ardennes* and *Old Brussels*]<sup>399</sup> Mr. D.Y. Cameron shows how composition can give distinction apart from emotional and significant colour. These, with Mr. James Paterson’s Edinburgh pictures and a fine drawing by Mr. Bruce Home, are indications that the ready-made picturesque of castle, ruin, and city, once condemned by our younger men of Scottish painters, is creeping back to Scottish art.’<sup>400</sup>

Despite turning back to similar subject matter, Glasgow Boys did not have a universal style.<sup>401</sup> When comparing works by Cameron, Macgregor, Roche, Macaulay Stevenson, and Gauld, all depicting landscapes, displayed next to one another, these individual styles are evident (Figure 5.142). The paintings by Cameron, Roche and Gauld all feature a castle or villa within the landscape. The style of each artist is typical of the late nineteenth and early twentieth century response to naturalism; the interplay of colours is used to depict an impression of a subject. However, how this interplay is used differs per artist, as does the level of detail included. In *Loch a Ghille Ghobaich, Morar* (1916-1918) (Figure 5.146), Macgregor has depicted individual trees to form the foreground behind which the hill rises up. The style of this work reminds us of Cézanne’s broad strokes in his landscapes. Whether Macgregor was influenced by Cézanne

<sup>399</sup> Laperriere, *The Royal Scottish Academy Exhibitors, 1826-1990: A Dictionary of Artists and Their Work in the Annual Exhibitions of the Royal Scottish Academy*, 258.

<sup>400</sup> J.L.C., ‘Studio Talk’, *The International Studio*, 1906.

<sup>401</sup> Fowle, Hamilton, and Melville, *Impressionism & Scotland*; Billcliffe, *The Glasgow Boys*; Hardie, *Scottish Painting: 1837 to the Present*.

requires further investigation. In an earlier work by Macgregor hung besides this landscape, *The Carse of Lecropt* (1891) (Figure 5.147), a subject and style similar to that seen in Barbizon School works has been depicted. This illustrates a change from a depiction of landscape influenced by the Barbizon School, a more realistic depiction of the landscape, to a brighter depiction with a greater focus on the interplay of colour. This is a similar change to that seen in Cameron's works.

In *A Castle on Mull* (Figure 5.143), Cameron allows the light to fall onto the castle, illuminating it in bright colours. To Cameron trees and shrubs were not important in his landscapes, except in an abstracted more generalised area of colour. Roche's *Corfe Castle* (Figure 5.144) is more muted in tone in contrast to Cameron's *A Castle on Mull*. Roche is also the most 'impressionistic' in style, with short strokes placed together. It is almost as if you can see the wind move across the painting. Cameron's works appear more static, there is less movement depicted in his landscapes. Gauld's depiction of a villa in a snowy landscape in *The Ramparts of Montreuil-sur-Mer in Snow* (Figure 5.145) is perhaps the most limited in colours. The trees in the foreground partially obscure the villa in the background, placing the building firmly amongst nature.



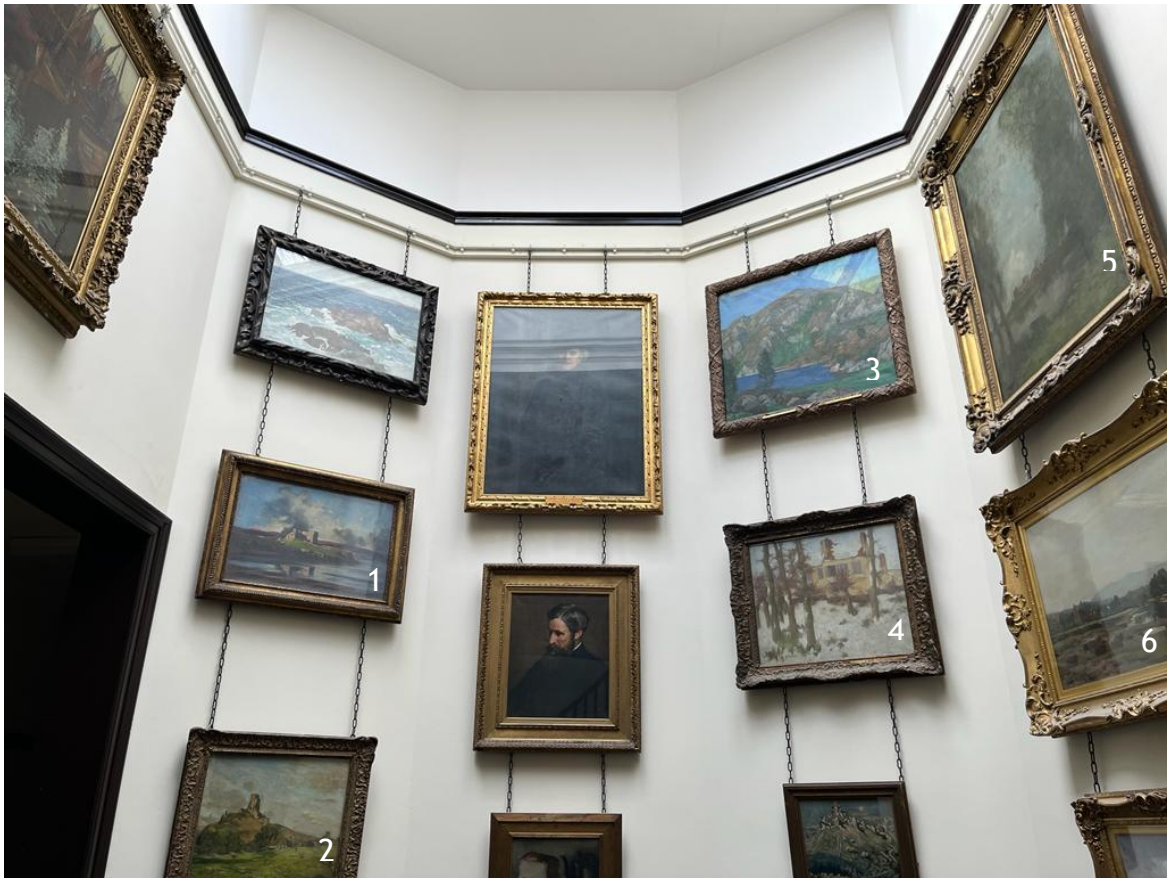


Figure 5.142 Top of stairwell in University Gardens 7 at the University of Glasgow displaying works by the Glasgow Boys:

1. David Young Cameron, *A Castle on Mull*, 1885-1940, oil on canvas, 51 x 76.2 cm, The Hunterian;
2. Alexander Roche, *Corfe Castle*, 1880-1921, oil on canvas, 51 x 61.3 cm, The Hunterian;
3. William Yorke Macgregor, *Loch a Ghille Ghobaich, Morar*, 1916-1918, oil on canvas, 81.2 x 91.5 cm, The Hunterian;
4. David Gauld, *The Ramparts of Montreuil-sur-Mer in Snow*, c.1912-1914, oil on canvas, 60 x 72.5 cm, The Hunterian;
5. Robert Macaulay Stevenson, *Linlithgow Palace*, 1896-1898, oil on canvas, 116.9 x 86.5 cm, The Hunterian;
6. William Yorke Macgregor, *The Carse of Lecropt*, 1891, oil on canvas, 71 x 91.5 cm, The Hunterian.



Figure 5.143 D.Y. Cameron, *A Castle on Mull*, 1885-1940, oil on canvas, 51 x 76.2 cm, The Hunterian.



Figure 5.144 Alexander Roche, *Corfe Castle*, 1880-1921, oil on canvas, 51 x 61.3 cm, The Hunterian.



Figure 5.145 David Gauld, *The Ramparts of Montreuil-sur-Mer in Snow*, c.1912-1914, oil on canvas, 60 x 72.5 cm, The Hunterian.



Figure 5.146 William Yorke Macgregor, *Loch a Ghille Ghobaich, Morar*, 1916-1918, oil on canvas, 81.2 x 91.5 cm, The Hunterian.



Figure 5.147 William Yorke Macgregor, *The Carse of Lecropt*, 1891, oil on canvas, 71 x 91.5 cm, The Hunterian.

#### 5.10.7 Care taken in every aspect - 'Rubbing', Glazing, and Media - *Uplands in Lorne*

Cameron occasionally requests in letters to his art dealer James Connell & Sons, Cameron that his pictures are 'rubbed', as discussed previously in section 5.8. It is unknown what he meant with this, and whether this applied to work in all media or to a specific medium only. Similarly, he writes that some of his pictures ought to be glazed, likely meaning that he intended for the works to be placed behind glass. The insinuation that Cameron wished for his works to be looked after or treated in some way upon completion suggests that he had a vested interest in their condition. This has already been remarked upon in the discussion on Cameron's choice of support, see the case study in section 5.10.2. It can also be seen in the chosen support for *Cloister at Montivilliers* which is a hardwood panel with neatly bevelled edges and a commercially prepared zinc white ground.





Figure 5.148 D.Y. Cameron, *Uplands in Lorne*, oil on panel, 14.1 x 18.2 cm, The Hunterian, Glasgow.

It is remarkable, therefore, that the support observed in *Uplands in Lorne* is not a well-prepared artists' support (Figure 5.148 and Figure 5.152). It may be an improvised support; the right edge of the board is rough and only the left edge has been bevelled (Figure 5.148). The rough right edge may be the result of the way in which the panel was acquired. The light wood, probably boxwood<sup>402</sup>, is a cheap alternative to the hardwoods more commonly used. It is possible that in this case the panel was made of a repurposed piece of wood. A further indication that this was an improvisation is the absence of a ground (Figure 5.149). No ground layer was identified during examination of the panel nor in a sample taken from the sky at the right edge (Figure 5.151). The only preparation that appears to have taken place is scoring of the panel, as can be seen in the X-radiograph (Figure 5.153), to increase adhesion of paint to its surface. However,

<sup>402</sup> Discussion Ian Tyers 22 June 2022

this landscape too has the sharp outlines of the hills and only very slight changes to the outlines of the hill were identified when comparing the infrared reflectogram (Figure 5.150) to the final composition. This indicates that this work was not as spontaneous as the support and lack of ground may imply.

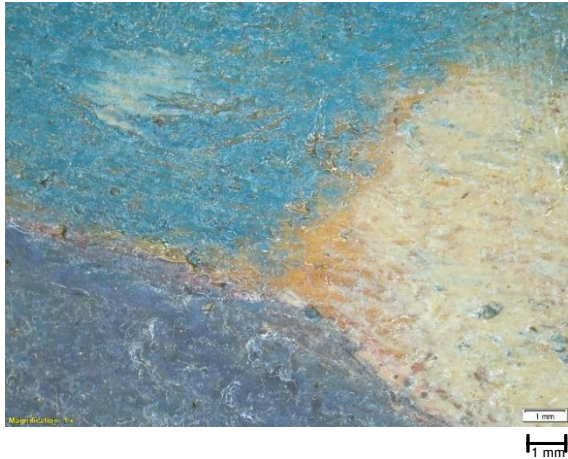


Figure 5.149 Micrograph of *Uplands in Lorne*; the panel is visible between the light blue of the sky, the white of the cloud and the purple-blue of the hill, 10x.



Figure 5.150 Infrared reflectogram of *Uplands in Lorne*, F8 exp. 30ms.

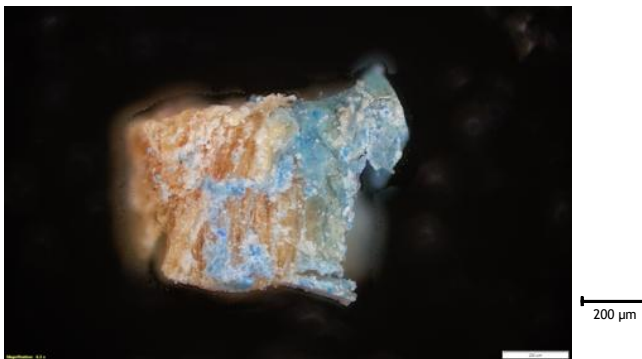


Figure 5.151 Sample taken from the sky in *Uplands in Lorne*, 100 x 0.67 magnification, stacked.



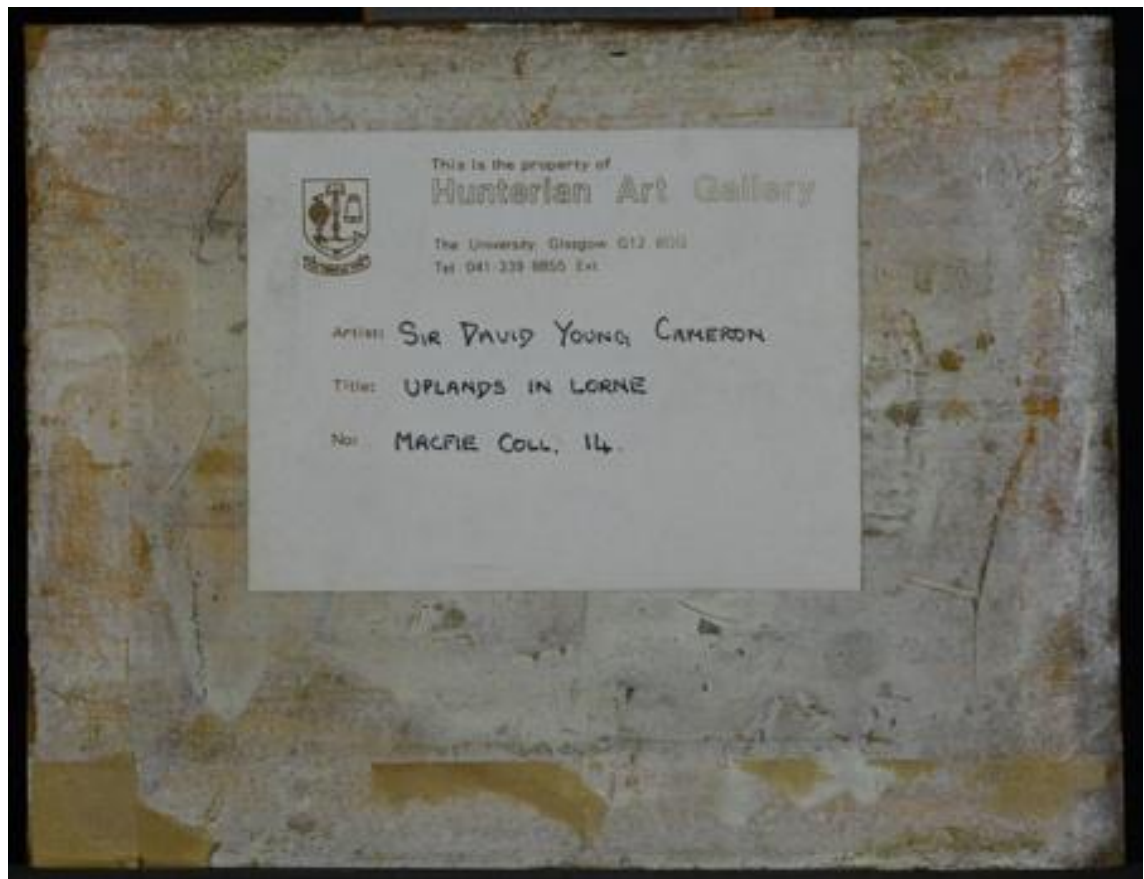


Figure 5.152 Verso *Uplands in Lorne*.



Figure 5.153 X-radiograph of *Uplands in Lorne*.

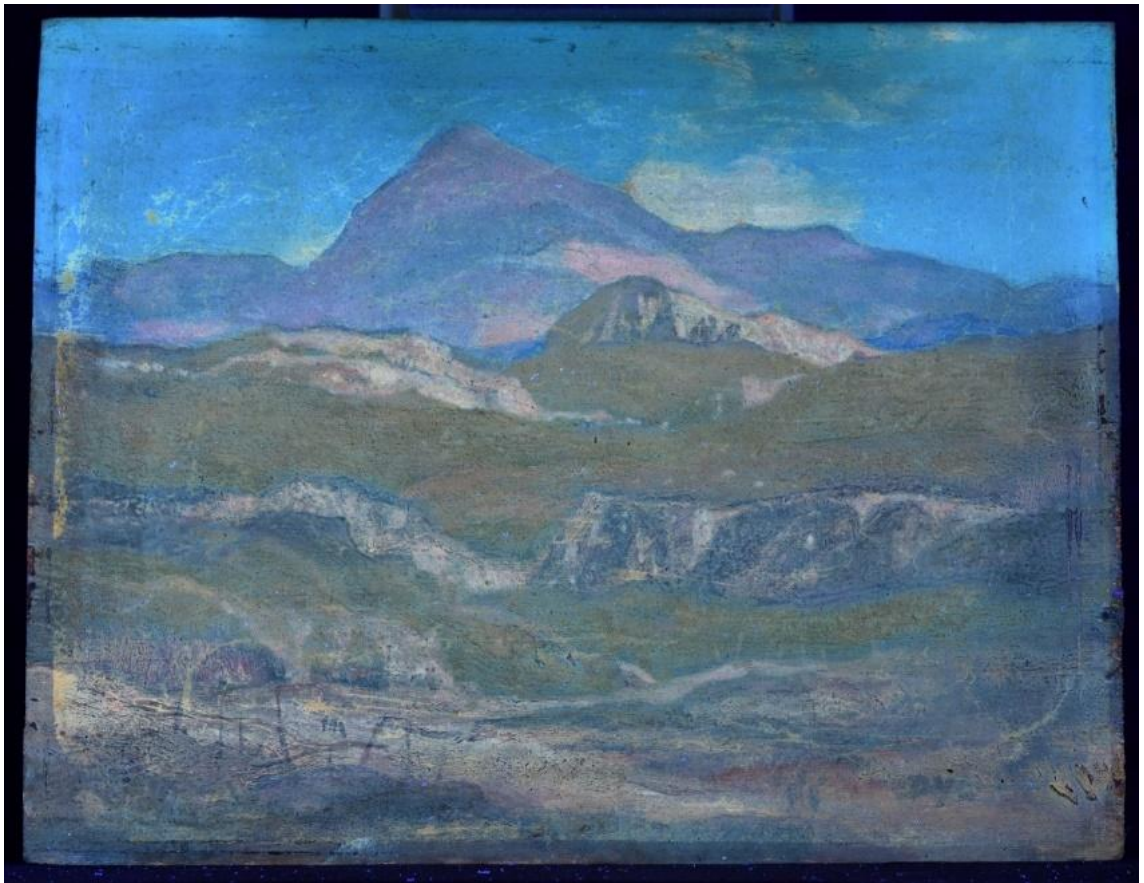


Figure 5.154 UV Fluorescence photograph of *Uplands in Lorne*.

In the ultraviolet induced fluorescence photograph, it is clear that in *Uplands in Lorne*, Cameron made use of different media (Figure 5.154). In Speed's description of Cameron's technique, he states that Cameron would thin down his paint with turpentine, indicating that Cameron did adjust his materials. The brown hills in *Uplands in Lorne* show a yellow-green fluorescence, indicating that the medium or varnish used in this area differs from the rest of the painting. It is unclear whether the variation in media relates to the varnish used or whether it indicates the use of a different medium to his paint for the glaze-like brown paint. It is possible Cameron used turpentine, or copal or mastic resin acquired from colourmen (See Colourmen), to adjust the paint in these areas. It was not possible to obtain a sample from these areas, nor did examination under magnification reveal much about the medium use. Unfortunately, whatever medium was used, has created an obscuring surface when examined under a microscope (Figure 5.155 and Figure 5.156).



Figure 5.155 Micrograph of *Uplands in Lorne*: Milky varnish as well as small bubbles or specks of dirt in varnish layer, 10x.



Figure 5.156 Micrograph of *Uplands in Lorne*: Milky varnish, 10x.

The manipulation of media has also been observed clearly in *Cloister at Montivilliers*. Drying cracks can be seen throughout the painting, most obvious in the area of the dark ceiling. It is not known exactly what caused these drying cracks to appear, but it is thought that it relates to the use of medium in this painting. Overall, the paint in this work has been applied thinly, and may have been manipulated with turpentine. A thinned paint can be seen in the shadows of the pillars in this painting. In this area, pooling of the thin paint along the bottom of the stroke can be seen (Figure 5.157). Additionally, the red paint next to the seated nun has also been thinned (Figure 5.158). There is no evidence in the UV fluorescence image which would suggest a similar medium use as that observed in *Uplands in Lorne*. However, an additional coating of the ceiling area where the severest drying cracking can be seen has been observed. This may relate to a partial cleaning (Figure 5.159). Alternatively, an additional protective coat may have been applied in this area due to the cracking. The layer covers the drying cracks, suggesting that it was applied after the cracking had occurred.





Figure 5.157 Detail photograph of the thinned paint application in the shadow of the pillars running across the path. The thicker edge at the bottom of the stroke shows the fluidity of the paint.



2 mm

Figure 5.158 Micrograph of Cloister at Montivilliers; Thin red paint next to the seated



Figure 5.159 UV Fluorescence photograph of *Cloister at Montivilliers*.

*Uplands in Lorne* was varnished or cleaned in the frame, as is evidenced by the stark lines along the edges of the panel (Figure 5.154). A synthetic varnish has later been applied over the entire work. It is possible that the varnishing or cleaning of this painting in frame happened during Cameron's lifetime and was executed either by himself or by an art dealer or collector. It was noticed that all of the paintings examined with ultraviolet light showed evidence of a varnish layer. Several of the paintings showed evidence of an old varnish layer underneath the modern synthetic layer now most prominently visible, *A Cloister in Montivilliers* and *A French Harbour*. The ultraviolet light fluorescence photograph obtained of *Fairy Lilian* shows an uneven varnish application, potentially a natural resin varnish.<sup>403</sup> The application suggests that the varnish may have been applied by the artist or a contemporary. It has darkened which is most clearly visible where a yellow, glossy layer is visible on top of the white ground along the edges of the painting.



Figure 5.160 Micrograph of *Morning in Lorne*: Fibres or brush hairs stuck in varnish, 20x.

The presence of fibres in the varnish, as can be seen in *Morning in Lorne* (Figure 5.160), and the uneven application of the varnish seen in *Uplands in Lorne*,

<sup>403</sup> The UV image could unfortunately not be obtained from Glasgow Museums Resource Centre.



might be an indication of the 'rubbing in' mentioned by Cameron in his letters. Perhaps the varnish was rubbed onto the work with a cloth.

*Uplands in Lorne* was framed when the painting had not yet fully dried. Along the edges, indentations and evidence of the gilding of a frame are visible in the paint layers (Figure 5.161). Along the top edge, it is believed that an old attachment mechanism of a frame has created indentations in the paint and in the panel (Figure 5.162). This too appears to have occurred while the paint was still wet because the paint can be seen inside the indentations and therefore was still malleable when they occurred.

In *Morning in Lorne* evidence of a frame being attached while the paint was not yet fully dry has been observed too. Along the top left corner a woodchip is stuck in the paint and an abrasion to the paint surface can be seen revealing the canvas (Figure 5.163). In the abrasions some gold leaf can be seen, suggesting that it was a gilded frame that was attached.



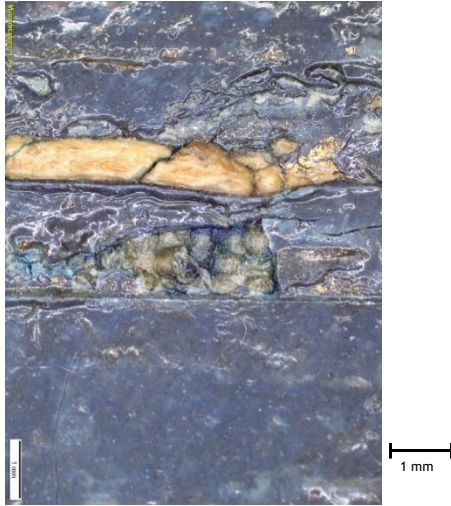
Figure 5.161 Micrograph of *Uplands in Lorne*: Abrasion from previous frame on right edge most likely showing a red underlayer under the brown layer. Gold leaf can also be seen in these abrasions, 15x.



Figure 5.162 Micrograph of *Uplands in Lorne*: Indentation in panel along the top of the panel, 10x.

1 mm





**Figure 5.163** Micrograph of *Morning in Lorne*: Abrasion along the top left corner, likely due to a frame, 15x.

## 6 Conclusions and Discussion

This thesis presents the first technical examination of oil paintings by the Scottish artist D.Y. Cameron. A combination of art historical research and technical examination (technical art history) has underpinned the characterisation of Cameron's materials, technique, stylistic development, and ideology. This has led to a reassessment of his status as a Glasgow Boy and provides insights into the materials and techniques of the Glasgow Boys, more generally. This thesis argues that Cameron was a Glasgow Boy. During the research it was possible to assess his early works not previously considered by Smith or Billcliffe. These works show more similarities than differences with the Glasgow Boys both in subject matter and style. In his early career, Cameron shared the same ideals as those associated with the Glasgow Boys: depicting lowland life, painting from nature in a realistic manner, and rejecting the moralistic imagery of the previous generation. The development in subject matter seen in Cameron's work can also be seen in the work of the Glasgow Boys. The earliest work studied, *Winter near Liberton, Midlothian*, is typical of the subject favoured by the Glasgow Boys - lowland landscape. Additionally, *The Bridge* and *The Avenue*, painted in the 1890s follow in the development of the Glasgow Boys who turned towards scenes of leisure life towards the end of the 1880s. Cameron also painted symbolic and poetic subjects; interestingly other Glasgow Boys including Hornel, Henry, Gauld, and Lavery, began to paint such subject matter in the 1890s. This is usually described in the literature as a side-venture led by Hornel, towards a more decorative style. To provide a better understanding of the group's work, this development deserves more attention and prominence in the discussion of the Glasgow Boys, than it has been given to date.

After the dispersal of the group in roughly 1895, most Glasgow Boys sought more profitable ventures and were accepted during the 1890s and early 1900s into the

art institutions they had rebelled against. This development is also seen with Cameron, who was accepted into the academies in the 1910s.

He changed subject matter around 1900, abandoning figural works in favour of architecture or landscape, and with it returned to the Romantic ideology expressed by artists of a century earlier - the sublime Highlands. In these later works, he developed a colourful, decorative approach, turning towards a brighter tonality and the use of purer colour. Cameron expressed his Romantic ideals in his speeches which he delivered in the last two decades of his life. The beauty of the landscape was revealed by the artist's observation and translation through his sensibilities and sensitivities, to create something partly decorative, as well as suggestive using motifs that carried historical significance. This clearly shows a departure from his earlier, more avant-garde work which rejected moralistic connotations.

Whether or not Cameron's materials and methods are comparable to that of other Glasgow Boys requires further technical art history research of their output. This would help determine if the group can be unified based on common materials and practices. However, at this point the broad description of the Glasgow Boys used within art history up until the 1980s should be used. Moreover, an additional technical study of Cameron's paintings, including analysis of figural works, should be conducted to better be able to draw conclusions about his artistic practice and to be able to compare this to his contemporaries.

The results of the technical examination from six oil paintings by Cameron, visual examination of works in situ in store and on display, and archival research including the Roberson account books, evidence that Cameron employed materials and methods typical of the period.

Cameron bought materials from the colourmen Winsor & Newton and Sennelier; as well as acquiring canvas supports, oil paints, linseed oil, mastic and copal resins, and powdered pigments from Roberson & Co Ltd. The double canvases Cameron ordered, and the identification of these canvases as well as those primed on both recto and verso, are evidence of an interest in the durability of his materials. Treatises on art materials in his library further indicate that he was at least somewhat interested in artists' materials. The watercolour paintbox owned by Cameron provides further proof of this, as well as providing insight into the nineteenth-century materials available to the artist.

It is thought that with the media Cameron bought, he prepared and/or adjusted some of his oil paints himself. Adjustments in viscosity of the paint would have allowed for a greater variety in paint application; visible especially in his later works. In areas where thinned paint has been used, or in which the paint appears to have been mixed with a different medium, drying cracks have formed. The mastic and copal resins acquired by Cameron may have been used as a varnish (this could not be confirmed by the technical analysis), or to adjust the properties of his paints. It is possible that these resins were used to 'rub' works as requested by Cameron in letters to his art dealer.

Cameron's palette contained traditional and recently introduced pigments which varied little throughout his career. These included: lead white, zinc white, cadmium yellow, chromium yellow, yellow ochre, vermillion, red lead, red iron oxide, red lake, cerulean blue, cobalt blue, chromium oxide green, emerald green, umber and charcoal blacks. Technical examination supports the suggestion that Cameron employed pigments mixed with black earlier in his career, to create a more muted tone, whereas later in his career, he used unadulterated colour, or mixed bright pigments without black. As discussed, these resulted in the tonal shift observed in Cameron's work around 1900.

A more unusual element in Cameron's paintings, is the use of a rubbed-in coloured underpainting to outline the composition for his landscapes based on detailed sketches of landscapes made in situ. Works with architectural elements were more carefully planned, being sketched in directly onto the primed canvas. Whether he employed a third strategy or one of the two described above for his figure paintings and portraits requires further research. It would be interesting to study his works from before 1900 to compare his method in earlier works.

Cameron's approach to surface texture in his oil painting was found to have changed throughout his career. Early works tend to have a relatively flat surface with little impasto. However, in works after 1900, experimentation with a variety of surface textures was observed. In a single painting, Cameron rubbed in his paint to reveal the weave texture; applied thin glazes that follow the canvas weave; or thick layers to hide the canvas weave; allowed the underlying colours to influence the tonality of the work and occasionally applied paint with a palette knife. He worked with square brushes ranging from half an inch to one inch, and palette knives including one which is thought to have a tapered tip, evidenced by the shape of a palette knife mark. Evidence has been found of the artist layering paints, mixing pigments to create intermediate tones, applying paint wet-in-wet and blurring the edges between strokes, or contrasting the colours by placing one starkly next to another to develop the interplay of colours. Cameron's paintings present a harmonious picture; achieved through a variation of texture and colour contrasts and sharp combined with neat outlines of the main components in his work.

Further research would bring a better understanding of the influence of Cameron and the Glasgow Boys on the wider artistic landscape of the period and into the twentieth century. The Glasgow Boys were the first to combine in a single Scottish style influences from the Barbizon and Hague Schools, with the proto-symbolic work of the Pre-Raphaelite Brotherhood, the atmospheric approach of Whistler, and the bright colours of contemporary artists in France. Observation

and sentiment were unified in the approach, allowing for a unique interpretation of the subject, as can be seen especially well in Cameron's later works. The turn towards Symbolism and a more decorative art in the 1890s, seen in the work of several of the Boys including Cameron, paved the way for the Four and the Scottish Colourists to a more significant extent than is acknowledged to date. It is probable that Cameron exerted more influence, but not necessarily through his painting, than is awarded to him. In his position teaching at the British School in Rome as well as in his various public functions he was ideally placed to do so.

This research has opened up the discussion on these artists using the holistic approach of technical art history; highlighting the need for technical examination of their works to create a deeper understanding of this diverse group. This research is a first step to generate a renewed interest in D.Y. Cameron and the Glasgow Boys.



## Appendix I Brief Chronology of Cameron's Life

28 June 1865: David Young Cameron born to Margaret Robertson and Reverend Robert Cameron in Glasgow

1874-1881: Enrolled in Glasgow Academy

1881-1884: Attended classes at Glasgow School of Art

1884-1887: Studied in Edinburgh at The Trustees' Academy and/or Royal Scottish Academy

1886: Cameron exhibited at the RSA and RGI for the first time

1887: Cameron returned to Glasgow and was introduced to etching by George Stevenson.

1891: Cameron elected to the Glasgow Art Club. First solo exhibition at the Van Baerle's galleries in Glasgow

1892: Cameron travelled to the Netherlands with James Craig Annan.

1893: Awarded a bronze medal at the World's Columbian Exposition in Chicago

1894: Cameron and Annan travel to Northern Italy.

1895: Elected fellow of the RE. First solo exhibiton in America in Frederick Keppel & Co.'s New York gallery.

1896: Cameron married Jeanie Ure Maclaurin. They travelled to northern France on their honeymoon.

1896-1898: Camerons lived at 12 St. James's Terrace (now Ruskin Terrace).

1897: Awarded medals for etchings in Brussels and Dresden. Joint exhibition with his sister Katharine at Gutekunst, London.

1898: Camerons moved to Markham Square in Chelsea, London. Cameron exhibited at the inaugural exhibition of The International.

1899: Solo exhibition at the galleries of P. & D. Colnaghi in Pall Mall, London. Moved back to Scotland, to Kippen.

1900: Travel to Sienna, Florence and Venice in Italy. Awarded gold medal at for etching in Paris.

1901: Cameron elected Associate of the International. Exhibits with Society of Oil Painters for the first time.

- 1902: Camerons visit Paris and north-west France. Elected member of the Society of Oil Painters.
- 1903: Resigns from the RE. Travelled with wife to France, visiting Montivilliers. Exhibited for the first time at the RA. Moved to Dun Eaglais, Kippen.
- 1904: Elected Associate of the RSA and RWS. Cameron with eleven other artists forms 'The Society of Twelve.
- 1905: Awarded gold medal for etching in Munich. Travelled to Belgium.
- 1906: Elected associate to the RSW.
- 1907-1909: Served on council of the RSW
- 1908-1909: Travelled to Egypt
- 1910: Potentially visited France.
- 1911: Elected Associate-Engraver at the RA. Received Honorary Degree of Doctor of Laws by University of Glasgow.
- 1915: Cameron elected full member to the RSW.
- 1916: Elected Associate-Painter at the RA.
- 1916-1918: Served on council of the RSW
- 1917-1919: War artist for the Canadian War Memorials Fund and the British Pictorial Propaganda Committee.
- 1918: Elected member to the RSA. Asked to serve on Scottish War Memorials Advisory Sub-Committee.
- 1919: Appointed member of the Faculty of Painting and the Faculty of Engraving of the British School in Rome. Declined nomination for RSA president.
- 1920: Elected full member to the RA.
- 1920-1927: Appointed Trustee of the Tate Gallery.
- 1920-1932: Placed on Non-Resident List of RSA
- 1920-1945: Appointed to the Board of Trustees of the National Galleries of Scotland.
- 1921: Cameron has heart attack.
- 1922: Convalesced in southern France
- 1923: Camerons visited the Provence and Rome. Received Honorary Degree of Doctor of Laws from Manchester University.

1924: Cameron was first official Visitor to the British School in Rome. Cameron was knighted. Appointed member of the Royal Fine Arts Commission.

1925-1927: 'Master Painter' for St. Stephen's Hall commission.

1925-1938: Cameron served as chairman of Faculty of Painting of the British School.

1926: Camerons visit France.

1927-1928: Visited Rome and Naples.

1927-1938: Supervised decoration of rebuilt building Bank of England.

1928: Gave address on 'The Romance of Scottish History'. Declined nomination for Presidency of the RA. Received Honorary Degree of Doctor of Laws from Cambridge University.

1929: Cameron resigns from Faculty of Engraving of the British School.

1931: Death of Lady Cameron

1932: Reinstated as full member of the RSA.

1933: Declined nomination for RSA Presidency again. Placed on List of Honorary Retired Members of the RSA. Member of the Royal Fine Arts Commission for Scotland. Appointed to King's Limner and Painter in Scotland.

1934: Appointed Vice-Convenor of the Church of Scotland's Advisory Committee on Artistic Questions.

1936: Received Honorary Degree of Doctor of Laws from St. Andrews University.

1945: Died on 16 September after giving a lecture 'A Cry from the Heart' on the reintegration of beauty in the church at St. John's Church in Perth.

## Appendix II Cameron's Home and Studio Addresses<sup>404</sup>

### Home Addresses

1865-1887 111 Hill Street, Glasgow (Parents' address)

1885-1887 Smith's, 4 Argyle Park Terrace, Edinburgh (during his two years studying in Edinburgh)

1887-1890 Glenleam, Bearsden, Glasgow

1890-1896 10 South Park Terrace, Hillhead, Glasgow

1896-1900 12 St. James's Terrace, Glasgow

1898-1899 Markham Square, Chelsea, London

1899-1903 Kirkhill, Kippen, Stirlingshire

1903-1945 Dun Eaglais, Kippen, Stirlingshire

1920-1930 40 Queen's Road, St. John's Wood, London

### Studios

1892-1895 134 Bath Street, Glasgow

1895-1897 217 West George Street, Glasgow

1903-1945 Dun Eaglais, Kippen, Stirlingshire

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<sup>404</sup> National Library of Scotland, 'Scottish Post Office Directories'.

## Appendix III List of Cameron's Public Appointments

1907 - 1909	Council member of the Royal Scottish Society for Painters in Watercolour
1911	Honorary Degree of Doctor of Law University of Glasgow
1916 - 1918	Council member of the Royal Scottish Society for Painters in Watercolour
1917 - 1919	War artist for the Canadian War Memorials Fund and the British Pictorial Propaganda Committee.
1919 - 1929	Member of the Faculty of Engraving of the British School in Rome
1919 - 1925	Member of the Faculty of Painting of the British School in Rome
1920 - 1927	Trustee of the Tate Gallery
1920 - 1945	Member of board of trustees of the National Galleries of Scotland
1921 - 1928	Master Painter for the redecoration of St. Stephen's Hall
1922 - 1929	Committee member of the National Art-Collections Fund
1923	Honorary Degree of Doctor of Law University of Manchester
1924	Royal Fine Arts Commission
1924	Knighted in the King's Birthday Honours
1925 - 1938	President of the Faculty of Painting of the British School in Rome
1927	Master Painter for the redecoration of the Bank of England
1928	Honorary Degree of Doctor of Law University of Cambridge
1928	Elder of Kippen parish church
1929 - 1938	Vice-Chairman of the National Art-Collections Fund
1933	Appointed the king's painter and limner in Scotland
1933	Member of the Royal Fine Arts Commission for Scotland
1934	Vice-convenor of the Church of Scotland's Advisory Committee on Artistic Questions
1936	Honorary Degree of Doctor of Law University of St. Andrews
1938 - 1945	Member of the Faculty of Painting of the British School in Rome

## Appendix IV Oil Paintings by Cameron in UK Collections

Works prefaced with a \* are a keystone work.

<i>Title</i>	<i>Location</i>	<i>Date</i>	<i>Material</i>	<i>Size</i>	<i>Accessi on Number</i>	<i>Provenance</i>
<i>April Breath</i>	Aberdeen Art Gallery & Museums	?	oil on canvas	51 x 76.3 cm	ABDAG 002203	bequeathed by the Honourable Gertrude Forbes Sempill, 1958
<i>Departing Day</i>	Aberdeen Art Gallery & Museums	?	oil on canvas	28.5 x 38 cm	ABDAG 002348	purchased with the assistance of the Murray Bequest, 1957
<i>Craigievar Castle, Aberdeenshire</i>	Aberdeen Art Gallery & Museums	ca. 1909	oil on canvas	102.7 x 57.1 cm	ABDAG 002399	presented anonymously, 1915
<i>The Waters of Lorne</i>	Aberdeen Art Gallery & Museums	1918	oil on canvas	96.6 x 126.9 cm	ABDAG 002662	purchased with income from the Macdonald Bequest, 1918
<i>Dunstaffnage, Argyll</i>	Aberdeen Art Gallery & Museums	?	oil on canvas	779 x 114.7 cm	ABDAG 002214	presented by Lord Bilsland, 1960
<i>Loch Maree, Highlands</i>	Aberdeen Art Gallery & Museums	?	oil on canvas	51.4 x 51.3 cm	ABDAG 002667	bequeathed by the Honourable Gertrude Forbes Sempill, 1958
<i>Ostia</i>	Aberdeen Art Gallery & Museums	?	oil on canvas	127.3 x 97.3 cm	ABDAG 002400	presented by the artist, 1933
<i>The Summer Isles</i>	Atkinson Art Gallery Collection	1935	oil on canvas	102 x 127 cm	SOPAG: 678	purchased from the Ashworth Bequest, 1933
<i>Rambelli, near Rome, Italy</i>	Birmingham Museums Trust	1922	oil on canvas	60.2 x 73 cm	1932P1 82	presented by G.A.F. Chatwin, 1932
<i>Sundown, Loch Rannoch</i>	Birmingham Museums Trust	1922-1923	oil on canvas	45.5 x 76 cm	1924P1	presented by the Public Picture Gallery Fund, 1924
<i>Loch Lomond</i>	Bristol Museum & Art Gallery	?	oil on canvas	99.4 x 150.3 cm	K1218	purchased with the H.H. Wills Fund, 1935
<i>The Marble Quarry, Iona</i>	Cartwright Hall Art Gallery, Bradford	?	oil on canvas	102.5 x 128 cm	1923-006	gift from Mr and Mrs Alfred Jowett, 1923

Oil Paintings by Cameron in UK Collections 279

<i>*A Garment of War</i>	City of Edinburgh Council	?	oil on canvas	121.9 x 167 cm	CAC105 /1964	presented by the Scottish Modern Arts Association, 1964
<i>Criffel</i>	City of Edinburgh Council	ca. 1908	oil on canvas	114.3 x 142.6 cm	CAC9/1 964	presented by the Scottish Modern Arts Association, 1964
<i>*Bailleul</i>	Dundee Art Galleries and Museums Collection (Dundee City Council)	ca. 1918	oil on canvas	98 x 113 cm	1- 1923	purchased with the assistance of the Morris Trust, 1920
<i>Stirling Castle</i>	Glasgow Museums Resource Centre	1905	oil on canvas	81.3 x 121.9 cm	1880	presented by the Trustees of the Hamilton Bequest, 1934
<i>Dawn on Rannoch</i>	Glasgow Museums Resource Centre	?	oil on canvas	35.6 x 48.3 cm	2925	purchased, 1951
<i>Sundown in Lorne</i>	Glasgow Museums Resource Centre	?	oil on canvas	55.9 x 68.6 cm	1606	gift from Richard Edmiston, in memory of his father, 1925
<i>Battledore and Shuttlecock</i>	Glasgow Museums Resource Centre	?	oil on canvas	34.3 x 42.5 cm	2852	purchased, 1950
<i>A Castle in Morven</i>	Glasgow Museums Resource Centre	?	oil on canvas	24.1 x 30.5 cm	2923	purchased, 1951
<i>Loch Trool</i>	Glasgow Museums Resource Centre	?	oil on canvas	61 x 106.7 cm	2924	purchased, 1951
<i>The Hills of Skye</i>	Glasgow Museums Resource Centre	?	oil on canvas	106.7 x 127 cm	1759	gift from Lord Woolavington, 1928
<i>*Mrs Thomas Annan</i>	Glasgow Museums Resource Centre	1894	oil on canvas	86.4 x 86.4 cm	3353	gift, 1980
<i>Roman Campagna, Italy</i>	Glasgow Museums Resource Centre	?	oil on canvas	22.9 x 61.6 cm	2918	bequeathed by George B. Dunlop, 1951



Oil Paintings by Cameron in UK Collections 280

<i>Cir Mhòr (The Large Comb)</i>	Glasgow Museums Resource Centre	1912	oil on canvas	114.9 x 130.2 cm	1301	purchased, 1912
<i>The Courtyard, Venice</i>	Gracefield Arts Centre, Dumfries	?	oil on canvas	44.5 x 35.5 cm	DGDET 38D	purchased by Dumfriesshire Educational Trust, 1952
<i>Morning, Dunure</i>	Gracefield Arts Centre, Dumfries	?	oil on canvas	48 x 88.1 cm	DGGAC 36R	gift from Mrs Dunlop
<i>*The Baths of Caracalla</i>	Harris Museum & Art Gallery, Preston	1924	oil on canvas	105.5 x 90.2 cm	PRSMG : P66	purchased
<i>*A French Harbour</i>	Hunterian Art Gallery, University of Glasgow	1894	oil on canvas	89.8 x 128.2 cm	GLAHA _43429	gift from Professor J.M. Wordie, 1952
<i>Uplands in Lorne</i>	Hunterian Art Gallery, University of Glasgow	?	oil on panel	13.4 x 17.5 cm	GLAHA _43427	gift from Professor Alec L. Macfie, 1979
<i>Affric</i>	Hunterian Art Gallery, University of Glasgow	?	oil on canvas	32.5 x 25.1 cm	GLAHA _43428	purchased, 1951
<i>*Cloister at Montivilliers</i>	Hunterian Art Gallery, University of Glasgow	ca. 1903	oil on panel	28.8 x 25.7 cm	GLAHA _43431	gift from Professor Alec L. Macfie, 1979
<i>A Castle on Mull</i>	Hunterian Art Gallery, University of Glasgow	?	oil on canvas	51 x 76.2 cm	GLAHA _43430	bequeathed by Professor G.B. Fleming, 1952
<i>Morning in Lorne</i>	Hunterian Art Gallery, University of Glasgow	?	oil on canvas	49 x 92.7 cm	GLAHA _43432	gift from Professor Alec L. Macfie, 1973
<i>*The Battlefields of Ypres</i>	Imperial War Museum London	1919	oil on canvas	182.8 x 317.5 cm	IWM ART 2626	commissioned, acquired, 1919
<i>*Fairy Lilian</i>	Kelvingrove Art Gallery and Museum	1894-1895	oil on canvas	87.6 x 60 cm	1238	gift from James Carfrae Alston, 1909
<i>Château Gaillard</i>	Kirkcaldy Galleries	?	oil on canvas	88.5 x 110.5 cm	KIRMG: 125	purchased, 1946

Oil Paintings by Cameron in UK Collections 281

<i>Loch Ness</i>	Kirkcaldy Galleries	?	oil on canvas	41 x 61 cm	KIRMG: 181	donated as part of the Harley Bequest, 1950
<i>The Watch Tower, Berwick</i>	Kirkcaldy Galleries	?	oil on canvas	39.4 x 49.7 cm	KIRMG: 235	purchased as part of the J.W. Blyth Collection with the assistance of the Local Museums Purchase Fund and the National Art Collections Fund (Eugene Cremetti Fund), 1964
<i>Scottish Loch</i>	Kirklees Museums and Galleries, Kirklees	?	oil on canvas	141.7 x 114.2 cm	1,990,424	
<i>The Hills of Dee</i>	Kirklees Museums and Galleries, Kirklees	?	oil on panel	31 x 40 cm (Estimate)	(1985.2140)	acquire, 1926
<i>Loch Aline in Ben Morven</i>	Kirklees Museums and Galleries, Kirklees	?	oil on canvas	60.4 x 78.3 cm	19,852,579	purchased, 1931
<i>Clunie</i>	Lady Lever Art Gallery, Wirral	1929-1930	oil on canvas	62.5 x 110.5 cm	LL 3857	purchased, 1933
<i>Balquhiddier, Stirlingshire</i>	Laing Art Gallery, Newcastle	ca. 1916	oil on canvas	152.5 x 229.6 cm	TWCMS : C601	purchased from the artist, 1929
<i>Glen Strae</i>	Lillie Art Gallery	?	oil on canvas	34.5 x 45 cm	MINAG: 1984.108	purchased, 1977
<i>The Hills of Arran</i>	Manchester Art Gallery	1903	oil on canvas	89.3 x 152.3 cm	1913.9	purchased from the International Society of Sculptors, Painters, etc, 1913
<i>*Dark Angers</i>	Manchester Art Gallery	1903	oil on canvas	68.6 x 129.4 cm	1904.4	purchased from the 21st Autumn Exhibition, 1904
<i>Highland Landscape</i>	McLean Museum and Art Gallery, Greenock	?	oil on board	242 x 35 cm	1,977,696	gift from William Y. Laurie, 1961

Oil Paintings by Cameron in UK Collections 282

<i>The Peaks of Assynt</i>	McLean Museum and Art Gallery, Greenock	?	oil on canvas	83.5 x 113.5 cm	1,977,691	gift from the Trustees of the Stuart Anderson Caird Bequest, 1949
<i>The Isles of Lorne, June</i>	McLean Museum and Art Gallery, Greenock	?	oil on canvas	89 x 145 cm	1,977,692	gift from the Trustees of the Stuart Anderson Caird Bequest, 1926
<i>La Roche, Belgium</i>	Museums Sheffield	?	oil on canvas	49.5 x 75.2 cm	VIS.187	gift from J.G. Graves, 1935
<i>Sunset on the Firth</i>	Museums Sheffield	?	oil on panel	14.5 x 22.7 cm	VIS.5005	purchased from the Fine Art Society, 1981
<i>The Hill of the Winds</i>	National Galleries of Scotland, Edinburgh	ca. 1913	oil on canvas	116.8 x 132.7 cm	NG 2080	bequeathed by Robert Younger, Baron Blanesburgh, 1947
<i>En provence</i>	National Galleries of Scotland, Edinburgh	1922	oil on canvas	67.3 x 83.2 cm	NG 2081	bequeathed by Robert Younger, Baron Blanesburgh, 1947
<i>La Rue Annette</i>	National Galleries of Scotland, Edinburgh	ca. 1922	oil on canvas	51 x 35.5 cm	NG 2383	bequeathed by Sir Alexander Maitland, 1965
<i>Ben Ledi: Late Autumn</i>	National Galleries of Scotland, Edinburgh	?	oil on canvas	35.6 x 36 cm	NG 2443	bequeathed by Mrs Isabel M. Traill, 1986
<i>Rocks and Ruins</i>	National Galleries of Scotland, Edinburgh	1913	oil on canvas	51 x 46 cm	NG 2455	bequeathed by Mr and Mrs G.D. Robinson through the Art Fund, 1988
<i>Glencaple</i>	National Galleries of Scotland, Edinburgh	ca. 1905	oil on canvas	76.2 x 102.2 cm	NG 2079	bequeathed by Robert Younger, Baron Blanesburgh, 1947
<i>Ben Ledi, Sundown</i>	National Museum Wales, National Museum Cardiff	early 20th cent.	oil on canvas	15.6 x 24.4 cm	NMW A 3855	bequeathed by Margaret Davies, 1963

Oil Paintings by Cameron in UK Collections 283

<i>The Scottish Highlands</i>	National Railway Museum, York	1924	oil on canvas	76.2 x 114.5 cm	1977-5747	obtained as a result of a direct claim of redundant material from the nationalised railway, 1957
<i>Stirling</i>	National Railway Museum, York	1927	oil on canvas	63.4 x 101.5 cm	1976-9328	obtained as a result of a direct claim of redundant material from the nationalised railway, 1968
<i>Rannoch Moor</i>	National Trust for Scotland, Hermiston Quay, Edinburgh	?	oil on canvas	35.4 x 60.8 cm	203.5	gift
<i>View of Culzean Castle with Ailsa Craig in the Distance</i>	National Trust for Scotland, Maybole	?	oil on canvas	96.5 x 125.7 cm	(2010.2 062	gift
<i>Loch Awe</i>	National Trust for Scotland, Hermiston Quay, Edinburgh	?	oil on board	22 x 30.3 cm	203.8	gift
<i>Loch Ness</i>	National Trust for Scotland, Hermiston Quay, Edinburgh	?	oil on canvas	39.5 x 74 cm	203.12	gift
<i>Thermae of Caracalla</i>	Paisley Art Institute Collection, Paisley Museum and Art Galleries	?	oil on canvas	78 x 119 cm	A0143	
<i>Mealfourvonie</i>	Paisley Art Institute Collection, Paisley Museum and Art Galleries	?	oil on canvas	49 x 75 cm	A0101	

<i>Figure Study</i>	Paisley Museum and Art Galleries	?	oil on canvas	89 x 44 cm	A0298	
<i>*Winter near Liberton, Midlothian, 1890</i>	Perth & Kinross Council	1890	oil on board	24.7 x 30.5 cm	9/28	bequeathed by Robert Hay Robertson, 1926
<i>Shadows of Glencoe</i>	Perth & Kinross Council	1925	oil on canvas	91.9 x 107.5 cm	1/28	gift from Robert Brough
<i>Fort Augustus, Dawn</i>	Perth & Kinross Council	?	oil on canvas	50.8 x 91.4 cm	4/28	bequeathed by Robert Brough, 1926
<i>Douart</i>	Perth & Kinross Council	?	oil on board	25.4 x 31.8 cm	5/28	bequeathed by Robert Brough, 1926
<i>*The Wilds of Assynt</i>	Perth & Kinross Council	1936	oil on canvas	102.1 x 127.9 cm	2/28	purchased from the artist, 1936
<i>A Castle by the North Sea</i>	Perth & Kinross Council	1924	oil on canvas	54.6 x 77.5 cm	3/28	bequeathed by Robert Brough, 1926
<i>The White Sands of Morar</i>	Queens' College, University of Cambridge	?	oil on board	16 x 23.6 cm	123	
<i>*Interior of Durham Cathedral</i>	Royal Academy of Arts, London	before 1920	oil on canvas	92.2 x 75.1 cm	03/1232	diploma work, 1920
<i>*The Norman Arch</i>	Royal Scottish Academy of Art & Architecture, Edinburgh	ca. 1918	oil on canvas	87.3 x 57.1 cm	1,994,005	Diploma Work Deposit, 1919
<i>Ponte della Trinita, Florence</i>	Russell-Cotes Art Gallery & Museum, Bournemouth	1902	ink on paper	16.9 x 22 cm	BORGM:2017.23	purchased from Elizabeth Harvey-Lee, 2017
<i>Autumn Snows, Menteith</i>	Southampton City Art Gallery, Southampton	?	oil on canvas	66.3 x 138.2 cm	114	purchased with the assistance of the Chipperfield Bequest Fund, 1936

Oil Paintings by Cameron in UK Collections 285

<i>Ben Ledi</i>	Tate, London	1914	oil on canvas	126.5 x 112 cm	N03209	presented by the Contemporary Art Society, 1917
<i>Rue de Bourg, Chartres</i>	Tate, London	1917	oil on canvas	61.2 x 40.7 cm	N03813	presented by the Art Fund, 1923
<i>Stirling Castle</i>	Tate, London	ca. 1914	oil on canvas	45.1 x 70.5 cm	N03324	presented by Viscount Bearsed through the Art Fund, 1918
<i>The Hills of Provence</i>	The Ashmolean Museum Art and Archaeology, Oxford	c. 1921-1926	oil on canvas	36 x 30 cm	WA193 7.59	bequeathed by Mrs W.F.R. Weldon, 1937 (currently on loan)
<i>*The Ruins of Ypres</i>	The Ashmolean Museum Art and Archaeology, Oxford	1919-1920	oil on canvas	50 x 74 cm	WA192 9.5	presented by Mrs W.F.R. Weldon, 1929 (not on display)
<i>Departing Day</i>	The Dick Institute, Kilmarnock	?	oil on canvas	32.5 x 27.6 cm	FA/A28	gift
<i>Ruthven Castle</i>	The Dick Institute, Kilmarnock	?	oil on canvas	44.7 x 105.6 cm	FA/A30	gift
<i>Western Isles</i>	The Dick Institute, Kilmarnock	?	oil on canvas	68.2 x 93.5 cm	FA/A32	gift
<i>Ben Lomond</i>	The Dick Institute, Kilmarnock	?	oil on canvas	38.8 x 49.4 cm	FA/A27	gift
<i>Dunure Castle</i>	The Dick Institute, Kilmarnock	?	oil on canvas	44 x 104.8 cm	FA/A29	gift
<i>Hills of Ross</i>	The Dick Institute, Kilmarnock	?	oil on canvas	42 x 87.7 cm	FA/A31	gift
<i>Castle Cambell, Dawn</i>	The Dick Institute, Kilmarnock	?	oil on canvas	15.3 x 22.8 cm	FA/A/6 50	
<i>A Little Town of Provence</i>	The Fitzwilliam Museum, Cambridge	1922	oil on canvas	66.4 x 66.1 cm	1078	gift from David Young Cameron, 1922
<i>Loch Lubnaig</i>	The Fleming Collection, London	?	oil on canvas	76.2 x 90.2 cm	FWAF/ RF478	

Oil Paintings by Cameron in UK Collections 286

<i>Hills of Ross</i>	The Fleming Collection, London	?	oil on panel	15.2 x 22.9 cm	FWAF/ RF189	
<i>The Blue Pool</i>	The Fleming Collection, London	?	oil on canvas	34.5 x 24.5 cm	FWAF/ RF875	
<i>The Boddin, Angus</i>	The Fleming Collection, London	?	oil on canvas	76.2 x 101.6 cm	FWAF/ RF210	
<i>Old Paris</i>	The Fleming Collection, London	?	oil on canvas	88.9 x 52.1 cm	FWAF/ RF593	
<i>Loch Fyne</i>	The Fleming Collection, London	?	oil on panel	15.5 x 22.5 cm	FWAF/ RF20	
<i>Berwick Bridge</i>	The Fleming Collection, London	?	oil on canvas	30.5 x 45.7 cm	FWAF/ RF566	
<i>Dunstaffnage</i>	The Potteries Museum & Art Gallery	?	oil on canvas	43.5 x 49 cm	1947.F A.771	bequeathed by Dr John Russell, 1947
<i>Caudebec</i>	The Potteries Museum & Art Gallery	?	oil on canvas	38.5 x 63.5 cm	1945.F A.699	purchased from R.H. Spurr, Southport, 1945
<i>Over the Hills, near Glasgow</i>	The Potteries Museum & Art Gallery	?	oil on canvas	40 x 59.5 cm	1963.F A.82	bequeathed by Mr H.F. Wood, 1963
<i>Ben Cruachan from Kilmelford</i>	The Stewartry Museum, Kirkcudbright	?	oil on canvas	58.2 x 89 cm	STEW: 2011:25 .05	Kirkpatrick Bequest
<i>The Eldon Hills</i>	The Stirling Smith Art Gallery & Museum	?	oil on canvas	89 x 110.5 cm	4,843,000	gift from A.J. Reid, 1936
<i>Ben Venue</i>	The Stirling Smith Art Gallery & Museum	?	oil on canvas	29.2 x 35.7 cm	4,502,000	gift from Mrs A. Sturrock and Alexander West Russell, 1932
<i>The Firth of Lorne</i>	The World of Glass, St Helens	?	oil on canvas	24.5 x 34.7 cm	SAHMG. 1998.01 5.0016	bequeathed by Guy and Marjorie Pilkington, 1973



Oil Paintings by Cameron in UK Collections 287

<i>Head of Loch Ness</i>	Touchstone s Rochdale, Rochdale	?	oil on canvas	45. x 49 cm	497	gift from J.S. Crompton, 1921
<i>The Sanctuary</i>	Touchstone s Rochdale, Rochdale	?	oil on canvas	77 x 121 cm	559	purchased from Mr Lockett Thompson, 1930
<i>Lunan Bay, Angus</i>	University of Dundee Fine Art Collections	?	oil on canvas	66 x 91 cm	DUNUC ARTS:1 1	purchased from the Brodie of Brodie, 1970
<i>The Hills of Ardgower</i>	Victoria Art Gallery & Museum, Liverpool	?	oil on canvas	44 x 64 cm	FA.77	bequeathed by Sir Charles Sydney Jones, 1947
<i>Loch Naver, Sutherlandshire</i>	Victoria Art Gallery & Museum, Liverpool	?	oil on canvas	60 x 80 cm	FA.601	bequeathed by Sir Charles Sydney Jones, 1947
<i>April Snow, Ben Ledi</i>	Victoria Art Gallery & Museum, Liverpool	?	oil on canvas	86 x 104 cm	FA.3	bequeathed by Sir Charles Sydney Jones, 1947
<i>Isles of the Sea</i>	Walker Art Gallery, Liverpool	1909	oil on canvas	102.2 x 153 cm	WAG 1807	purchased, 1909
<i>*Nightfall, Luxor</i>	Walker Art Gallery, Liverpool	1910	oil on canvas	101.6 x 68.5 cm	WAG 1136	purchased, 1910
<i>St Andrews</i>	Walker Art Gallery, Liverpool	1905	oil on canvas	107.7 x 158.7 cm	WAG 661	purchased, 1905
<i>Morvern and Mull</i>	Williamson Art Gallery & Museum, Birkenhead	?	oil on canvas	88.9 x 152.4 cm	BIKGM: 1892	purchased, 1931

Works Exhibited by Cameron in the RSA and RGI 288

## Appendix V Works Exhibited by Cameron in the RSA and RGI

### V.I Royal Scottish Academy (ARSA 1904 and RSA 1918) <sup>405</sup>

Year	Number	Title (number)
1886	68	<i>Early morning in a Highland valley</i>
	169	<i>The convent minstrel</i>
1887	187	<i>Noonday</i>
	811	<i>Old Edinburgh</i> (at special exhibition 'Works in watercolour and sculptures by living artists')
1888	51	<i>Midsummer</i>
1889	223	<i>Traquair: early summer</i>
	747	<i>The Borderland: darkening down</i>
1890	168	<i>Afterglow</i>
1892	76	<i>Forty Winks</i>
	154	<i>Evening shadows</i>
1894	308	<i>A Dutch Town</i>
1895	425	<i>A French Harbour</i> (lent by John Wordie Esq, Glasgow)
	451	<i>Dutch etchings</i>
	466	<i>Scottish Etchings</i>
1896	49	<i>Fairy Lillian</i> (lent by J Carfrae Alston Esq)
	469	<i>Holyrood in 1745</i> (presentation plate for 1896 of the Art Union of Scotland)
	479	<i>Italian etchings</i>
1897	43	<i>Miss Kathryn Todd, Lasswade</i>
	61	<i>The reverie</i>
1898	7	<i>The Bride</i>
	195	<i>A French River</i>
	408	<i>Mrs Annan</i>
1900	225	<i>Carselands</i>
	418	<i>Kirkhill</i>

<sup>405</sup> Laperriere, *The Royal Scottish Academy Exhibitors, 1826-1990: A Dictionary of Artists and Their Work in the Annual Exhibitions of the Royal Scottish Academy*.

Works Exhibited by Cameron in the RSA and RGI 289

1901	114	<i>Early spring in Tuscany</i>
	292	<i>Road in Tuscany</i>
1902	247	<i>Faraway</i>
1903	139	<i>Stirling</i>
	343	<i>Menteith</i> (lent by Thomas Ogilvie Esq, Aberdeen)
1904	365	<i>A Parisian Courtyard</i>
	540	<i>Dark Angers</i> (lent by Manchester Corporation)
1905	182	<i>The old gateway</i>
	272	<i>Glencaple</i>
	394	<i>The porch, Harfleur &amp; St Germain</i> (etchings)
1906	200	<i>A castle in the Ardennes</i> (lent by K S Anderson Esq, London)
	397	<i>Old Brussels</i>
1907	274	<i>Early morning: Whitby</i>
	336	<i>Morning at Berwick</i>
1908	259	<i>Criffel</i>
	352	<i>South aisle, Tewksbury</i>
	447	<i>The Little Devil of Florence</i> (etching)
1909	160	<i>The marble quarry</i>
	311	<i>Craigievar</i>
1910	285	<i>The hills of Skye</i>
	295	<i>Nightfall: Luxor</i>
	376	<i>Rameses II</i>
1911	70	<i>Badenoch</i>
	113	<i>The Sphynx</i>
	247	<i>Old Paris</i>
1912	97	<i>Cir Mohr</i> (lent by Glasgow Corporation)
1913	97	<i>The Hill of the Winds</i>
1914	398	<i>Stirling Castle</i>
1915	180	<i>Nether Lochaber</i>
	622	<i>In Strathearn</i>
	626	<i>Perthshire landscape</i>
1916	130	<i>Urquhart</i>
	349	<i>Glen Nevis</i>

Works Exhibited by Cameron in the RSA and RGI 290

1917	99	<i>St Aignan</i>
	108	<i>Ypres</i>
1918	235	<i>The sound of Arisaig</i> (lent by Stephen Mitchell Esq, Bolquhan, Stirlingshire)
		<i>Rue de Bourg</i> (lent by Robert Jack Esq, Penclair, Lanark)
	308	<i>South Morar</i> (lent by Ralston Mitchell Esq)
	358	
1919	217	<i>The Norman porch</i> (diploma work) (lent by the RSA)
	496	<i>Bailleul</i>
1923	91	<i>Ben Slioch</i> (lent by Robert W Strang Esq, Glasgow)
	149	<i>Ardtornish</i> (lent by J Howden Hume Esq, Glasgow)
	307	<i>La Rue Annette</i> (lent by Mr & Mrs Maitland, Edinburgh)
	264	<i>The Temple of Venus, Rome</i> (lent by Robert W Strang Esq, Glasgow)
1924	264	<i>The Temple of Venus, Rome</i> (lent by Robert W Strang Esq, Glasgow)
1925	302	<i>Baths of Caracalla II</i> (lent by Col D S Morton CMG, Glasgow)
1926	297	<i>A garment of War</i> (lent by the Scottish Modern Arts Association)
	327	<i>The Baths of Caracalla, Rome</i> (lent by Preston Art Gallery)
	670	<i>The Little Devil of Florence</i> (etching & drypoint lent by R K Blair Esq, WS)
		<i>Ben Lomond</i> (etching & drypoint lent by Mrs Alexander Maitland)
	671	<i>Thermae of Caracalla</i> (etching & drypoint lent by R K Blair Esq, WS)
	672	<i>Aquamanile</i> (etching & drypoint lent by Mrs Alexander Maitland)
	673	
1929	170	<i>The Holy Isles</i> (lent by Andrew Clark Esq, JP, Cambuslang)
1930	171	<i>Ostia</i>
1938	177	<i>Suilven</i> (lent by A S L Young Esq, MP)
	828	<i>The Roman Campagna</i>

Works Exhibited by Cameron in the RSA and RGI 291

1946	90	<i>Stirling Castle</i> (lent by Mr & Mrs Maitland, Edinburgh)
	119	<i>Dark Angers</i> (lent by Manchester City Art Gallery)
	164	<i>The Norman arch</i> (diploma work) (lent by RSA)
	170	<i>Whitby</i> (lent by Sir Edmund Findlay, Edinburgh)
	618	<i>After-glow on the Findhorn</i>
	619	<i>Ben Lomond</i>
	622	<i>Five Sisters, York Minster</i>
	627	<i>Royal Scottish Academy</i>
	628	<i>Notre Dame, Dinant</i>
	629	<i>Arran peaks</i>
	630	<i>Ben Ledi</i>
	631	<i>The Chimera of Amiens</i>
	632	<i>St Laumer, Blois</i>
1947	225	<i>Hills of Morven</i> (Lent by Gerald Fleming Brown Esq, Lanarkshire)
1976	27	<i>The Hill of the Winds</i> (lent by that National Gallery of Scotland (150 <sup>th</sup> Anniversary Exhibition of works by deceased & living Members, Associates & Honorary Members))

V.II Royal Glasgow Institute<sup>406</sup>

Year	Number	Title	Price
1886	443	<i>Jacobites - A Sketch</i>	£5
1887	82	<i>The Rev W.T. Henderson</i>	
1890	190	<i>The Border Land</i>	£45
	271	<i>Autumn Stillness</i>	£6
1891	305	<i>Shadow and Shine</i>	£12
	561	<i>Noonday</i>	£55
1892	86	<i>Morning</i>	£45
	208	<i>Portrait of a Girl</i>	
1893	518	<i>Anemones (watercolour)</i>	£35
	758	<i>Portrait - Beatrice (watercolour)</i>	
	805	<i>Oude Kirk, Amsterdam (etching)</i>	£4
1894	116	<i>Portrait</i>	
	187	<i>Isabel</i>	£80
1895	320	<i>Portrait</i>	
	433	<i>Fairy Lillian</i>	
1896	126	<i>The Golden Mirror</i>	
	410	<i>Dorothy</i>	
1897	125	<i>Daisy</i>	
	464	<i>The Sister</i>	£170
1898	147	<i>Gipsy</i>	£31
	573	<i>Robert Meldrum, Esq</i>	
1900	473	<i>Dorothy Maude Kay</i>	
1901	26	<i>Saint Mark's, Venice</i>	£30
1902	214	<i>The Ravine</i>	£26
	517	<i>A Venetian Doorway (watercolour)</i>	£20
1903	43	<i>The Winding Road</i>	£31
	485	<i>Canale Antonio, Venice, a Study (watercolour)</i>	£45
1904	697	<i>Spring in London</i>	£130

<sup>406</sup> Billcliffe and Royal Institute of the Fine Arts Glasgow, *The Royal Glasgow Institute of the Fine Arts 1861-1889: A Dictionary of Exhibitors at the Annual Exhibitions of the Royal Glasgow Institute of the Fine Arts*.

Works Exhibited by Cameron in the RSA and RGI 293

1907	597	<i>The Eildon Hills</i>	£210
	824	<i>A Venetian Street</i> (watercolour)	£10
	889	<i>Marij</i> (watercolour)	£8
1909	164	<i>St Andrews</i> (lent by the Coporation of Liverpool)	
1910	46	<i>Craigievar</i>	
1915	278	<i>Eilean Creag</i>	
	577	<i>Tewkesbury Abbey</i> (b&w)	
1916	409	<i>The Watch Tower</i>	
1919	283	<i>The Sound of Kerrera</i> (lent by J. Howden Hume, Esq)	
	674	<i>Robert Lee's Workshop</i> (b&w) (lent by Miss Howden)	
1920	391	<i>Ardtornish</i> (lent by J. Howden Hume, Esq)	
	392	<i>Rue de Bourg, Chartres</i> (lent by Robert Jack, Esq)	
	642	<i>The Fisher's Hut</i> (lent by Wm Greig Jun, Esq JP)	
1921	135	<i>Moonrise in Lorne</i> (lent by Sir W H Raeburn MP)	
	639	<i>Robert Lee's Workshop</i> (b&w) (lent by W Robinson, Esq)	
1922	558	<i>Inverlochy Castle</i> (lent by Robert W Strang, Esq)	
1923	96	<i>In Ancient Rome</i> (lent by Robert W Strang, Esq)	
	478	<i>Robin Hood's Bay</i> (Lent by Major G H Christie DSO)	
1924	82	<i>The Temple of Venus, Rome</i> (lent by Robert W Strang, Esq)	
	133	<i>In the Heart of Sutherland</i> (Lent by Colonel William Thorburn)	
1925	102	<i>The Firth of Lorne - November</i> (lent by Sir Hugh Reid CBE LL.D DL)	
1926	399	<i>Thermae of Caracalla, Rome</i> (Lent by Paisley Art Institute)	
1929	122	<i>Saint Mark's</i> (lent by John Stevenson, Esq JP)	
	732	<i>Saint Mark's</i> (lent by John Stevenson, Esq JP) (p&d)	
	748	<i>Broad Street, Stirling</i> (lent by John Stevenson, Esq JP) (p&d)	
1934	678	<i>Tarff</i> (etching)	
1935	165	<i>Springtime in Perthshire</i> (lent by G B Dunlop, Esq)	
1936	75	<i>Morning - Dunure</i>	
1937	80	<i>Stormy Sunset in Skye</i>	£200
	119	<i>The Wilds of Assynt</i> (lent by Museum and Art Gallery, Perth)	
	144	<i>Suilven</i> (Lent by A S L Young, Esq JP)	
	306	<i>Ben Ledi</i> (etching) (lent by John C Weir, Esq)	
1939	507	<i>Ben Mohr</i> (sepia)	£25



Works Exhibited by Cameron in the RSA and RGI 294

1943	257	<i>Tarff</i> (lent by William Greig, Esq)
1944	46	<i>The Eternal Hills</i> (lent by Ian MacNicol, Esq)
1946	233	<i>The Heart of Perthshire</i> (lent by G B Dunlop, Esq)
	193	<i>The Hebrides</i> (lent by G B Dunlop, Esq)
	359	<i>Morning - Dunure</i> (lent by G B Dunlop, Esq)
1949	193	<i>Morning - Dunure</i> (lent by G B Dunlop, Esq)
1957	349	<i>Bailleul</i> (lent by Museums and Fine Art Galleries, Dundee)
1976	202	<i>Cir Mhor</i> (lent by Glasgow District Council Museum and Art Galleries)

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 295

## Appendix VI Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen

Book title	Author	Date	Location
The Possibilities of Prayer and 5 others	Iona Press	1912	Library
William Blake's Writings and 9 others	Edited by Housman	1893	Library
Horae Subsecivae, 3 vols. Limp leather gilt top	Brown	1900	Library
Dr John Brown and His Sisters	McLaren	1901	Library
Coventry Patmore's Poems, 2 vols. Hf. Mor. G.t.	Coventry Patmore	1894	Library
Legends and Lyrics, 2 vols and 23 others	Adelaide Proctor	1892	Library
Pan and the Young Shepherd, wrappers	Maurice Hewlitt	1906	Library
Essays and lectures, Intentions and Oscar Wilde by J.C. Ingleby, together 3 vols	Oscar Wilde J.C. Ingleby		Library
Rossetti's Works, 3 vols. Plush, of. G.t. and 14 others		1892	Library
Views and Reviews and 6 others	W.E. Henley	1892	Library
Natural History of Selborne and 14 others	White	1902	Library
Sonnets & Poems	John Masefield	1916	Library
The Everlasting Mercy	John Masefield	1911	Library
Lollingdon Downs	John Masefield	1917	Library
Ballads & Poems	John Masefield	1910	Library
Poems - Odes, Auguries, The Secret, The Anvil, England & Other Poems, together 7 vols.	Laurence Binyon	V.Y.	Library
Tragedy of Pompey The Great, 1st. Edition	John Masefield	1910	Library
Good Friday, 1st Edition	John Masefield	1917	Library
Plays, 4 vols. Of. Wrappers, and 6 others	John Galsworthy	V.Y.	Library
The Play Boy of the Western World and The Tinker's Wedding, 2 vols. and 6 others	Synge	1912 1911	Library
Poems, 9 vols. Of. Mostly 1st. Editions	Stephen Phillip	V.Y.	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 296

Poems, 2 vols & Days & Nights	Arthur Symon	1906 1923	Library
Green Arras, 1st Edition	Housman	1896	Library
The Heart of Peace, 1st Edition	Housman	1918	Library
Poems	Henley	1898	Library
Hawthorn & Lavender, 1st. Edition		1901	Library
Noyes (Alfred) Drake, 2 vols. 1st. Edition	Noyes (Alfred) Drake	1906 1908	Library
Selected Verse, 1st. Edition	Noyes (Alfred) Drake	1901	Library
The Enchanted Island, 1st.do.	Noyes (Alfred) Drake	1009	Library
Poems, 9 vols. (6 vols. 1st Editions)	William Watson		Library
Plays & 7 others	Synge	1924	Library
Selected and Last Poems, 2 vols.	George Meredith	1897 1909	Library
Lyra Heroica, rox. g.t.	W.E. Henley	1892	Library
For England's Sake, wrappers	W.E. Henley	1900	Library
A Song of Speed, wrappers	W.E. Henley	1903	Library
Times Laughing Stocks, 1st. Edition	Thomas Hardy	1909	Library
Late Lyrics and Earlier, 1st.edit.	Thomas Hardy	1922	Library
Works, 3 vols. buckram, g.t.	Francis Thompson	1913	Library
Sister Songs (4to) buck- :ram	Francis Thompson	1910	Library
Lyra Celtica	edited by E.A. Sharp	1896	Library
Poems, 2 vols. (4to) g.t.	Keats	1915	Library
Songs of Our Lady in Silence, St. Dominic's Press & 10 others		1920	Library
The Furrowed Earth (4to)	Gertrude Bone	1921	Library
The Sea Is Kind and 8 others, together 10 vols	Sturge Moor	1914	Library
The Art of Thomas Hardy	by Lionel Johnston	1895	Library
Poetical Works of Thomas Traherne, 1st. edition (4to)		1903	Library
Poetical Works of William Watson (4to)		1899	Library
Burns' Poems	edited by Andrew Lang	1896	Library
Collected Works, 2 vols	D.G. Rossetti	1890	Library
Poems and 7 others	A.H. Clough	1909	Library
Personalities In Art	Cortinoz	1925	Library
Fine Prints and 8 others	Wedmore	1897	Library
Modern Gaelic Bards	Macleod	1908	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 297

Poems	Alice Meynell	1923	Library
Shakespeare's Tempest,	decorated by R.A. Bell	1901	Library
Emotion in Art	by Claude Phillips	1925	Library
Old Masters & Modern Art, The National Gallery, Italian Schools	Holmes	1913	Library
Studies In English Art, 2 vols.	Wedmore	1876 1880	Library
Sketches & Studies In Italy and Greece, 3rd. Series	Symond	1898	Library
Works, 9 vols. (Greek Studies 1st. edition)	Walter Pater		Library
Renaissance In Italy, The Fine Arts	J.A. Symonds	1897	Library
Essays Speculative & Suggestive and 7 others	J.A. Symonds	1907	Library
The Romantic Movement In English Poetry, Studies In Seven Arts, William Blake, Play Acting & Music, The Symbolist Movement in Literature & Studies in Elizabethan Drama, together 6 vols. 1st. editions V.Y.	A. Symons		Library
Wedmore On Books & Arts and 3 others	Wedmore	1899	Library
Chiefly Poetry 100 vols.			Library
The Ring and The Book and Other Works, 10 vols.	Robert Browning	1894	Library
Tragedies & Poems, 11 vols. buckram g.t.	Swinburne	1903 1904	Library
Folk Songs of The Tuscan Hills	edited by Grace Warwick	1914	Library
Selected Poems of Robert Burns	edited by Andrew Lang	1891	Library
Collected Poems & 7 others	William Watson	1898	Library
Poems, 1st. Edition	W.B. Yates	1904	Library
Collected Poems of Edmund Gosse		1911	Library
Life & Works, Edition de Luxe 12 vols. silk binding	Tennyson	1898	Library
Posthumous Poems	Swinburne	1917	Library
R.L.Stevenson by Richard Le Gallienne, Large Paper Copy with Portrait by D.Y. Cameron	Richard Le Gallienne	1895	Library
Le Gallienne's Rubaiyat of Omar Khayyam		1897	Library
Plays for an Irish Theatre	Yates	1911	Library
On English Embroidery	Drick		Library
Needlework As Art, g.t.	Lady Alford	1886	Library
Needlework & Religion	Symonds		Library
Leda (4to)	A. Huxley	1920	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 298

Moods, Songs & Doggerels 1st. edition	John Galsworthy	1912	Library
Gallipoli, 1st. edition	John Masefield	1916	Library
Le Sirens, 1st. edition & 12 others	Binyon	1925	Library
Tennyson - A Memoir by His Son, 2 vols.		1897	Library
Tennyson - A Memoir by His Son, 2 vols.	by Stopford A. Brooke	1894	Library
The Poetry of Robert Browning	by Stopford A. Brooke	1902	Library
Oxford Lectures on Poetry and Shakespearean Tragedy, 2 vols.	Bradley	1909 1904	Library
Opinions On Men, Women & Things	Quilter		Library
Dante's La Divinia Commedia	edited E.C.Lowe	1904	Library
Works, &c. 23 vols.	Ruskin		Library
Arminii Opera (4to) cf:		1629	Library
The Book of Common Prayer of Edinburgh		1712	Library
Le Cose Maravigliose Del Alma Citta Di Roma Woodcuts, vellum		1600	Library
The Oxford Book of English Prose, Laurie's Material of the Painter's Craft & Speed's Practice and Science of Drawing, together 23 vols. Buchan (J.W.) History of Peebles-shire, 2 vols. buckram, uncut		1925	Library
The French Procession	Madame Mary Duclane	1909	Library
Hebridean Memories	Seton Gordon	1923	Library
Wanderings in the Western HighLands & Islands	Donaldson	1923	Library
Peaks, Lochs & Coasts of the Western Highlands	Gardner	1924	Library
Notes On The District of Monteith	Cunningham Graham	1907	Library
The Land of The Hills and The Glens	Seton Gordon	1920	Library
The Highlands with Rope & Rucksack	Baker	1923	Library
Rich on Water Colour Painting and 9 others	Rich	1918	Library
Complete Book of the Dog and 4 others	Leighton		Library
Quinctiliani Declamationes (4to) vell.		1698	Library
Scottish Gardens (4to)	Maxwell	1908	Library
The Heart of a Garden	Watson	1906	Library
Samplers & Stitches (4to)	Christie	1920	Library
Love Poems of Don Juan Nonsuch Edition		1923	Library
Miscellaneous Literature, 38 vols.			Library
Life of Rodin, Recollections & Impressions of Whistler by A.J. Eddy, Way's Memories of Whistler, &c. 32 vols.	Lawton		Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 299

Whistler As I Knew Him by Mortimer Mompes, (4to) g.t.	Mortimer Mompes	1904	Library
The Van Eycks and Their Followers	Conway	1921	Library
Lives of The Most Eminent Painters, Sculptors & Architects, edited by De Vere, 10 vols. buckram	Vasari	1914 1915	Library
Millais Life & Letters, 2 vols.		1899	Library
Ford Maddox Brown and 14 others	Hueffer	1896	Library
Turner & Ruskin	edited Wedmore	1900	Library
The Art of Botticelli, folio, hf. vell.	Laurence Binyon	1913	Library
Barbizon School of Painters, folio (inscribed copy)	Croal Thomson	1890	Library
Studies In Both Arts, folio	Ruskin	1895	Library
David Scott and His Works, folio	David Scott	1894	Library
George Manson and His Works, folio	George Manson	1880	Library
Paterson (James) R.S.W. Nithsdale folio	James Paterson	1893	Library
Story of The Tweed, illustrated by D.Y. Cameron, folio	Maxwell	1905	Library
William Blake, folio	W.B. Scott	1878	Library
Turner & Ruskin	by Sir Wm. Armstrong	1902	Library
English Bookbindings in the British Museum, folio	Fletcher	1895	Library
Early English Printing	Gordon Duff	1896	Library
Grotesque Alphabet of 1464	edited Campbell Dodgson	1899	Library
Gauguin-Mappe, plates in portfolio		1913	Library
Jerusalem, The Emanation of The Great Albion	William Blake	1904	Library
Masters of Modern Art, Augustus John (4to)			Library
Manuscript and Inscription Letters	Johnston		Library
Liber Studiorum, 12 photograph plates in portfolio	Turner		Library
Lithography & Lithographers folio	Pennell	1898	Library
Masuccio, folio	Somare		Library
Century of Artists, folio g.t.	Henley	1899	Library
Lithographs by Whistler, arranged by Way in portfolio		1914	Library
Lectures in Landscape, folio hf. vell.	Ruskin	1897	Library
Muirhead Bone's Glasgow with notes	A.H. Charteris	1911	Library
Lucas' John Constable The Painter, (4to)		1924	Library
Crane	C.H. Collins Baker	1921	Library
Andrea Mantegna	Paul Kristeller	1901	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 300

Shaw & Jackson's Architecture		1892	Library
Whistler's Gentle Art of Making Enemies			Library
Great Buildings and How To Enjoy Them	Browne	1907	Library
Chinese Painters	Petricci		Library
Fonts & Font Covers; Dedication of English Churches: Screens & Galleries & Bench Ends in English Churches, 4vols. V.Y.	Bond		Library
Memorials & Monuments and 6 others	Weaver	1915	Library
Rose & Francis' Cathedrals & Cloisters of Midland France, 2 vols. g.t.		1907	Library
History of Architecture	Fletcher	1901	Library
English Monastic Life and 14 others	Gasquet	1904	Library
Evolution of Italian Sculpture	Balcarres	1909	Library
Heraldry in Scotland 2 vols. hf. vell.	Stevenson	1914	Library
Gothic Architecture in England	Bond	1906	Library
Ornament & Its Appreciation	Day	1904	Library
Old Crosses & Lych Gates	Vallances		Library
Celtic Mythology & Religion and 3 others	MacBain	1917	Library
Drawing & Engraving	Hamerton	1892	Library
Etching in England	Wedmore	1895	Library
Etching Craft (inscribed copy)	Robin	1922	Library
Whitman's Print Collectors Handbook	Salaman	1912	Library
Golden Age of Engraving	Keppel	1910	Library
Memoir & Catalogue of The Works of Charles Meryon		1879	Library
The Etched Work of F. Seymour Haden	Sir W.R. Drake	1880	Library
Etched Work of Rembrandt (two copies)	Haden	1879	Library
Lalanne on Etchin		1880	Library
Epochs of Chinese and Japanese Art, 2 vols. (4to)	Fenollosa	1812	Library
Painting in the Far East (4to)	Binyon	1908	Library
Art of the Painter Etcher wrappers	Haden	1891	Library
Survivals in Belief Among the Celts	Henderson	1911	Library
Underhill's Mysticism			Library
Life & Times of Akhnaton and The Treasury of Ancient Egypt 2 vols.	Weigall	1911	Library
Egyptian Art	Maspero		Library
Goya, plates (4to)	Mayer	1923	Library
French Sculpture in The Thirteenth Century, plates		1915	Library



Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 301			
English Church Architecture, 2 vols. (4to)	Bond	1913	Library
History of French Architecture, 2 vols.	Blomfield	1911	Library
Prior & Gardner's Account of Medieval Figure Sculpture in England (4to)		1912	Library
Carved Stones of Islay, (4to) rox.	Graham	1895	Library
Catalogue Raisonne and 3 others	Honore Daumier	1904	Library
Knights of the Most Noble and Most Ancient of The Thistle, hf. mor.		1911	Library
Roman Frontier Post, 2 vols. rox. g.t.	Curle	1911	Library
The Early and Later Work of Aubrey Beardsley, 2 vols.		1899 1911	Library
Morris (William) Works, Architecture, Industry & Wealth; The Home of the Wolfings; The Aeneids of Virgil; The Roots of the Mountains Grettir the Strong; Hopes and Fears for Art; The Odyssey of Homer and The Volsemga Saga, &c. together 8 folios, bds. Chiswick Press V.Y.	Various		Library
H. & J. Van Eyck (4to) buckram (stamp on title)	by W.H. James Weale	1908	Library
Etchings of Meryon and Drawings of Holbein & J.M. Swan, 3 folios V.Y.			Library
Life & Work of Vittorio Carpaccio folio		1907	Library
Old Dutch & Flemish Masters	Cole	1895	Library
Les Dessins De Maitres Anciens, vell.		1880	Library
Millet - Twenty Etchings and Woodcuts reproduced in facsimile	edited by W.E. Henley	1881	Library
American Etchers, The Modern Disciples of Rembrandt and 2 others	Keppel		Library
Graphic Works (4to) hf.cf.	Hogarth	1808	Library
Charles Conder, His Life & Work (4to) buckram g.t.	Gibson	1914	Library
Gothic Byzantine and Romanesque Architecture, 4 vols. hf. vell:	Jackson	1915 1920	Library
Wallet edited by A. Stodart Walker (4to) hf.vell.	A Beggar	1905	Library
Piero Della Francesca (4to)		1922	Library
La Peintre Graveur Illustre - Charles Meryon (4to)	Charles Meryon	1907	Library
Seymour Haden about Etchings (4to)		1879	Library
Millet L'Ancien Art Serbe Les Eglises (4to)		1919	Library
Cathedral De Chartres-Architecture. 7 vols. (4to) in portfolio			Library
Old Water Colour Societies Club, 1st. & 2nd. vols.		1923 1925	Library
Poetry of Architecture, L.P. Copy (4to)	Ruskin	1893	Library
Male (E.) L'Art Religieux Du XIII Siecle in France, wrappers	E. Male	1919	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 302			
Frederick Goulding, hf. vell.	Martin Hardie	1910	Library
Alice's Adventures in Wonderland, (4to) buckram, g.t.	illustrated by Arthur Rackham		Library
The Flowers I Love	Katharine Cameron		Library
Turner's Visions of Rome	by Dr. Thomas Ashby	1923	Library
Twelve Sketches of Scenery and Antiquities on the Line of the G.N. of S. Railway	by Sir George Reid	1883	Library
The Intimate of Paul Gauguin translated (4to)	by Van Wyck Brooks	1923	Library
Children's Children (4to) vell.	Bone	1908	Library
Catalogue of Exhibition of Old Masters at Grafton Galleries		1911	Library
Catalogue of His Etched Works, edited by Laurence Binyon, 2 vols.	William Strang	1906 1912	Library
Inventory of the Drawings of the Turner Bequest to the National Gallery, 2 vols.		1909	Library
Eden Versus Whistler (4to)			Library
Whistler's Nocturnes, wrappers.			Library
The Etched Work of Martin Hardie; A Book of the Boyhood of Christ, &c. 8 vols.			Library
Etchings Catalogue New York	Whistler	1902	Library
Muther Malerei im XIV Jahrhundert 3 vols. hf. mor. g.t.		1893	Library
The English Bible, edited , 5 vols. folio vell. Dover Press	by the Rev. F.H. Scrivener	1903	Library
Great Masters of Dutch and Flemish Painting, Albert Durer, Mediaeval Art, Titian, Donatello & Michael Angelo, The School of Madrid, Pollaiuolo, Verrocchio, Correggio, together 10 vols. Duckworth & Co.			Library
Goya, etc. 35 vols.	Calvett		Library
The Modern Painting, 1st. edition	George Moore	1893	Library
The Art of Velasquez (4to) hf. vell.	Stevenson	1895	Library
Catalogue of the National Loan Exhibition, buckram		1909 1910	Library
Royal Scottish Academy 1826-1916 g.t.	Mackay & Rinder	1917	Library
Great Masters of Landscape Painting, illustrated, git.	Michel	1910	Library
Life of Jesus of Nazareth	illustrated by Wm. Hole	1906	Library
Rabelais' Works, and 12 others	illustrated by Dore		Library
Artists Library Series; Theology &c. 32 vols.			Library
Delle Vite De Piu Eccelenti Pittori Scultori et Archittorii, vel.		1568	Library
How To Identify Old China	Hodgson	1904	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 303			
Old Table Glass, (inscribed copy)	Bate		Library
Music & Memories of a Musician (inscribed copy) Pamphlets, &c. (20)	Henschel	1918	Library
Fifty Caricatures, 1st. edition (4to)	Max Beerbolm	1913	Library
Raphael , hf. mor. g.t.	Muntz	1882	Library
Encyclopedia, 10 vols. hf. mor.	Chambers	1895	Library
Royal Edinburgh, illustrated by Sir George Reid, L.P. copy, hf. mor.g.t.	Oliphant	1890	Library
The Book of the Queen's Doll House,	edited A.C. Benson		Library
William Morris, His Art. &c.	Vallance	1897	Library
A Midsummer Night's Dream	illustrated by Rackham	1908	Library
Life & Letters of Charles Samuel Keene (4to)	Layard	1892	Library
Golden Visions by C. Lewis Hind, (4to).	Turner		Library
Etchings and Dry Points (4to)	Bone	1909	Library
Hidden Treasures at the National Gallery		1905	Library
The Quarto for 1896			Library
The Wakefield Second Nativity Play		1917	Library
Etchings with an Introduction by Frank Rinder (4to) vell. (one of one hundred and fifty copies)	D.Y. Cameron & Frank Rinder		Library
Writings of William Blake, Nonsuch Press, 3 vols. hf. vell.	Keynes		Library
Visitors' Book containing Holograph Signatures of Celebrities		1925	Library
Holy Bible, Genesis to Ruth, Nonsuch Press		1925	Library
Miscellaneous Literature, 68 vols.			Library
Porcelain	Dillon		Library
Ivories	Maskell		Library
Scottish Painting Past & Present	Caw	1908	Library
Art of the Greeks	Walter		Library
Donatello	Cruttwell		Library
Lawrende	Armstrong		Library
Art of the romans	Walter		Library
Turner 's Sketches & Drawings	Finberg		Library
Michael Angelo	Davies		Library
Florentine Sculptors of the Renaissance	Bode		Library
Rembrandt's Etchings, 2 vols.	Hind		Library
Rembrandts Paintings	Meldrum		Library
Titian	Rickett		Library
Chardin	Furst		Library
Charterhouse Old & New,	illustrated by D.Y. Cameron	1895	Library
Masters & Masterpieces of Engraving	Chapin	1894	Library
Life of Whistler, 2 vols.	E.R. & J. Pennell	1908	Library

William Strang, Supplement to His Etched Work, 1882-1912	William Strang	1923	Library
George Paul Chalmers & 3 others	Gibson	1879	Library
Modern Art, 2 vols. g.t.	Meier-Graefe	1908	Library
Histoire De La Gravure Par Duplessis, hf.cf.		1880	Library
Rembrandt His Life Work & Time, 2 vols. hf.bd.	Michel		Library
Durer & Rembrandt in 1 vol. Art Monographs, &c. together 31 vols.	Lionel Cust & P.G. Hamerton	1893	Library
Velasquez & His Times by Justi, hf.bd		1889	Library
Outline of History	Well	1920	Library
Rembrandt, Von Rosenberg		1909	Library
Rembrandt & His Work	by Malcolm Bell	1899	Library
Gallerie De L'Ermitage, St. Petersburg			Library
The Ex Libris Collection of The Ducal Library at Wolfenbuttel (4to) vell.		1895	Library
English Book Illustration of Today	Sketchley	1903	Library
Wandelingen Mit Rembrandt, illustrated	Frits Lugt	1915	Library
A Monograph	Ivan Mestrovic	1919	Library
A Monograph	Poussin	1914	Library
La Reve, L.P. Copy, illustrated, hf.bd.	Zola		Library
History of Scotland, 3 vols.	Hume Brown	1899	Library
Scottish Chiefs, 2 vols. hf.cf.	Porter		Library
Letters From A Gentleman in the North of Scotland, 2 vols, cf.	Burk	1754	Library
Lochaber In War & Peace (4to)	Kilgour	1908	Library
Scotland, A Description of The Western Islands, 3 vols.	MacCulloch	1819	Library
The Two Protectors	Tangye	1899	Library
The Marquis of Montrose	Buchan	1913	Library
Scotland Before 1700	Hume Brown	1893	Library
Highlanders of Scotland, hf. mor.g.t.	Skene	1902	Library
Mary Queen of Scots, buckram	Hay Fleming	1898	Library
Islesmen of Bride	Donaldson		Library
Love Affairs of Mary Queen of Scots	Hume	1903	Library
Mary Stuart	MacCunn		Library
The Descent of the Hepburn of Monkrig, buckram		1911	Library
History of Scotland, 4 vols.	Lang	1900 1907	Library
Life of James IV	Taylor	1913	Library
The Clan Cameron	Cameron	1894	Library
Nories Loyal Lochaber		1898	Library
Social Life in Scotland in The XVIIIth. Century	Graham	1901	Library

Scotland in The Time of Queen Mary	Hume Brown		Library
Napoleon, The Last Phase	Rosebery	1900	Library
Chatham	Rosebery	1910	Library
Story of France, 2 vols.	Watson	1901	Library
History of The Clan Cameron, rox. (binding damaged)	Mackenzie	1884	Library
English Monasticism	Hill	1867	Library
Outer Isles	Freer	1902	Library
Makers of Venice, hf. buckram	Oliphant	1892	Library
History of The Great War	Mr Punch	1919	Library
Parliaments of Scotland	Rait	1924	Library
A Diary of Frances, Lady Shelley 1818-1873 2 vols.	by Richard Edgc ombe	1913	Library
Miscellaneous Literature, 140 vols.			Library
Works, Memorial Edition, 27 vols. g.t. 1909-1911 and Letters of George Meredith, 2 vols.	George Meredith	1912	Library
Waverley Novels, Edinburgh Edition, 48 vols. buckram, g.t.	Scott	1901	Library
Pastorals of France	Wedmore	1878	Library
Works, Pentland Edition, 20 vols.. buckram, g.t.	Robert Louis Stevenson	1906	Library
Proceedings of the Society of Antiquaries of Scotland, 16 vols.		1908 1924	Library
Transactions of The Scottish Ecclesiological Society		1918 1925	Library
Romantic Story of The Highland Garb & Tartan (4to) g.t.	Mackay	1924	Library
Myth, Tradition & Story from Western Argyll, illustrated	Grant	1925	Library
Scottish Land Names	Maxwell	1824	Library
Catholic Highlands of Scotland, 2 vols.		1909 1917	Library
Ancient Catholic Homes of Scotland		1907	Library
Where the Forest Murmurs	Fiona Macleod	1906	Library
Mansie Waugh, Lord Cockburn's Memorials, illustrations, after Raeburn, and Harvey's Scottish Life & Character, illustrated by Erskine Nicol, together 3 vols.	illustrated by Martin Hardie		Library
Life of Joan D'Arc by Anatole France, 2 vols.		1923	Library
Inner Life of The Royal Academy 1914	Leslie	1843	Library
Cunningham's Life of Sir David Wilkie, 3 vols.			
Students Dictionary of Anglo Saxon	Sweet	1911	Library
Gaelic Dictionary, hf. mor.	MacBain	1911	Library
A Shepherd's Life	W.H. Hudson		Library
Place Names of Argyll	Gillies	1906	Library
Geology & Scenery of the Grampians, 2 vols.	Macnair	1908	Library
Napoleonic Studies	Rose	1904	Library

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 306			
Life of William Blake	Gilchrist	1907	Library
William Blake, 1st.edition	Swinburne	1866	Library
Life of Walter Pater, 2 vols.	Wright	1907	Library
Life of John Keats	Colvin	1917	Library
Letters & Memoirs of D.G. Rossetti, 2 vols.		1895	Library
Figures of Several Centuries	Symon	1916	Library
Christina Rossetti	Mackenzie Bell	1898	Library
George Meredith	Ellis	1919	Library
George Frederick Watt, His Writings and Life	George Frederick Watt	1912	Library
A Hundred Years In the Highlands, illustrated	Mackenzie	1901	Library
Antiquarian Notes	Fraser Mackintosh	1913	Library
Sir Walter Scott's Friend	Mac Cunn	1909	Library
Pre-Raphaelitism & The Pre- Raphaelite Brotherhood, 2 vols. g.t.	Holman Hunt	1905	Library
Gallipoli Diary, 2 vols.	Hamilton	1920	Library
Poems by Two Brothers, L.P. Copy vellum	Tennyson	1893	Library
Scalacronica of Sir Thomas Gray, hf. vell.	Maxwell	1907	Library
An Onlooker In France	Orpen	1921	Library
Story of The Forth, (4to)	Cadell	1913	Library
Life & Letters of Frederick Leighton by Mrs Russell Barington, 2 vols. g.t.		1906	Library
Mempirs of Sir Ewen Cameron of Lochiel (4to) hf. mor. g.t.		1842	Library
William MacTaggart, R.S.A.	Caw	1917	Library
The Yellow Book, vol. 7		1895	Library
M.S. Book on Physick & Cookery (4to) vell. Early XVIII Century			Library
The Pictish Nation, Its People and Its Church (4to)	Scott		Library
Songs and Tale of St. Columba		1897	Library
Miscellaneous Literature, 100 vols.			Library
English Flower Garden	Robinson	1900	Library
Rock Gardens	Meredith	1910	Library
Wall & Water Gardens	Jekyll	1920	Library
Story of My Rock Garden	Malby		Library
Miscellaneous Books on Gardening, 37 vols.			Library
Vasari on Technique		1907	Library
Holmes Notes On The Science of Picture Making, The Art of Rembrandt and The Tarn and The Lake, 3 vols.	Holmes		Library
A.B.C. of Japanese Art	Blacker		Library
One Hundred Masterpieces of Sculpture	Hill		Library
Romance of Fra Filippo Lippi	Anderson	1909	Library

The Herbaceous Garden	Martineau	1913	Library
Memories of The Month, 3rd. Series	Maxwell	1903	Library
Trees & Shrubs Hardy in the British Isles, 2 vols.	Bean	1925	Library
The Keeper's Book by Mackay, buckram		1911	Library
The Enchanted Land & Fairy Land by Louey Chisholm, 2 vols.	illustrated by Katharine Cameron	1904 1906	Library
The Golden Staircase	illustrated by M. Dibdin Spooner	1906	Library
Legends & Stories of Italy	Steedman illustrated by Katharine Cameron		Library
Miscellaneous Literature, 14 vols.			Library
Works, 26 vols. pocket edition	Rudyard Kipling	1916	Library
Works, 35 vols. pocket edition	Henry James		Library
Works, Wessex Edition 22 vols.	Thomas Hardy		Library
Novels, 10 vols.	Jane Austen	1918	Library
Works, 12 vols. illustrated	Dickens		Library
English Book Plates, Ladies Book Plates, Printers' Marks and Modern Illustration, 4 vols. g.t.			Library
Sister Teresa	George Moore	1902	Library
Works, 22 vols. hf. mor. g.t.	Thackeray	1869	Library
Works, 14 vols.	William Sharp (Fiona Macleod)		Library
Little Novels of Italy, The Forest Lovers and a Son of Renny, 1st. edition	Maurice Hewlitt		Library
Novels, 11 vols.	Kaye-Smith		Library
Miscellaneous Literature, chiefly Fiction, 200 vols.			Library
The Art Journal		1909 1910	Hall
Leonardo Da Vinci by Dr Thiis (4to)			Hall
Meissonier (4to)	Greard	1897	Hall
Albert Moore	Baldry	1894	Hall
Treatise (4to) Essex House Press	Cellini	1898	Hall
Greek Sculpture	Warrack		Hall
Art of Illuminating	Tymm & Wyatt		Hall
New Zealand International Exhibition Art Catalogue		1906 1907	Hall
Souvenir of The Fine Art Section Franco-British Exhibition		1908	Hall
International Fine Arts Exhibition (British Section) Rome		1911	Hall



Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 308			
Matriculation Albums of The University of Glasgow		1728-1858	Hall
Memorial Catalogue, buckram, g.t.	Burns	1898	Hall
Etched Work of Whistler (4to)	Kennedy	1910	Hall
Modern Masters of Etching, Sir D.Y. Cameron, J.C. Forain and Frank Brangwyn, 3 vols.			Hall
Gardens of Small Country Houses	Jekyll & Weaver	1924	Hall
Daumier, The Man and The Artist	Sadleir	1924	Hall
Drawings of Claude Lorrain	Hind	1925	Hall
Memorial Catalogue of Old Glasgow Exhibition (4to)		1894	Hall
The Arts of Great Britain, 8 parts and 3 others			Hall
D.Y. Cameron (4to) illustrated, g.t.	Rinder	1912	Hall
Royal Scottish Academy	Rinder & Mackay	1917	Hall
Atelier, Edgar Degas, 4 vols. wrappers		1918	Hall
Van Dyck (4to) hf. vell. 1900	Roose	1900	Hall
Millais (by Arthur Fish) Master Painters of The World	Arthur Fish	1923	Hall
Celtic Illuminative Art by the Rev. S.F.H. Robinson (4to) buckram		1908	Hall
Scottish History & Art, folio		1902	Hall
Nineteenth Century Art, folio	MacColl	1902	Hall
Work of Charles Keene (4to)	Pennell	1917	Hall
Punch 1910-1923, together 24 vols.			Hall
The River Tweed from Drawings, folio, hf. vell.	Sir George Reid	1884	Hall
True Portraiture of Mary Queen of Scots, Edition de Luxe	Foster	1904	Hall
Christophie Plantin Par Max Roose, folio, hf. mor. g.t.			Hall
Illustrated Catalogue of Italian Sculpture 4to. buckram, Burlington Fine Arts Club		1913	Hall
The Etchings of Sir Francis Seymour Haden , L.P. Copy	Malcolm Salaman	1923	Hall
William Blake, folio	Scott	1878	Hall
The Vasari Society Publications, 1st. & 4th. Series		1920-1923	Hall
The Bosboom Album Plates in portfolio			Hall
The Times Atlas, folio		1922	Hall
Pictures of Life & Character, 3rd. & 4th. series in 1 vol.	Leech	1864	Hall
Nicolson, An Alphabet (4to)	Nicolson		Hall
Works (Reproductions) together 3 vols.	Sir William Fettes Douglas		Hall
New English Dictionary, vols. 1-8 hf. mor.	Murray	1888-1914	Hall

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 309  
Guide Books, Topographical Literature, &c., Dining  
about 150 vols. room

Houses & Haunts of Sir Walter Scott on Japanese vellum, buckram g.t.	Napier	1897	Dining room
The Road in Tuscany, 1st. edition, 2 vols.	Hewlett	1904	Dining room
The Lake of Menteith (4to)	Hutchison	1899	Dining room
Cities of Spain, coloured plates	Hutton		Dining room
In Unknown Tuscany, coloured plate			Dining room
Spain, A Study of Her Life & Dance	Tyler		Dining room
J.M.V. Turner	by Harry Townend		Studio
Sir D.Y. Cameron, Frank Brangwyn, James MacBey, Anders Zorn and Sir Frank Short, 5 vols. Modern Masters of Etching			Studio
The Art Collection of The Nation, Masters of English Landscape Painting and British Water Colour Painting of Today, 3 vols. wrappers, The Studio Extra Nos.			Studio
D.Y. Cameron Catalogue of Etchings (4to) hf. vell. g.t.	Rinder	1912	Studio
Guide to Gothic Architecture	Gardner	1922	Studio
Landscape Painting	Hind	1922-1924	Studio
Drawings of Florentine Painters, 2 folios. hf. mor.	Berenson	1913	Studio
Collection of Pictures belonging to John Reid with Notes , folio, hf.vel. g.t.	by J.C. Caw	1913	Studio
St. Louis International Exhibition 1904,British Section Art Catalogue			Studio
Iconologia Deorum der Abbildung Der Botter, folio.		1680	Studio
Gnats , oblong folio	by J. Mann	1884	Studio
Catalogue of Pictures belonging to W.A. Coats, folio, hf. mor. g.t		1904	Studio
Rembrandt Collection of Reproductions in portfolio Florence N.D.			Studio
Beauties of Continental Architecture, folio, hf.bd. (binding broken)	Coney		Studio
Portraits of Illustrious Persons of The Court of Henry VIII, reproduced in imitation of the original drawings of Hans Holbein, folio, hf. vell.			Studio
Drawings, folio	by C. Dana Gibson	1895	Studio
North Holland, A Series of Photographs 1893, in portfolio	by Craig Annan		Studio
Large Collection of Mounted Photographs in. portfolio			Studio

Books listed in the 1925 Fire Insurance Inventory of Dun Eaglais, Kippen 310

Whistler Etchings (reproductions) in 3 portfolios Grolier Club			Studio
Vasari Society Reproductions, parts 3 & 6-10 in 6 portfolios			Studio
Italian Bronze Statuettes of The Renaissance, vol 3 in portfolio	Bode	1912	Studio
Oblong Album containing a Collection of Unmounted Photographs			Studio
On Form and Colour	Phillipp	1915	Studio
On The Technique of Painting	Moreau-Vauthier	1923	Studio
Barbizon House 1921-22 & 24 Catalogue of The Goupil Gallery Selected Pictures: Josef Israels, Matthew Maris, Sir Henry Raeburn, &c.			Studio
Social Evolution	Kidd	1894	Studio
Historic Churches of Paris and 12 others	Lonergan	1896	Studio
Print Collectors Quarterly, 29 numbers of) and miscellaneous collection Book relating to the Great War Modern Art Literature, &c.			Printing Room
Kenneth Grahame's Dream Days 1899 and Strachey's Books & Characters 1922 and 4 others			Tower Room
Maurice Hewlett's Richard Yea & Nay 1900 & 6 others			Blue Room
Trial of Jesus, 1st. edition	John Masfield	1925	Blue Room
The Book of Friendship arranged	by Arthur Ransome		Blue Room

## Appendix VII Glasgow Boys and Associates

### Core group:

William York Macgregor (1855-1923)

James Paterson (1854-1932)

Arthur Melville (1855-1904)

(Sir) John Lavery (1856-1941)

George Henry (1858-1943)

(Sir) James Guthrie (1859-1930)

William Kennedy (1859-1918)

Edward Arthur Walton (1860-1922)

Joseph Crawhall Jr. (1861-1913)

Edward Atkinson Hornel (1864-1933)

Thomas Millie Dow (1848-1919)

Alexander Roche (1861-1921)

David Gauld (1865-1936)

### Also discussed:

J.E. Christie (1847-1914)

Alexander Mann (1853-1908)

Robert Macauley Stevenson (1854-1952)

Grosvenor Thomas (1856-1923)

Pittendrigh Macgillivray (sculptor) (1856-1938)

James Nairn (1859-1904)

Thomas Corsan Morton (1859-1928)

James Whitelaw Hamilton (1860-1932)

Stuart Park (1862-1933)

George Pirie (1863-1946)

Harrington Mann (1864-1937)

(Sir) David Young Cameron (1865-1945)

John Quinton Pringle (active in Glasgow but not a true member) (1864-1925)

## Appendix VIII Publications on the Glasgow Boys

### VIII.I Monographs on individual artists

#### E.A. Hornel

Smith, B. (2010). *Hornel: the life & work of Edward Atkinson Hornel* (2nd rev.). Atelier. <https://go.exlibris.link/GVt5kLyx>

#### John Lavery

McConkey, K. (1993). *Sir John Lavery*. Canongate. <https://go.exlibris.link/HtxY60NX>

McConkey, K., & Lavery, J. (2010). *Sir John Lavery: a painter and his world* (2nd (rev.)). Atelier Books. <https://go.exlibris.link/gSLfT9x5>

#### Arthur Melville

Gale, I., & Melville, A. (1996). *Arthur Melville*. Atelier Books. <https://go.exlibris.link/fHqQZzvn>

McConkey, K., Topsfield, C., Melville, A., & Gallery, S. N. (2015). *Arthur Melville: adventures in colour*. National Galleries of Scotland. <https://go.exlibris.link/5jZXkBcR>

#### Joseph Crawhall

Hamilton, V., Crawhall, J., & Galleries, G. M. and A. (1990). *Joseph Crawhall, 1861-1913: one of the Glasgow boys*. J. Murray in association with Glasgow Museums and Art Galleries.

#### D.Y. Cameron

Smith, B. (1992). *D.Y. Cameron: The Visions of the Hills*. Atelier Books.

James Paterson

Wallace Paterson, Anne. The Glasgow Boy James Paterson of Moniaive (1854-1932): Following in My Grandfather's Footsteps An Anthology of a Painter's Family. Bd3, Limited.

## VIII.II Journal articles on the group and individual artists

Group

Billcliffe, R. (1991). A Brush with Europe: visual art in Glasgow 1890-1990. *RSA Journal*, 139(5417), 330-342.

John Lavery

Weight, A. (2014). John Lavery: an intrepid war artist. *Burlington Magazine*, 156(1338), 573-579. <https://go.exlibris.link/ykHGBnch>

McConkey, K. (2020). No tampering, no faking, no artifice: Her First Communion by John Lavery. *The British Art Journal*, 21(1), 54. <https://go.exlibris.link/Nlv6FSnW>

Arthur Melville

Pickvance, R., & McConkey, K. (2016). Arthur Melville (1855-1904) and the Macaulay Stevensons: A friendship rediscovered . In *The British Art Journal* (Vol. 16, Issue 3, pp. 44-53). The British Art Journal in association with the Berger Collection Educational Trust .

McConkey, K., Hellen, R., & Chardon-Marchetto, E. (2007). Neither Shakespeare's Audrey nor Nature's Grass; Audrey and her Goats by Arthur Melville (1855-1904). *The British Art Journal*, XVIII(3), 19-27.

## VIII.III Publications on the group

This first comprehensive study of the Glasgow Boys, describing their development, style and eventual move away from Glasgow was revised by the author in 2008. An introduction to the Glasgow Boys, their development and style has been published as a volume in the Flame Tree's Masterpieces of Art series and a pocket guide to the Glasgow Boys appeared shortly before the Kelvingrove exhibition of 2010:

Billcliffe, R. (1985). The Glasgow Boys; The Glasgow School of Painting 1875-1895. John Murray Ltd.



Billcliffe, R. (2008). *The Glasgow boys* (1st Frances Lincoln). Frances Lincoln.  
<https://go.exlibris.link/d12R0ZcZ> (Revised by the author)

Hodge, S. (2018). *Glasgow Boys; Masterpieces of Art*. Flame Tree Publishing.

Hardie, W. R. (2010). *The Glasgow Boys in your pocket*. Waverley.

## Appendix IX Glasgow Boys exhibitions since 2000

*The Glasgow Boys 1885-1895*, Fine Art Society London, 21 September - 21 October 2004

*Pioneering Painters*, Kelvingrove Art Gallery and Museum, Glasgow, 2010, and Royal Academy London, 2010-2011

Opening Glasgow Boys Gallery in Kelvingrove Art Gallery and Museum, Glasgow, 2011

*Glasgow Boys at Kirkcudbright*, Kirkcudbright Town Hall, 2 July - 29 August 2011

*Glasgow Boys and Girls*, Ewan Mundy Fine Art, Glasgow, 4 October - 1 November 2013

*The Glasgow Boys*, Drents Museum, Assen, 22 September 2015 - 7 February 2016

*The Glasgow Boys*, Fine Arts Society, Edinburgh, 21 July - 28 August 2017

*The Glasgow Boys: A Spirit of Rebellion*, St. Andrews Museum 28 May - 4 September 2016, Kirkcaldy Galleries 24 June - 5 November 2017, and Dunfermline Carnegie Library & Galleries 3 February - 29 April 2018

Fleming Collection Exhibition *Glasgow Girls and Boys: Painters of the modern world* Granary Gallery, Berwick-Upon-Tweed, 5 September - 15 November 2020, University of Hull Art Collection, January - April 2021, and Kirkcudbright Galleries, 5 June - 12 September

*The Glasgow Boys*, Fine Art Society, Edinburgh 10 June - 24 July 2021

*Scottish Art 1800-1945*, N

### Exhibition catalogues

Stevenson, H., & Walsh, J. (2010). *Pioneering painters: the Glasgow Boys*. Glasgow Museums Publishing. <https://go.exlibris.link/9x53V1Tm>

Walsh, J., & Stevenson, H. (2010). *Introducing the Glasgow Boys*. Culture and Sport Glasgow (Museums). <https://go.exlibris.link/tcVZRRm3>

Billcliffe, R., Dulau Beveridge, A., Fowle, F., Lindenhovius, W., McConkey, K., Meacock, J., Melville, J., & Veldink, S. (2015). *The Glasgow Boys: Schots Impressionisme, 1880-1900* (W. Lindenhovius, Ed.). WBOOKS. <https://go.exlibris.link/v4NP9Nxx>

Knox, J. (2020). *The Glasgow Girls and Boys*. The Fleming Collection.

## Appendix X Exhibitions Including Cameron Since 2000

*20<sup>th</sup> Century Printmaking*, The Fine Art Society, Edinburgh, 8 until 29 January 2024

*Twenty Twenty One*, The Fine Art Society, Edinburgh 30 September 2021 until 13 November 2021

*Hang 5. Auld Lang Syne*, The Fine Art Society, Edinburgh 29 July 2021 until 28 August 2021

*Bright Shadows: Scottish Art in the 1920s*, City Art Centre, Edinburgh 12 September 2021 until 6 June 2021

*Portraits?*, Davidson Galleries, Seattle, Washington, USA, 4 February 2021 until 27 March 2021

*Looking Out*, The Fine Art Society, Edinburgh, 18 February 2021 until 26 March 2021

*Christmas*, The Fine Art Society, Edinburgh, 4 December 2020 until 23 December 2020

*British Realism 1900-1935*, The Fine Art Society, London, 30 July 2020 until 25 August 2020

*Etching Revival: Whistler and His Circle*, Childs Gallery, Newbury Street, Boston, Massachusetts, USA 9 January 2020 until 1 March 2020

*La Ville Lumière: Prints of Paris*, Childs Gallery, Newbury Street, Boston, Massachusetts, USA 7 November 2019 until 5 January 2020

*1650-1950: Scottish Painting*, The Fine Art Society, Edinburgh, 15 November 2019 until 23 December 2019

*Whistler & Company: The Etching Revival*, Knoxville Museum of Art, Knoxville, Tennessee, USA 23 August 2019 until 10 November 2019

*Harbour Cottage Gallery*, The Fine Art Society, Edinburgh, 10 August 2019 until 25 August 2019

*The Sublime and The Beautiful*, The Fine Art Society, Edinburgh, 31 May 2019 until 20 July 2019

*Whistler & Company: The Etching Revival*, Museum of Arts and Sciences, Daytona Beach, Florida, USA 1 September 2018 until 25 November 2018

*Lasting Impressions: British prints from the 19<sup>th</sup> and 20<sup>th</sup> century*, The Fine Art Society, London, 30 October 2017 until 21 November 2017

*Notable Highlights from the Year*, The Fine Art Society, Edinburgh, 23 June 2017 until 15 July 2013

*The Spirit of Line: D.Y. Cameron at 150*, Scottish National Gallery of Modern Art, Edinburgh, 24 October 2015 until 21 February 2016

*Picturing Conflict: Art of the First World War*, City Art Centre, Edinburgh, 8 November 2014 until 18 January 2015

*New Acquisitions - Winter 2013*, The Fine Art Society, Edinburgh, 27 November 2013 until 23 December 2013

*Scottish Pictures of the Twentieth Century*, The Fine Art Society, Edinburgh, 15 February 2013 until 16 March 2013

Scottish Painters and Limners: Part 2 - from the RSA Collections (A Diamond Jubilee Celebration), Royal Scottish Academy, Edinburgh 7 January 2013 until 25 March 2013

Scottish Painters and Limners: Part 1 - from the RSA Collections (A Diamond Jubilee Celebration), Royal Scottish Academy, Edinburgh 24 September 2012 until 17 December 2012

*The Printmaker's Art*, Scottish National Gallery, Edinburgh 20 February 2010 until 23 May 2010

*Scottish Pictures*, Hopetoun House, South Queensferry, West Lothian 22 until 24 April 2006 and Sotheby's 7 until 14 April 2006

[illegible]

## Appendix XII Specifications of the Analytical Equipment

### High Definition Camera

Nikon D850 camera. With LED lights and UV lights (...nm). A UV filter was placed over the camera lens when taking the ultraviolet light images.

All photographs were edited using Affinity Photo version 1.10.0.

### IRR Camera

The Opus Apollo IRR Camera was used for infrared reflectography. The accompanying software Opus Apollo Instruments version 1.1.4.0 was used to control the camera and to obtain the reflectographs. The camera operates within 0.9 to 1.7mm. The lens has a focal length of F/5.6 to F45. Furthermore, the exposure can be adjusted as needed from twenty to fifty seconds.

For the reflectographs in this study, the exposure and F-number were adjusted to obtain the best image of a painting. The F-numbers used were F11, F8 and F5.6 and exposure time varied from 30-50 seconds. The F-number and exposure time used are listed in the captions of the reflectographs.

### X-radiography

A portable X-ray unit was used for the X-radiography conducted in this study. The Amadeo P-110/100H was used. A digital plate was used to capture the images. The device is controlled with a remote trigger, which allows the analyst to be at a safe distance from the X-ray source. The trigger time is 2 seconds. The mA and kV at which the X-rays were taken differed per object and were adjusted in such a way that the best possible image was obtained. The corresponding software ... was used.

### Affinity Photo

Photoshop software to be used for white balance corrections, straightening and cropping of photographs, reflectographs and radiographs. Raking light photographs were transformed to black-and-white images as the relief in the paintings becomes more evident in black-and-white. Version 1.10.0. of Affinity Photo was used.

### Microscopes

Olympus BX41 polarizing microscope with a built-in Olympus DP4 camera and an Olympus U-TV-.63XC magnification tube. A CoolLed pE-300 Ultra UV lamp was used for

Specifications of the Analytical Equipment 321

epi-illumination. Fluorescent filter U-M11011v2 (BP 355-425nm, BS 500nm, LP 520nm) and fluorescent filter U-MWB2 (BP 460-490nm, BS 500nm, LP 520nm). Image processing software Olympus Stream Basic version 2.4.4.

The eye pieces have a 10x magnification. The connection tube to the camera has a magnification of 0.63x. Therefore, the magnification observed on the screen and in the captured image is slightly lower than that observed when looking through the eyepieces. A 10x objective with the 10x eyepieces has a total magnification of 100x. For the camera this magnification is 6.3x. In the micrographs the objective magnification is displayed. Due to the 0.63x magnification of the camera, on the display the objective magnification is displayed as 6.3x.

Tabletop microscope: Olympus SZ61 stereomicroscope with an Olympus Soft Imaging Solutions GMBH camera on an adjustable arm was used of which the eyepieces have a 10x magnification with an objective allowing magnification of 0.65x to 4.5x. Image processing software Olympus Stream Basic version 2.2.

### pXRF

The Niton XL3t pXRF Analyzer was used to carry out the XRF analysis. Each reading took 80 seconds, with 15 seconds for each element range (low, main, high), except for the light range which was measured for 20 seconds. The difference in reading time for the ranges stems from the settings for the device. The maximum reading time of 80 seconds cannot be surpassed which it would if each reading time was set for 20 seconds. *Cloister at Montivilliers* was examined for 20 seconds in the main range. *A French Harbour* has been examined for 20 seconds with 5 seconds in each of the 4 ranges.

The data was downloaded from the pXRF analyzer using the Thermo Scientific NDT software version 8.4.3. To remotely control the pXRF from a laptop the Thermo Scientific NDTTr software version 8.4.3 was used.

All pXRF data was processed and the spectra were generated using MATLAB version R2021b (9.11.0.1847648)

### ATR-FTIR

The PerkinElmer Spectrum One FTIR spectrometer was used to conduct the FTIR analysis. The software Spectrum v.5.0.1 was used to obtain the FTIR spectra. These spectra were processed with KnowItAll software v.21.1.91.0. In this same software, the sample spectra could be compared to spectra from the reference library of the Kelvin Centre for Textile Conservation and Technical Art History. This reference library of pure materials such as pigments and binding media, was used to aid in the identification of binder and pigments.



SEM-EDX

Software Aztec version 4.0 by Oxford Instruments

The SEM-EDX analysis was conducted using a Zeiss Sigma VP device with an EDX detector with Xmax 80 sqmm

The energy used during the analysis of the cross-sections was 15-20kV and the working distance was between 9.1 and 9.6mm. The difference in working distance is caused by the slightly different thicknesses of the cross-sections.

The loose samples were all analysed at 15kV, and the paintbox samples were analysed with a WD=8.6mm.

For all samples analysed the data was measured was continued until 300.000 counts were reached

For PB1-PB6 data was gathered until 200.000 counts.

Zeiss Sigma VP

EDX Detector = Xmax 80

Smart SEM was used to control the device, the working distance and the energy levels (keV).

Aztec software Inca was used to obtain spectra and maps and process the data.

Embedding Resin

Samples were embedded as cross-sections using the Technovit 2000 LC light curing resin. First a label was inserted into the cross-section mould and a drop of resin added to secure the label in place. This was cured in the UV chamber for 1-2 minutes, after which the mould was filled halfway and cured for a further 5 minutes. The sample was placed on the resin and the mould further filled until full. The mould was then placed in the light-chamber to cure for 40-45 minutes. A different curing process was attempted with sample FH7, which followed the timings described in the figure below. An alteration was made to the final on-run which lasted 20 minutes, followed by 20 minutes to cool down.

Technovit 2000 LC - radiation scheme																			
Temperature limit: max. 50 °C (30 mm embedding mould)										1.30 h									
on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off
4	6	1	6	1	6	1	6	1	7	1	7	1	7	1	7	1	7	1	7
Temperature limit: max. 60 °C (30 mm embedding mould)										1.12 h									
on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off
4	6	1	6	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5
Temperature limit: max. 70 °C (30 mm embedding mould)																			
on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off	on	off
6	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	8			

Depending on the duration of the radiation scheme, the compound might become slightly opaque.

Steps in curing process for the Technovit 2000LC curing resin.

After the curing process was complete, the samples were left in a windowsill to further harden overnight. Before polishing the samples were washed in acetone to reduce the stickiness of the resin.

The cross-sections were ground first with rough silicon-carbide (SiC) paper of grades 400 and 800 on a grinding wheel smoothed with water. Subsequently, Micro-Mesh cloths of grades 1800 to 12000 were used to further dry polish the sample.

The light-chamber used for the curing of the resin was the Technotray® CU Heraeus

## Appendix XIII MATLAB Method for pXRF Processing

The pXRF Niton XL3t device and its accompanying software were developed for use in industry (for instance to check the quality of metal beams used in construction). Therefore, neither the device nor the software has been optimised for use in cultural heritage. In cultural heritage, the quantity of the element indicated by the device is of less interest than the elements identified. The complex layering of paint and the variety of pigments used in the layering but also in different areas of an object mean that it is not possible to extrapolate directly the results obtained in one spot to the rest of the object. In the case of pXRF which detects elements in the spot analysed, it cannot be stated in which layer the elements have been detected. Merely that the elements are present somewhere in the layer structure of that spot. A different spot may reveal the presence of different elements and can have a different layering structure. Therefore, it is the elements identified in a sample spot rather than the quantity of an element detected that is most interesting. However, the quantities are not fully irrelevant either. The relative quantities of elements to each other can aid in the identification of pigments. Additionally, the relative proportion of the peaks related to a single element can aid in the identification of that element in the sample spot. For instance, barium has four peaks in the lower keV region, between 4 and 5 keV. The proportion between these peaks can help distinguish barium from titanium which has two peaks in the same area. The additional barium peak at approximately 32 keV provides a further indication of the presence of this element. The .csv file that is automatically generated when downloading the pXRF data from the device to the computer contains quantitative data that is of less use to cultural heritage and is harder to interpret. The spectra of the measurements can be viewed in the NDT software, but it is presented in a confusing manner which makes the interpretation more difficult. The spectra are of more interest when interpreting pXRF measurements from cultural heritage objects than the numerical data.

### The XL3T pXRF device and NDT Software

In the Niton (NDT) software the four ranges (main, high, low, light) measured with the device are presented as individual spectra (fig. 7). These ranges correspond to the filters used. For this research, the pXRF was used in 'Mining' mode with the following

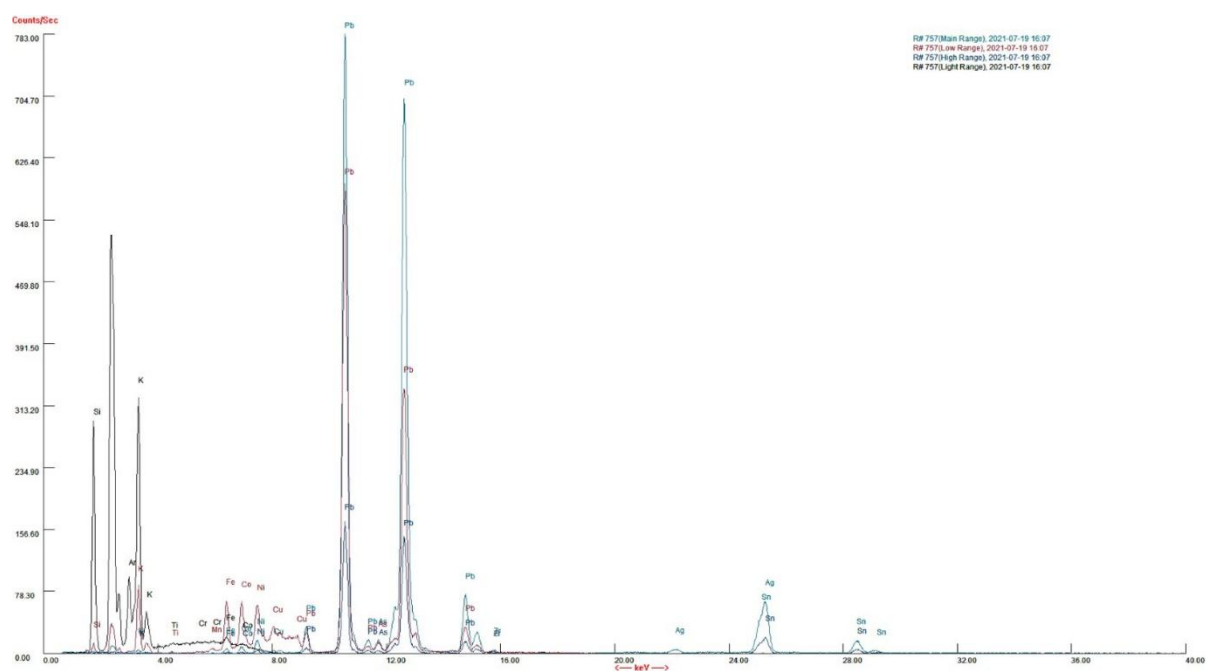
filters: Main: Al @ 40kV, Low: Cu @ 20kV, High: Mo @ 50kV, Light: no filter @ 6.2kV.<sup>407</sup>

These filters allow for the best analysis of elements in a specific keV range. Evidence of these filters can often be found within the spectra as trace amounts (Rayleigh and Compton peaks), especially if the overall signal is low. Other elements that can appear in the spectra due to the device are rhodium (Rh), palladium (Pd) and niobium (Nb). The La and Lb lines of the silver (Ag) x-ray tube can be seen in the spectrum of the light range when no filter is used. Further elements that were consistently observed in the spectra are argon (Ar) peaks in at 2.99 and 3.17 keV and a trace nickel (Ni) peak which looks like a noise signal. The latter has not yet been explained but as this nickel peak is consistently found in pXRF analysis of paintings, it is considered to be noise. As the analysis was not conducted in a vacuum, the former can be explained by contamination with argon in the air. These elements provide different levels of noise in the different ranges, with some signals being clearly evident in one range but absent in another, for instance, argon is visible in the light range but not in the low, main or high range, and silver is evident in the main range but is not so clearly visible in the high range.

When the pXRF data is presented in the NDT software, it is possible to view one of the four possible spectra or to view all spectra at once in which case they are laid over each other. This creates a confusing image of elements having been detected in multiple spectra but at different intensities. Additionally, the automatic labelling of the peaks with elements by the software is not always correct as it is not able to consider all possible peak overlaps.

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<sup>407</sup> Communication with Niton Sales Manager Ken Granger, 26/08/2021.



NDT spectrum view with the spectra of the four ranges presented overlaid.

Creating an Alternative Processing Method

To create a clearer presentation of the pXRF data an alternative way of processing the data gathered with the pXRF was sought. From the NDT software the pXRF data can be exported as a .csv file in which each measurement of a sample is represented by four columns, the four ranges. When multiple measurements are exported in the same file, still only one keV column is given in column 1.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	keV	746(Main	746(Low R	746(High f	746(Light	747(Main	747(Low R	747(High f	747(Light	748(Main	748(Low R	748(High f	748(Light Range)	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0.015	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0.045	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0.075	0	0	0	0	0	0	0	0	0	0	0	0	0

View of the .csv file that can be downloaded of the data from the NDT software.

In the alternative method for processing the data, the idea was to create a single spectrum out of the four different spectra given by the pXRF device. To do this, the filters of the different ranges and the cut off points for the different ranges were

considered. It was decided that the following cut off points gave the best results: light range 4.15keV, low 10keV, main 15keV and high up to 40keV. It was decided to ignore the data above 40keV as no good signal could be obtained beyond this keV with the pXRF device. The cut off points were also decided based on where they would give the least abrupt cut-off in the spectrum and not overlap with peaks typical of elements. As this may differ per object, it was important to include a degree of flexibility in the new processing method to allow for adjustments. Initially, a methodology was developed using Microsoft Excel. However, it was found that the amount of data to be processed often caused Excel to crash and therefore, this was not deemed a suitable processing method. Therefore, I turned to MATLAB, a programming and numeric computing platform, to write a script that would process the data automatically. For both the Excel method and the MATLAB method, the .csv file that can be downloaded from the NDT software was considered the workable file.

The script developed from being able to process a single measurement in a .csv file to being able to process multiple .csv files each with a single measurement, and finally to being able to process a series of measurements in the same .csv file. This last method is preferred as it allows all measurements taken of a single object to be exported in one .csv file and processed at the same time.

## The First Versions of the Scripts

The first versions of the script worked with a .csv file containing only one measurement. These files had to be manually exported from the NDT software, by selecting one measurement at a time and then selecting export data.

The first version of the script and could not easily be After importing the data for from the .csv file into MATLAB using the 'ImportCSV' script, it the cut off points of the ranges to be determined by checking which row number

	A	B	C	D	E	F
1	keV	852(Main f 852(Low R: 852(High R: 852(Light Range)				
2	0	0	0	0	0	
3	0.015	0	0	0	0	
4	0.03	0	0	0	0	
5	0.045	0	0	0	0	
6	0.06	0	0	0	0	
7	0.075	0	0	0	0	
8	0.09	0	0	0	0	
9	0.105	0	0	0	0	
10	0.12	0	0	0	0	

Excel (.csv) file for a single measurement as was required for the first versions of the code.

was rigid adjusted. the y-axis as an array required different manually

corresponded to the desired cut-off point. As this is inconvenient and mistakes are easily made, a way to automate this process was next developed, resulting in the 'getIndex' script. This script determines which row number in the imported .csv corresponds to the determined cut-off point described in the 'RunScriptCSV' script. With this, the data of the four spectra can be selected and combined into one array in the latter script. In this script, the code to plot the data against the keV array, imported using 'getkeV', is written, including commands for the desired lay out. The title of the .csv file was copied and given to the plot and the peaks were labelled if they were stronger than a specific peak count, which can be adjusted as desired. Therefore, the advice is always given to carefully consider the name of the .csv file as it will be the plot title. Generally, it is advised to use the name of the object analysed, as was done in this study (fig. 11). This first script consisted of four interlinked scripts: 'ImportCSV', 'getkeV', 'getIndex', and 'RunScriptCSV'.

In the second version of this processing method, a loop script was added which allowed for multiple .csv files, each with one measurement, to be processed one after the other. The various .csv files had to be placed in the active folder in which MATLAB is active, and all files in this location would be processed. This 'LoopCSV' script provided the command to run through the other scripts as many times as the number of .csv files in the folder. Even though the loop script made it far easier to process multiple



measurements, it was still considered more tedious than necessary because an individual file had to be created for each measurement. Therefore, the method was developed further to allow for the processing of multiple measurements in a single file.

## The Latest Version

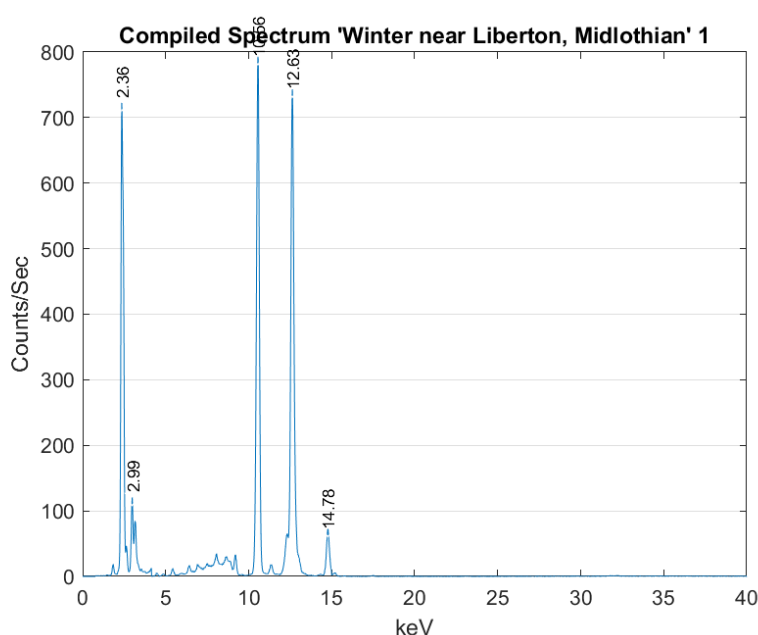
The latest version of the script allows for this analysis of multiple measurements in a single file. It requires five interlinked scripts: 'ImportCSV', 'getkeV', 'getIndex', 'RunScriptCSV', and 'Loop\_CSVFiles'. Two scripts import the data, one the keV line, and the second the y-data of the ranges of a single measurement. The third script is the 'getIndex' script which has not changed since its initial version. This script is run through the 'RunScriptXRF' script which controls the processing of the four ranges into a single spectrum and the plotting of the graph, including the lay-out. The last script is the loop script 'Loop\_CSVFiles'. This script determines the number of columns in the .csv file and divides this by four (the number of ranges for each measurement) to determine the number of iterations the code needs to be repeated. Furthermore, this script states that the 'RunScriptXRF' needs to be repeated, that the name of the plot is the title of the .csv file plus the number of the iteration and to save the produced plot as a .png file. This latest version is the most adaptable, with the cut off points being adjustable as well as the minimum peak height required for the peak to be labelled. The labels are printed vertically but this can be adjusted to a horizontal presentation if preferred. In the code the peaks with more than 50 counts/sec were labelled with their keV value. Additionally, a requirement for the distance between the labels has been added to avoid overlap of the labels. A minimum distance of 0.5keV between peak labels has been included to avoid overlap of peak labels. This too can be adjusted if a smaller or wider gap between labels is preferred.

```
[pks,locs] = findpeaks(Data,keV,'MinPeakHeight',50,'MinPeakDistance',0.5);
findpeaks(Data,keV,'MinPeakHeight',50,'MinPeakDistance',0.5)
drawnow
plot(keV,Data,'-',locs,pks,'vw')
```

Part of the 'RunScriptXRF' script in which the minimum peak height for the labelling of the peaks and the peak distance for the labels can be adjusted. The bottom line gives the command to plot the data with the peak labels.

The y-axis is set to automatic meaning that the top y-axis value is calculated by MATLAB to best fit your data. The output plots therefore are likely to have different y-axis maximum values. The x-axis runs from 0 to 40keV, as determined based on the filters and the signals received when conducting analysis.

If any changes to the code are made, 'Save' must be pressed before the code is run again. Otherwise the old version of the code will be used. All scripts can be found below.



Spectrum generated using the MATLAB code of the painting *Winter near Liberton, Midlothian*.

## Running the Scripts

All scripts must be placed in either the 'Current folder', when using MATLAB online, or the accessed folder when using the desktop version of MATLAB. The file to be processed should also be placed in this folder. The processed plots are saved to the same folder as .png files. To run the scripts when all files are in place, 'Loop\_CSVFiles' has to be typed in the command window followed by pressing 'ENTER'.

For this MATLAB method to be applied successfully, the measurements must have been taken using the full runtime, ensuring that all four ranges have been analysed. If this is not the case, this fourth range can be replaced by copying the most appropriate of the other ranges to the fourth column. For instance if the run time did not allow for the high range to be measured, the main range may be copied and pasted in the place of the high range. This still gives four columns and the code can still be used.

The code has been used successfully for this research as well as by students in the postgraduate course 'Making and Meaning: Technical Art History' and other researchers who have used this Niton XL3t device.

When the code is run, a warning appears in the command box. This does not interfere with the code nor does it prevent the code from running. It refers to the fact that certain variables have not been given names. Due to the nature of the processing, no variable names are required and therefore they have been omitted. In future, an update might be made to clean up this code to remove this warning, but as this warning does not hinder the processing, this clean-up has not yet been completed.

### XIII.I pXRF Processing Matlab Scripts

#### Import CSV file

```
function CSVImport = CSVImport(workbookFile, sheetName, dataLines)
files = dir('*.csv') ; %will identify the csv files in the 'Current Folder'
    B = length(files) ;
    k=1:B;
    file=fullfile(files.folder,files.name);

    CSVImport=readtable(file);
    CSVImport=table2array(CSVImport(1:2668,2:end));
end
```

#### getkeV

```
function getkeV = GetkeV(workbookFile, sheetName, dataLines)
files = dir('*.csv') ; %will identify the csv files in the 'Current Folder'
    B = length(files) ;
    k=1:B;
    file=fullfile(files.folder,files.name);

    getkeV=readtable(file);

    getkeV=table2array(getkeV(1:2668,1)); %creates array for the keV values needed for
the x-axis

end
```

#### getIndex

%Do NOT change this code. you do not have to change this code if you want  
 %to change the cut-off points for the different spectra. You can adjust  
 %these in RunScriptXRFDData.m

```
function [idx] = getIndex(x,s,d)
    idx = cast(x/s,'int32'); %determines number of cells for range, int32 ensures a whole
number is result
    if d(idx + 1,1) < x %if idx plus another cell is less than x (the chosen cut off point) a 1
is added to the index number
        idx = idx + 1;
    end
end

%used to determine the cut off points for the different XRF ranges
%x is a whole number such as 5,10 or 15
%s is the steplength
```

%d is the file from which the data is taken

### RunScriptXRF

```
function [] = RunScriptXRF(name)
XRFDData = evalin('base','sample');
keV = getkeV (name);
global mytitle;
i = string(evalin('base','i'));

MaxRow = length(keV); %reads the max row number of imported data
Steplength = keV(2,1)-keV(1,1); %determines steplength between each data point
keVLight = getIndex(4.15,Steplength,keV); %Determines data for the light range
keVLow = getIndex(10,Steplength,keV); %Determines data for the low range
keVMain = getIndex(15,Steplength,keV); %Determines data for the main range

Light = XRFDData(1:keVLight,4.15); %Select values of light range for keV<5
Low = XRFDData(keVLight+1:keVLow,2); %Select values of light range for keV<10
Main = XRFDData(keVLow+1:keVMain,1); %Select values of light range for keV<15
High = XRFDData(keVMain+1:MaxRow,3); %Select values of light range for keV>15
Data = vertcat(Light,Low,Main,High);

plot(keV,Data); %Plot graph

[pks,locs] = findpeaks(Data,keV,'MinPeakHeight',50,'MinPeakDistance',0.5); %find the
local maxima, above a threshold (50) both the y and x value for the peak will become a
variable in workspace. The threshold can be adjusted.
findpeaks(Data,keV,'MinPeakHeight',50,'MinPeakDistance',0.5) %point out the peaks in
the plot.The MinPeakDistance ensure that two peaks very close next to each other
aren't both labelled so there is no overlap between the peak labels.
drawnow
plot(keV,Data,'-',locs,pks,'vw')

ax = gca; %allows manipulation of x and y grid lines
ax.XGrid = 'off'; %x grid lines are off
ax.YGrid = 'on'; %y grid lines are on

txt = round(locs*100)/100;%creates a separate text label for KeV values with 2 decimal
points
text(locs,pks,num2str(txt),'Rotation', 90,'fontsize',8) %labels peaks with KeV numbers of
said peak, with vertical label orientation and a smaller font size so labels are more
easily legible and overlap less.

xlim([0 40]) %sets x-axis limits
ylim auto %sets y-axis limits

xlabel("keV") %label x-axis
ylabel("Counts/Sec") %label y-axis
title("Compiled Spectrum " + mytitle + " " + i) %title of spectrum

end
```

Loop\_CSVFiles

```

files = dir('*.csv') ; %will identify the csv files in the 'Current Folder'
B = length(files) ; %total number of .csv files

file_path = fullfile(files.folder,files.name);
global mytitle;
XRFDData = CSVImport;
MaxColumn = size(XRFDData,2);
n = MaxColumn/4; %number of loops needing to be done

% loop for each file
for i = 1:n %runs loop until all files have been processed
    k = 1:B;
    fprintf('%s',files(k).name); %can be used to test the loop and see what the file name
    is
    filename = files(k).name; %identifies the file name
    [pathstr,name,ext] = fileparts(filename); %removes the .csv extension from the
    filename so the file can be saved as png
    mytitle = name;
    sample = XRFDData(1:end,((i*4)-3:i*4));

    RunScriptXRF(sample); %run the XRF processing code for each file
    %basefilename = [object,p]
    spectrum_plot = gcf;
    name_name = string(name);
    FormatSpec = '%s_%d';
    figure_name = sprintf(FormatSpec,name_name,i);
    drawnow
    saveas(spectrum_plot,figure_name,'png'); %saves the plot with the filename as a png
    file
    i = i + 1;

end

```

Appendix XIV Transcription of Roberson Account D.Y. Cameron 1917-1939<sup>408</sup>

1917							1918							Page 92	
Oct	24	Colour brushes [...]	30	18	6	4	Mar	1	By cheque [...]	56	1	4			
Nov	29		54	34	18	11									
Sep	21		44	2	12	8									
Aug	30		41		3	5									
				56	1	4							56	1	4
1918															
Feb	9	p[?] white per post	67	1	10	10	May	8	Cheque	26	1	10	10		
Aug	8	20 goods	99	10	2	3	Aug	31	Cheque	142	10				
1919							1919								
Mar	7	20 goods	134	19	18	2	Apr	24		£20	60	20		5	
				30		5							30		5
July	14	6 jars[?] 1ft No1 canvas [...]		1	14	4	1920		By transfer Led B.	145	7	14	4		
							1920								
1920															
		10 transfer Led a	92	7	14	4	Jan	19	By cheque	[?]	7	14	4	Page 145	
Jan	7	No9 canvas on 65 1/2 x 48 3/4	198	2	14	6							22	5	5
	30	Easels re re	201	19	10	11									
				22	5	5							22	5	5

<sup>408</sup> Roberson Archive, Hamilton Kerr Institute, Account ledgers: HKI MS 136-1993, 137-1993, 138-1993



July 1822	17	WW panels 8. oil cols [...]	240	1	17	Oct	14	"	"	194	1	17
Jan	31	Oil colors per post	88	2	15	1922						
June	1	1/2 pint mastic ([...])	256		6	July	28	9/13/7	[?]	156	9	18
	1	RST 4/6 linseed 2/6 [...]	256		9							7
May	14	Oxhair brushes selected	104	4	11							
	30	Oxhair brushes 1/2/1 WW[?] panel	105	1	17							
				9	18						9	18
					7							7
1923						1923						
May	8	Slender lead with step[?]	155	4	4	July	16					
						1924		Cheque		46	4	4
July	20	Copal 5[?] oil colours 13/6 post	22		19	Jan	14	"	"	96		19
					6							6
1924												
Mar	6	20 goods	195	3	13	June	25	"	"	137	11	5
June	13	goods	206	11	5	Nov	4	"	"	174	3	13
				14	18						14	18
					8							8
1925						1925						
June	8	WC sable 1/4/7 [?] rubber	33	1	8	July	18	"	"	47	9	3
	11	canvas per[?]		7	14							2
				9	3						9	3
					2							2
July	15	RST 4/9 RSP 4f [?] 2/6	231		11	1926						
Nov	5	canvases	263	3	10	Feb	26	"	"	115	5	17
Dec	23	No12 on 45 x 32	278	1	15							1
				5	17						5	17
					1							1

1926					
Jan	22	20 goods	61	3	5    6
July	15	Canvas per post [?]	83	13	19   7
Oct	15	2 stretch 42 x 30 1/3f oil colors 2/0/6 [?] 3/4	369 393	3 <u>16</u> 20	6 13      4 2
1927					
Jan	5	Specialty seasoned [?] [?]	1	2	1     6
	18	Canvases re re [?]	4	2	10
Feb	15	Stret 48 x 30 and sev 10 own[?]	15	1	11    6
				<u>6</u>	3
June	28	20 goods	125	3	14
	30		126	7	9    3
				<u>11</u>	3    3
Aug	11	Canvases re [?]	78	1	13    9
	30	1/2 pc [?] mastic + post	84		7    9
				<u>13</u>	4    9
Dec	14	10/20[?] goods	144		12   10
1928					
Feb	9	20[?] goods	152	2	10    6
	22		147		9    6
	25	oil colors canvas	149	7	16
Mar	24	canvases	160	4	15
				<u>16</u>	3   10

May	15	canvases	178	16	3	July	30	" "	170	16	3	
						Sep	7	Canvas ([...])	393	1	18	7
						Oct	31	Cheque	195	12	11	11
July	13	canvases 90 x 60	202	14	10					14	10	6
Nov	2	canvases	242	4	14							
Dec	18	p white, colors p post	261	2	9							
				7	4							
						Forward				7	4	
1929		brought forward		7	4	1929						
Feb	1	20 goods	189	1	18	Feb	6	By cheque	31	9	2	8
				9	2					9	2	8
Feb	7	20 [?] goods	189	4	8	Mar	1		38	1	5	6
	26	"	192	1	5	Apr	24		32	6	11	11
	19	Canvases [...]	183	2	3							
				7	17	6/4/11 [in pencil]				7	17	5
June	7	Canvases	321	3	12	1930						
Sep	16	Canvases	362	8	7	Jan	13		123	18		
				11	19		28		137	5	11	1
Nov	7	6 no 3 over rev no1 14 x10	382	1	18							
	24	20 [?] goods	4	6	7							
	28	Canvases	1	3	5							
				23	11					23	11	1
1930												
Feb	18	Canvases	32	1	8	Mar	17		152	3	10	7
Mar	12	20 [?] goods	15	3	10	May	14		171	4	4	6

	13	Canvases	41	<u>2    6    3</u>	
				<u>7   15   1</u>	
Aug	28	20 [?] goods	19	2   14   6	July                  14
Aug	31	Canvases	89	3     5   10	1931
Dec	5	Canvases	129	<u>     19   9</u>	Jan                  1   Transfer R + C[?]
				<u>    4    5   7</u>	10 <u>4    5    7</u>
1931					1931
Jan	4	transfer R L B	146	<u>4    5    7</u>	Jan                  16 By cheque
Mar	23	[?] goods	167	<u>1    4    3</u>	Mar                  25
July	1	Powder colors per post	198	6   10	Oct                  22
Sep	7	Oil colours per post	220	<u>1   15   3</u>	129   2   2   1
				<u>  2    2    1</u>	2    2    1
					1932
Nov	12	Powdered colours per post	234	<u>     13    6</u>	Jan [Jun?]          14
1934					157                  13    6
Jun	13	Various odd sizes covered	144	<u>6    3    3</u>	1934
					Jul                  30 Cheque
					Dec                  31 all c[?]
					20    6
					392                  3    3
1935					1935
Feb	2	20 [?] goods canvases	222	<u>3   18   6</u>	Feb                  14 Cheque [?]
April	25	Canvases + white	243	<u>1   12   9</u>	May                  13
July	5	20 [?] goods	261	<u>3    6    3</u>	July                  11 [?]
					122   3   6    3
Sept	9	20 [?] goods	282	<u>3    6    8</u>	Sep                  13
					139   3   6    8
					1936

Oct 15 20 [?] goods  
 Nov 15 "  
 " 18 "

1936

July 3 20 [?] goods  
 " 31  
 Dec 7 20 [?] goods

1937

Jan 27 20 [?] goods  
 Jan 1 20 [?] goods

June 2 20 [?] goods  
 July 16

July 24[?] 20 [?] goods  
 Oct 11 20 [?] goods  
 Nov 1 20 [?] goods

Dec 30 20 [?] goods

1938

Feb 3  
 Mar 12 20 [?] goods

293 4 7 5  
 304 3 10 6  
 305 6 2 3  
 14 2

379 4 15 10  
 2 1 7  
 50 3 14 5

75 3 1 2  
 58 18 4  
 3 19 6  
 104 3 12 10  
 116 1 8 2  
 5 1

119 8 10  
 142 2 12 8  
 149 1  
 4 1 6

163 1 9 10

174 8 9  
 186 3 5

Jan 23 Cheque [?] 178 14 2  
 14 2

July 24 Cheque 25 4 15 10  
 Aug 4 Cheque 32 1 7  
 Dec 18 " 70 3 14 5

1937

Jan 5 Cheque 76 18 4  
 Mar 8 94 3 1 2  
 3 19 6  
 June 7 21 3 12 10  
 July 26 1 8 2  
 5 1

Sept 4 148 8 10  
 Nov 1 164 2 13 8  
 November 11 By cheque 169 19  
 4 1 6

1938

Jan 4 By cheque 186 1 9 10  
 Jan 28 192 1 9 10  
 Mar 15 By cheque CB5 3

Apr	23		197	<u>2</u>	<u>14</u>	<u>9</u>	May	3	By cheque	C17	<u>1</u>	<u>14</u>	<u>1</u>
				<u>7</u>	<u>13</u>	<u>9</u>					<u>7</u>	<u>13</u>	<u>9</u>
June	27	20 [?] goods	215		<u>10</u>	<u>5</u>	July	1	By cheque	34		<u>10</u>	<u>5</u>
Aug	29	" "	231		<u>17</u>		Sept	3	" "	54		<u>17</u>	
Nov	30	" "	257	<u>1</u>	<u>12</u>	<u>3</u>	Dec	6	" "	77	<u>1</u>	<u>12</u>	<u>3</u>
							1939						
Dec	7	" "	259	<u>1</u>	<u>6</u>	<u>7</u>	Jan	10	" "	86	<u>1</u>	<u>6</u>	<u>7</u>
1939													
Feb	1	20 [?] goods	273	<u>1</u>		<u>9</u>	Feb	8	By cheque	94	<u>1</u>		<u>9</u>
"	16	" "	275	<u>1</u>	<u>10</u>	<u>10</u>	"	22	"	97	<u>1</u>	<u>10</u>	<u>10</u>
May	2	" "	161		<u>3</u>	<u>6</u>							
July	20	" "	313	<u>2</u>	<u>9</u>	<u>7</u>	July	24	By cheque	138	<u>2</u>	<u>9</u>	<u>7</u>
Aug	4	" "	316	<u>1</u>	<u>2</u>	<u>9</u>	Aug	8		143	<u>1</u>	<u>6</u>	<u>3</u>
				<u>3</u>	<u>15</u>	<u>10</u>					<u>3</u>	<u>15</u>	<u>10</u>
Nov	16	20 [?] goods		<u>1</u>	<u>7</u>		Nov	20	By cheque	166	<u>1</u>	<u>7</u>	

## Appendix XV Cameron's Roberson Canvas Orders

### Cameron's canvas orders from canvas specifications book Roberson

March? 1931

2 best stretchers 20 x 15  $\frac{3}{4}$

1 " " 21 x 11  $\frac{1}{4}$  ?

February? 1929

Stretcher 38 x 28  $\frac{1}{2}$  covered no18 over no1

Stretcher 16  $\frac{1}{2}$  x 11  $\frac{3}{4}$  covered no2 over no1

Stretcher 30 x 25 covered

No2 over reversed no1

13.9.29

1 Best Stretcher 23  $\frac{3}{4}$  x 28  $\frac{3}{4}$  cov. No17

1 " " 29 x 23  $\frac{1}{2}$  " " 17

1 " " 37  $\frac{3}{4}$  x 47  $\frac{3}{4}$  " " 12

1 " " 43  $\frac{1}{4}$  x 24  $\frac{1}{2}$  " " 12

Stretcher only

1 " " 13  $\frac{1}{4}$  x 9  $\frac{1}{4}$  1 " " 12 x 10

4 " " 14 x 10

All with cover bars + back cloths

November? 1929

6 stretcher 14 x 10

Covered no3 over reversed no1

March 1930

Stretcher 12 x 12 no2 over reversed no1

" " 16  $\frac{1}{2}$  x 12  $\frac{1}{2}$  no2 " " no1

" " 30  $\frac{3}{4}$  x 24 no17 " " no1

Stretcher only 15 x 10  $\frac{1}{4}$

July-September 1930

2 stretcher 18  $\frac{1}{4}$  x 18  $\frac{1}{4}$  covered no20A over no1

1 " " 24 x 11  $\frac{3}{4}$  " " no17 " " no 1

1 " " 40  $\frac{1}{4}$  x 18  $\frac{1}{4}$  " " no 17 " " no1

[word written at the bottom of the order but cannot read it]

2 Dec 1930

20 x 20 covered reversed 1

10  $\frac{1}{2}$  x 8  $\frac{1}{8}$  + no18

August 1927

2 No 17 over W.N. No1 reverse 14  $\frac{1}{4}$  x 10  $\frac{1}{4}$

2 ^ 18  $\frac{1}{4}$  x 10  $\frac{1}{4}$  low[?]

All sides to be rounded where canvas touches

Unknown date (August 1927- July 1928)

Stretcher 50 x 40  $\frac{1}{2}$



Covered reversed no1 + no17

Unknown date (August 1927- July 1928)

Stretcher 14 x 10  $\frac{1}{4}$  covered 18 over reversed 1

18  $\frac{1}{4}$  x 10  $\frac{1}{4}$  covered 18 ----- 1

July 1928

2 stretchers 90 x 60

Covered own St Stephen canvas over no 1

1 stretcher

36[seems to be scribbled over 38] x 29  $\frac{3}{4}$

Covered no18 over reversed no1

October/November 1928

Stretcher 30 x 21  $\frac{1}{2}$  (Same size as A Castle by the North Sea, Perth Museum and Art Gallery, 54.6 x 77.5 cm, 1924 bequeathed 1926)

25  $\frac{1}{2}$  x 10  $\frac{1}{2}$  covered 18 over reversed no1

25  $\frac{1}{2}$  x 17  $\frac{1}{2}$

40 x 20

Canvas no.	Number of canvases ordered total
2	4
3	1
12	2
17	10
18	9
20A	1
St Stephen	1

Canvases orders specified in the Roberson account books

Cameron favoured canvas no 17 and 18

It seems a no.1 was always used reversed on the back of a canvas of various numbers.

Account books

7 January 1920 no9 canvas on 65 ½ x 48 ¾  
30 January 1920 easels  
11 June 1925 canvas  
5 November 1925 canvases  
23 December 1925 no12 on 45 x 32  
15 July canvas  
31 December 1926 20p 11ft canvas  
18 January 1927 canvases  
15 February 1927 [word] 48 x 30 and rev 18 own[??]  
11 August 1927 canvases  
25 February 1928 canvases  
24 March 1928 canvases  
15 May 1928 canvases  
13 July 1928 canvases 90 x 60  
2 November canvases  
19 February 1929 canvases  
7 June 1929 canvases  
16 September 1929 canvases  
7 November 6 no 3 over rev no1 14 x 10  
28 November 1929 canvases  
11 February 1930 canvases  
13 February 1930 canvases  
31 August 1930 canvases  
3 December 1930 canvases  
25 April 1935 canvases

## Appendix XVI Overview Samples Analyses and Results

Title	Date	Support	Size	Suppliers' Mark	Preparatory Layer(s)	Application of Preparatory Layer(s)	Underdrawing (IRR)	Pigments White	Pigments Black	Pigments Red/Orange	Pigments Yellow	Pigments Green/Blue	Pigments Brown	Pigments Other/Additives	Medium	Varnish	Technical Methods	No. Samples
Cloister at Montivilliers (The Hunterian, acc. No. GLAHA43431)	1903-1908	Panel, mahogany*	Height: 28.4 cm; Width: 25.2 cm; Depth: 0.7 cm	-	White ground, calcium ground	Potentially commercially applied, but later adjusted by the artist as some of the ground layer has been thinned.	Detailed underdrawing in a dry black material, likely pencil or charcoal.	Lead (Pb) white	Carbon black	Vermillion, iron oxide	Cadmium yellow, iron oxide	Chrome green, cobalt/ cerulean bleu	iron oxide		oil*	yes	VIS, UV, RL, IRR, LM, SEM-EDX, ATR-FTIR, pXRF	3
A French Harbour (The Hunterian, acc. No. GLAHA43429)	1894	Canvas (tabby weave, 14 /14 /cm (coarse canvas)), transparent lining, wax* strip lining Stretcher with one vertical cross-bar	Height: 89.2 (89.8) cm; Width: 127.1 (128.2) cm; Depth: 2.9 cm	-	White ground on verso and partial ground on recto Calcium ground and a lead white layer on verso	Likely commercially applied on verso(extends over tacking margins). Recto likely artist applied. Two white layers applied on verso: a calcium ground layer and a thin lead white, barium sulphate layer over this	-	Lead (Pb) white	Carbon black	Vermillion, iron oxide	Cadmium yellow, iron oxide	Chrome green	iron oxide	Barium sulphate	oil*	yes	VIS, UV, RL, IRR, LM, SEM-EDX, ATR-FTIR, pXRF	4
Uplands in Lorne (The Hunterian, acc. No. GLAHA43432)	unknown	Panel	Height: 14.1 cm; Width: 18.2 cm; Depth: 0.3 cm	-	-	-	-	Lead (Pb) white, Zinc White, titanium white?	Carbon black	Vermillion, red lead	Iron oxide	Cobalt blue, cerulean blue	iron oxide	Barium sulphate, calcium carbonate/sulphate	oil*	yes	VIS, UV, RL, IRR, LM, pXRF, mapping-FTIR	1
Morning in Lorne (The Hunterian, acc. No. GLAHA43427)	unknown	Canvas (tabby weave, 11-12/cm), double canvas Stretcher with two cross-bars (1 horizontal, 1 vertical)	Height: 92.4 cm; Width: 48.8 cm; Depth: 2.4 cm	In white chalk? on stretcher: 'James', could refer to James Connell & Sons, Cameron's art dealer.	White ground on recto and verso. A light grey layer, a light yellow layer and a bright yellow layer.	Likely commercially applied on both sides (extends over tacking margins). The coloured layers, except for the grey layer, are likely artist applied.	-	Lead (Pb) white, Zinc White,	Carbon black	Vermillion, iron oxide, red lead	Cadmium yellow, iron oxide	Cobalt blue	Iron oxide, umber	Barium sulphate, calcium carbonate/sulphate	oil*	yes	VIS, UV, RL, IRR, LM, pXRF	-
The Wilds of Assynt (Perth Museum and Art Gallery, acc. No. 2/28)	1936	Canvas (tabby)	Height: 102.1 cm; Width: 127.9 cm	-	White ground	Likely commercially applied (extends over tacking margins)	-	Lead (Pb) white		Vermillion, iron oxide, red lead	Cadmium yellow, iron oxide	Cobalt blue	Iron oxide	Calcium sulphate	oil*	yes	VIS, IRR, pXRF	-
Winter near Liberton, Midlothian (Perth Museum and Art Gallery, acc. No. 9/28)	c.1890	Academic board	Height: 24.7 cm; Width: 30.5 cm	verso: Prepared Artist's Board Winsor & Newton 38 Rathbone Place, London	White ground	Commercially applied	-	Lead (Pb) white		Vermillion, red lead, iron oxide	Iron oxide	Cobalt blue		Barium sulphate	oil*	yes	VIS, IRR, pXRF	-
Paintbox belonging to DY Cameron (Perth Museum and Art Gallery (58M/1946)	unknown	Wooden paintbox, ceramic paint palette, and enamelled paint pots		Inside lid box: Roberson & Compy no. 51 Long Acre, London On Palette: C. Roberson 99 Long Acre, London	-	-	-	Zinc white/lead white	Carbon black		potentially addition of red lead to brown paint mixtures	Iron oxide Iron oxide, lead oxide, Chrome Yellow, yellow pink (organic pigment on calcium carbonate and potash alum substrate)	Iron oxide, Umber, Brown pink (organic pigment on potash alum substrate)	barium sulphate, calcium carbonate/sulphate	Gum Arabic	-	pXRF, SEM-EDX, ATR-FTIR	8

## Appendix XVII Overview of Works Examined in Museum Stores and in Situ

<i>Title</i>	<i>Location</i>	<i>Date</i>	<i>Material</i>	<i>Framed/ Glazed</i>	<i>Analyses</i>
<i>Stirling Castle</i>	Glasgow Museums Resource Centre	1905	oil on canvas	Framed, glazed	VIS
<i>Dawn on Rannoch</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS
<i>Sundown in Lorne</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS, UV
<i>Battledore and Shuttlecock</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS
<i>A Castle in Morven</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS, UV
<i>Loch Trool</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS
<i>The Hills of Skye</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS, UV
<i>Mrs Thomas Annan</i>	Glasgow Museums Resource Centre	1894	oil on canvas	Framed, glazed	VIS, UV
<i>Roman Campagna, Italy</i>	Glasgow Museums Resource Centre	?	oil on canvas	Framed, glazed	VIS
<i>Cir Mhòr (The Large Comb)</i>	Glasgow Museums Resource Centre	1912	oil on canvas	Framed, glazed	VIS, UV
<i>A Castle on Mull</i>	Hunterian Art Gallery, University of Glasgow	?	oil on canvas	Framed, glazed	VIS
<i>The Hill of the Winds</i>	National Galleries of Scotland, Edinburgh	ca. 1913	oil on canvas	Framed, glazed	VIS
<i>En provence</i>	National Galleries of Scotland, Edinburgh	1922	oil on canvas	Framed, glazed	VIS
<i>La Rue Annette</i>	National Galleries of Scotland, Edinburgh	ca. 1922	oil on canvas	Framed, glazed	VIS
<i>Ben Ledi: Late Autumn</i>	National Galleries of Scotland, Edinburgh	?	oil on canvas	Framed, glazed	VIS
<i>Rocks and Ruins</i>	National Galleries of Scotland, Edinburgh	1913	oil on canvas	Framed, glazed	VIS
<i>Glencaple</i>	National Galleries of Scotland, Edinburgh	ca. 1905	oil on canvas	Framed, glazed	VIS
<i>Winter near Liberton, Midlothian</i>	Perth & Kinross Council	1890	oil on board	Unframed, unglazed	VIS, IRR, pXRF

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<i>Shadows of Glencoe</i>	Perth & Kinross Council	1925	oil on canvas	Framed, glazed	VIS
<i>Fort Augustus, Dawn</i>	Perth & Kinross Council	?	oil on canvas	Framed, glazed	VIS
<i>Douart</i>	Perth & Kinross Council	?	oil on board	Framed, glazed	VIS
<i>The Wilds of Assynt</i>	Perth & Kinross Council	1936	oil on canvas	Unframe d, unglazed	VIS, IRR, pXRF
<i>A Castle by the North Sea</i>	Perth & Kinross Council	1924	oil on canvas	Framed, glazed	VIS
<i>Fairy Lilian</i>	Kelvingrove Museum & Art Gallery	1896	oil on canvas	Unframe d, unglazed	VIS, UV, microsc opy

No Optimiser or Dinolite could be used for the in situ investigation of the works that were glazed and framed. Of the unframed and unglazed works, only one could be examined underneath a microscope, *Fairy Lilian*.

## Appendix XVIII Overview Painting Samples

<i>Title</i>	<i>Sample no.</i>	<i>Description</i>	<i>LM</i>	<i>Cross-section*</i>	<i>SEM-EDX</i>	<i>ATR-FTIR</i>	<i>Results (Pigments/Binder/Additives)</i>
<i>Cloister at Montivilliers (The Hunterian, GLAHA43431)</i>	CM1	White ground with little brown paint	x	x	x		Zinc white, lead white, vermillion, iron trace, silicon and aluminium
	CM2	Brown paint (no ground was identified)	x			x	Some indication of oil and resin (could be binding medium and/or varnish). Likely some pigment visible too in FTIR spectrum.

<i>A French Harbour (The Hunterian, GLAHA43429)**</i>	CM3	Exists of two small pieces; white ground with brown, red and green paint.	x	x	x	Red lead, chromium oxide, iron oxide, zinc white
	FH1	White material related to lining taken from foldover edge (used to also contain a paint sample but the paint sample has been lost)				x
	FH2	Green and red paint with a little ground	x			
	FH4	White material related to lining taken from foldover edge				x Wax and resin
	FH5	Red and green paint	x	x	x	Iron oxide, vermillion, red lead, chrome green, silicon



<i>Uplands in Lorne (The Hunterian, GLAHA43432)</i>	FH6	Exists out of two small pieces; red and green paint with ground	x	x	x		vermillion, lead and calcium
	FH7	Canvas pieces with paint on recto and verso	x	x	x	x	Barium sulphate, cadmium sulphate, lead white, trace of iron. FTIR: oil, wax, ivory black, carbonate
	UL1	Light blue sky paint from the edges	X		X		Cerulean blue, zinc white

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## Appendix XIX Technical Analysis of a Watercolour Paintbox Owned by Cameron

In the nineteenth century, colourmen sold watercolour and oil paintboxes containing a set number of paints. There were small boxes, which contained only few colours but could be easily taken along to paint *en plein air* and there were studio boxes which could hold all the pigments an artist needed in their studio. The watercolour paintbox Cameron owned offers a good example of a kind of paintbox that was available in this period. Additionally, it is the only art materials object owned by Cameron that exists in a public collection. The paintbox was bequeathed by the artist in his will to Perth Museum and Art Gallery, along with other items from his studio and house such as paintings and furniture.<sup>409</sup>

The wooden paintbox (5BM/1946) (Figure XIX.1), thought to be mahogany, contains twelve enamelled pots labelled with pigments and all filled with paint, two paintbrushes, one of which is broken, and a ceramic palette. The box has been divided into two compartments, a wider compartment where a wooden tray with the paint pots and the mixing palette were stored and a narrower compartment for the paintbrushes. The wooden tray has twelve holes, one for each of the paint pots. This tray balances on two thin wooden outcrops along the side edges of the box. The tray can be lifted from the box to reveal the painting palette. The box could be closed and locked. The key is still inserted in the lock. Excepting the broken paintbrush and the box itself which has been damaged - the wooden panel forming the left side of the wooden box is no longer attached - all items are in good condition (Figure XIX.2).

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<sup>409</sup> Account books at Perth Museum and Art Gallery containing a list of items that were part of the Sir D.Y. Cameron Bequest. Access courtesy of Amy Fairley, curator, and Anna Zwagerman, conservator, at the Perth Museum and Art Gallery.



Figure XIX.1 DY Cameron's paintbox with open lid and all its contents: ceramic palette, two brushes and a wooden tray with twelve paint pots, photo credit Perth Museum and Art Gallery.



Figure XIX.2 DY Cameron's paintbox with open lid showing that the left side panel of the box is no longer attached, photo credit Perth Museum and Art Gallery.



Figure XIX.3 Paint pots from DY Cameron's paintbox with the lids closed. Each pot has been labelled with a pigment, photo credit Perth Museum and Art Gallery.





Figure XIX.4 Paint pots from DY Cameron's paintbox with the lids opened. The surface of the paint in the pots shows indications of its use, photo credit Perth Museum and Art Gallery.

The twelve paint pots are of a total of nine different pigments related to four colours: yellow, brown, black and blue (Figure XIX.3 and Figure XIX.4). Three of the pigments are present twice. The absence of red and green pigments within the paintbox is notable. It is unlikely that Cameron chose the pigments present in the paintbox, therefore the lack of red and green pigments may simply be an accident of the box's history. There are indications that the box and its contents have been used. Indentations of brush hairs appear in the surface of some of the paint pots, for instance, in the pot labelled 'Burnt Umber' in the top row (Figure XIX.4). Additionally, in a sample fragment from the pot labelled 'Prussian Blue' several brush hairs were identified. Furthermore, it seems that the watercolour, see analysis below, cakes were slightly domed when they were new, as can be seen in the pot labelled 'Naples Yellow' on the bottom row, which appears less used. In most of the pots this dome is no longer visible, another indication that the paintbox was used. At present, it is assumed that Cameron used the paintbox. Analysis of watercolour works by Cameron is required to determine if the pigments found in the box are present in his works. This was beyond the scope of the present research.

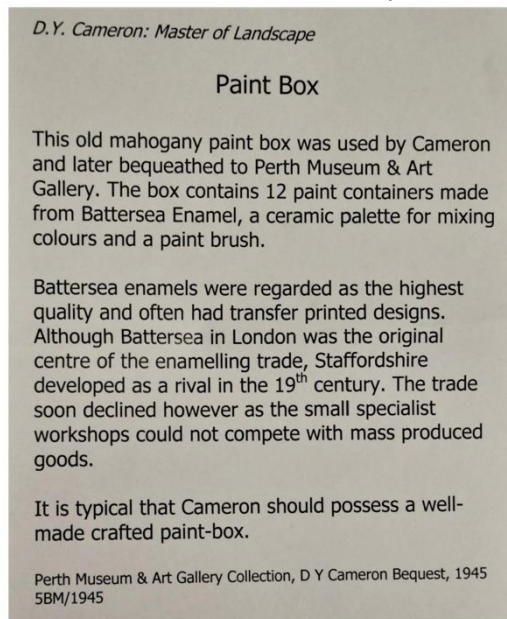


Figure XIX.5 Description accompanying D.Y. Cameron's paintbox in the object history file, photo credit Perth Museum and Art Gallery.

The enamelled pots in the paintbox are thought to be examples of Battersea enamel (Figure XIX.5).<sup>410</sup> This type of enamelling was popular in the eighteenth century and was used for a variety of items from candlesticks to boxes as well as small luxury items, for instance snuffboxes. Battersea enamel has been used to indicate any type of painted enamel although it originally more specifically referred to the enamel produced in Battersea from 1753 to 1756. In the nineteenth century, the interest in enamelwork decreased. However, it did

not disappear as imitations of the popular, earlier enamelwork continued to be produced, specifically throughout the second half of the nineteenth century.<sup>411</sup> The designs on painted enamels were often transferred through transfer printing, a process in which a design on an engraved copper plate is transferred to an enamelled object.<sup>412</sup> This process was likely used to print the pigment names and the gold and white detailing around the border on the lids of the pots.

The paint pots appear to be items of some luxury. Enamelled objects were not mass-produced, and were, therefore, often costly.<sup>413</sup> Whoever first bought the paintbox may have commissioned it specially as it was unlikely to be a stock

<sup>410</sup> Object text in the Object History File from Perth Museum and Art Gallery. Access courtesy of Amy Fairley, curator, and Anna Zwagerman, conservator, at the Perth Museum and Art Gallery.

<sup>411</sup> Speel, *Dictionary of Enamelling*; Speel, *Painted Enamels: An Illustrated Survey 1500-1920*.

<sup>412</sup> Speel, *Dictionary of Enamelling*. 48

<sup>413</sup> Speel, *Painted Enamels: An Illustrated Survey 1500-1920*. 150

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item. The preciousness of the box, as well as its unknown original owner, likely made this paintbox an interesting item for collectors.

### XIX.I Provenance

It is uncertain how Cameron came to own the box. Included in the object history file at Perth of the paintbox is an exhibition label<sup>414</sup> that reads that the box has been 'Lent by R.W.M. Walker, Esq., 1915' (Figure XIX.6).<sup>415</sup>

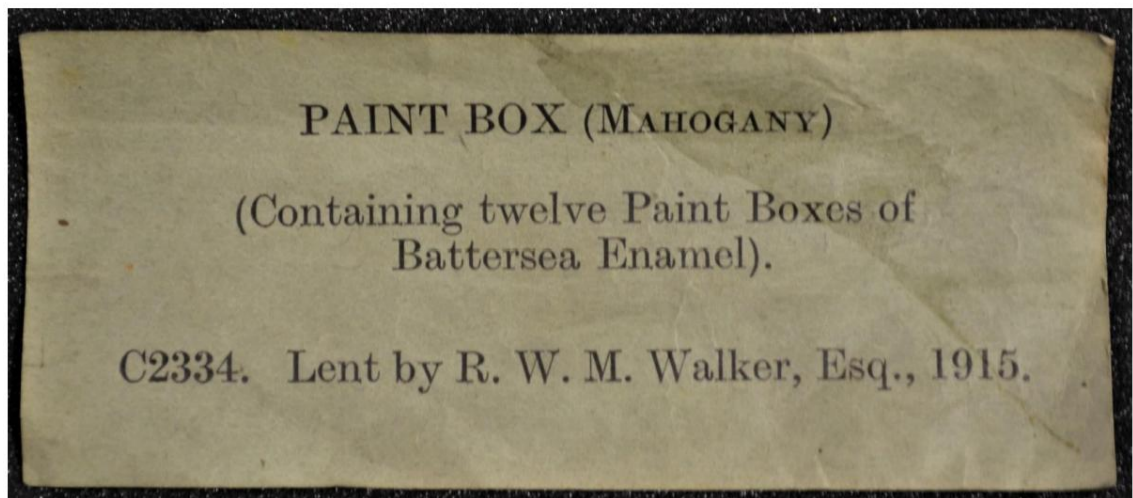


Figure XIX.6 An exhibition label, part of the object history file of DY Cameron's paintbox, photo credit Perth Museum and Art Gallery.

This suggests that the box was not in Cameron's possession at this time and that Cameron likely acquired the box from R.W.M. Walker. Ralph William Morrison Walker died in July of 1945. The auction house Christie was charged with selling Walker's large collection including the porcelain work and art objects.<sup>416</sup> The sale was held across eight days from 10 July until 26 July. The paintbox was not part of this sale, and therefore it is believed that sometime between 1915 and

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<sup>414</sup> To date, the exhibition to which the paintbox was lent has not been identified. It is possible that the paintbox was lent to an exhibition in London, as this is where Walker lived. However, with only the limited information on the exhibition label, the exhibition could not be identified.

<sup>415</sup> Exhibition label in the Object History File of the paintbox from Perth Museum and Art Gallery. Access courtesy of Amy Fairley, curator, and Anna Zwagerman, conservator, at the Perth Museum and Art Gallery

<sup>416</sup> 'Front Matter', *The Burlington Magazine for Connoisseurs*, 4 November 1945.



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1945, Cameron acquired the paintbox from Walker.<sup>417</sup> However, it is not known if Cameron bought it to be used, or as a piece of interest for his collection. Nor is it known if the box went straight from the manufacturer to Walker or if he obtained the paintbox elsewhere. What is known is that the box and its palette were originally distributed by the colourman Roberson & Co as is indicated by the colourman's label on the inside of the box and the stamp on the back of the palette (see subsection 4.3 Colourmen - Roberson & Co, Winsor & Newton, Lechertier.).

## XIX.II Colourman's Marks

On the inside of the lid of the paintbox, the colourman's label reads 'Roberson & Compy Manufacturers of Water and Oil Colours and Materials for Drawing, Painting, &tc. No. 51 Long Acre, London' (Figure XIX.7). Roberson started advertising as 'Roberson & Co' in 1841 and the address listed on the label implies that the box was made while Roberson was located at 51 Long Acre in London. In 1853, Roberson relocated to 99 Long Acre in London.<sup>418</sup> This dating, between 1841 and 1853, evidences that the paintbox itself was produced over a decade before Cameron was born in 1865. This also predates J.M.W. Walker who was born in 1856.

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<sup>417</sup> Christie Ltd., *Catalogue of the Collection of Decorative Furniture, Objects of Art, Porcelain and Faience, Arms and Armour, Formed by R.W.M. Walker ... Which ... Will Be Sold at Auction by Christie, Manson & Woods, Ltd. ... at Derby House, Stratford Place, Oxford Street.*

<sup>418</sup> Simon et al., 'British Canvas, Stretcher and Panel Suppliers' Marks . Part 8, Charles Roberson & Co'; National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - R '.



Figure XIX.7 Roberson & Co colouman label on the inside of the lid of DY Cameron's paintbox, photo credit Perth Museum and Art Gallery.



Figure XIX.8 The reverse of the ceramic palette from DY Cameron's paintbox with a Roberson & Co Colourman stamp, photo credit Perth Museum and Art Gallery.

The Roberson's stamp on the verso of the ceramic palette (Figure XIX.8) lists the later address of 99 Long Acre. Therefore, it can be ascertained that the paintbox and the palette were initially distributed or manufactured in different periods. The palette dates from sometime between 1853 and 1908 when 'Roberson & Co'

Technical Analysis of a Watercolour Paintbox Owned by Cameron 359 became 'Roberson & Co Ltd'.<sup>419</sup> This also suggests that maybe the palette was a later addition to the box either made by the current owner or the colourman.

It is unknown when the paintbox was bought and if it was immediately bought by Walker or if it passed through other hands before reaching Walker. Whereas Walker cannot be found, Cameron is listed in the 'Index of Account Holders in the Roberson Archive 1820-1939' from September 21<sup>st</sup>, 1917, until November 16<sup>th</sup>, 1939. Therefore, it is known that Cameron bought materials at Roberson & Co. Even though it seems unlikely, if Walker decided to sell the paintbox back to Roberson, Cameron could have bought it from the colourman. However, there is no evidence that supports this hypothesis. In Cameron's Roberson account, no reference was found to a paintbox or paint containers other than readymade pigments.



Figure XIX.9 Ceramic palette from DY Cameron's paintbox with six paint mixing indentations, photo credit Perth Museum and Art Gallery.

Other examples of Roberson paintboxes were identified in an attempt to assist in the dating of Cameron's paintbox. To date only two other Roberson boxes with clearly identifiable colourman labels and marks have been identified. In the collections of the Museums Victoria in Melbourne there is a paintbox with a

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<sup>419</sup> National Portrait Gallery, 'British Artists' Suppliers, 1650-1950 - R '.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 360 similar palette to that in Cameron's paintbox.<sup>420</sup> The ceramic mixing palettes in both boxes are the same; both have six hollows for mixing paint, and they have the same colourman's stamp (Figure XIX.9). The Museums Victoria paintbox has been dated to the 1860s. Even though the palettes in the two collections are the same, the paintboxes are quite different. The label in the paintbox of the Museums Victoria collections states that it is a watercolour paintbox and further details prices that the Roberson company has won for their drawing materials at international exhibitions. Contrastingly, the Perth paintbox has no details other than the address of the company on its label. The prices and address, 99 Long Acre, listed on the label in the Melbourne paintbox give it a later manufacturing or distributing date than the Perth paintbox.

The paintbox from Perth's collections seems to be a more luxurious item than that in the Museums Victoria collections. In the Museums Victoria paintbox, the wooden tray contains individual boxes for square watercolour cakes. Furthermore, the paintbox at the Museums Victoria is narrower and longer than the Perth box. In the Melbourne paintbox, the watercolour cakes and the brushes are in different compartments on the same wooden tray that can be lifted out of the box to reveal the ceramic palette, whereas the paintbrushes in the Perth paintbox have their own compartment.

A second example of a Roberson paintbox has been identified on an auction website.<sup>421</sup> This last box most closely resembles the box in the Museums Victoria collections: it appears to have the same colourman label on the inside of its lid and the ceramic palette and shape of the box also seem similar. The auction house box too has square spaces for watercolour cakes rather than spaces for paint pots or jars. Considering paintboxes by other colourmen has not revealed the use of paint containers like those in Cameron's paintbox either. Other paintboxes of various colourmen either contain watercolour cakes, such as the

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<sup>420</sup> Museums Victoria Collections, "Paintbox - Watercolour, Charles Roberson & Co, circa 1860s." <https://collections.museumsvictoria.com.au/items/1796522> [07/02/2022]

<sup>421</sup> WorthPoint, "Charles Roberson Victorian Watercolour Artist Paintbox."

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Museums Victoria paintbox, or paint tubes, such as in Corot's paintbox, which contains tubes from a range of manufacturers many of which were added by the artist Matthew Maris when he owned and used the box.<sup>422</sup>

Unfortunately, there are no marks on any of the pots in Cameron's paintbox that could indicate the enamelling company. In literature discussing enamelling many different types of objects are described or mentioned, including a variety of small boxes. However, no reference to the use of small, enamelled pots as paint containers has been found.<sup>423</sup>

It is likely that the pots date from around the same time as the box, considering the tray for the pots is made of the same wood as the box and fits exactly in the box. The enamelled pots were likely not produced on a massive scale, especially considering the diminishing interest in enamel work in the first half of the nineteenth century.<sup>424</sup> Perhaps, the paintbox with a tray fitting twelve paint pots could be filled with an artist's own choice of paint pots. This would explain why certain pigments appear twice in the paintbox, for instance blue black. Roberson catalogues and the account books did not shed any light on when or why this paintbox contains enamelled pots of watercolour. In their sales catalogues, the paintboxes advertised are made to include watercolour cakes or tubed paints, available in a variety of sizes and with a varying number of compartments.<sup>425</sup>

Whether it was a special commission or whether it was a standard box to be filled with an artist's choice of pigments, the pigments present in the box reveal invaluable information about the materials that were available. The initially

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<sup>422</sup> Hermens et al., 'Matthijs Maris at Work'; Townsend, 'The Materials of J.M.W. Turner: Pigments'; Townsend, 'Whistler's Oil Painting Materials'.

<sup>423</sup> Williams, 'Eighteenth-Century English Enamels'; The Battersea Society, 'Looking Back: Battersea Enamels'; Grayson, 'Imperfect Printed Enamel Surfaces: Interpreting Marks of Eighteenth-Century Midland Craftsmanship'; Speel, *Dictionary of Enamelling*; Speel, *Painted Enamels: An Illustrated Survey 1500-1920*.

<sup>424</sup> Speel, *Painted Enamels: An Illustrated Survey 1500-1920*; Speel, *Dictionary of Enamelling*.

<sup>425</sup> Visit Roberson Archive consultation of various sales catalogues.

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bright lake pigments were known to be light fugitive, yet in Cameron's paintbox three pots labelled to contain lake pigments can be found.<sup>426</sup> Stable colours such as ochres, Prussian blue, and Naples yellow are also present in the paintbox. However, even though Naples yellow had been in use in paintings since the 1600s<sup>427</sup>, it was by the nineteenth century no longer used in its original form and substitutions for its original components were preferred. Not only did substitutions occur but additions were also made to pigments during the manufacturing process unbeknownst to the artist. As nineteenth-century pigment production was distributed across several institutions, and as more stable, cheaper or simply alternative versions of pigments were created, or attempts to make such were made, the labels on prepared paints did not necessarily indicate what was actually to be found within.<sup>428</sup>

### XIX.III Technical Analysis

In total eight samples were taken from the paintbox to analyse the pigments and binders used (Figure XIX.10). For the sampling of the paintbox, scraping was used. The number of fragments thus obtained ensured that a variety of analysis could be conducted on the samples. The eight samples obtained from the paint pots cover all the pigments in the paintbox except one, 'Light Oker' (sic). There are two pots each of Blue Black, Brown Pink and Naples Yellow. Due to time constraints, of each of these pigments only one of the pots was sampled on the assumption that the same pigment mixture would be identified in the second pot with the same label.

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<sup>426</sup> Harley, "Artists' Pigments c.1600-1835: A Study in English Documentary Sources", 114; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 520; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*. 149.

<sup>427</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 133; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 574.

<sup>428</sup> Bomford et al., *Art in the Making: Impressionism*, 34.





Figure XIX.10 D.Y. Cameron's paintbox with indications of where the samples were taken.

The samples were analysed with microscopy, pXRF, ATR-FTIR, and SEM-EDX. An overview of the analysis conducted and the results can be found in Appendix XXI. In the following sections, each of the eight analysed paints will be discussed, compiling the results from the analysis to identify the binder, pigments and fillers present in each of the paint pots.

#### XIX.IV Binder

In all sample spectra obtained (see spectra throughout this chapter), the characteristic polysaccharide gum peaks were identified: a broad peak around  $\pm 3200 \text{ cm}^{-1}$  and sharp peaks in the fingerprint area at 1600, 1416 and  $1020 \text{ cm}^{-1}$ .<sup>429</sup> It is probable that the gum used in the watercolour paints is gum Arabic. This gum is a common binder for watercolour paints.<sup>430</sup> It has been used as a binder since at least the twelfth century but was probably in use as a tempera medium already earlier.<sup>431</sup> In artists' manuals describing how to make

<sup>429</sup> Ibekwe et al., "Synthesis and Characterization of Chitosan/Gum Arabic Nanoparticles for Bone Regeneration", 32; Derrick, "Fourier Transform Infrared Spectral Analysis of Natural Resins Used in Furniture Finishes", 46; Vetter and Schreiner, "Characterization of Pigment-Binding Media Systems - Comparison of Non-Invasive In-Situ Reflection FTIR with Transmission FTIR Microscopy.", 13.

<sup>430</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 28-29.

<sup>431</sup> Gettens and Stout, 28.



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watercolours a suggestion is sometimes made to add saccharide, crystallized sugar, syrup or honey to the paint mixture to increase solubility in water and to reduce its brittleness.<sup>432</sup>

## XIX.V Enamelled Pots

Battersea enamel, the type of enamelling the pots in the paintbox are believed to be, was most commonly applied to a thin copper foil base, often in the shape of a pot or a small box, such as a snuff box. This metal base would be covered by a dense white base layer over which a coloured layer or pattern was applied through transfer printing.<sup>433</sup>

To better understand the materials used in the making of the pots as well as to understand potential interference of the pot with the signals from the paint during pXRF analysis, a background reading of the outside of one of the paint pots, 'Brown Pink,' was taken. The resulting spectrum indicates that lead, sulphur, silicon, potassium, tin, iron, and copper are present (Figure XIX.11).

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<sup>432</sup> Doerner, *The Materials of the Artist and Their Use in Painting with Notes on the Techniques of the Old Masters*, 257; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 28; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 498, 520.

<sup>433</sup> The Battersea Society, "Looking Back: Battersea Enamels"; Williams, "Eighteenth-Century English Enamels"; Grayson, "Imperfect Printed Enamel Surfaces: Interpreting Marks of Eighteenth-Century Midland Craftsmanship"; Speel, *Dictionary of Enamelling*, 9.

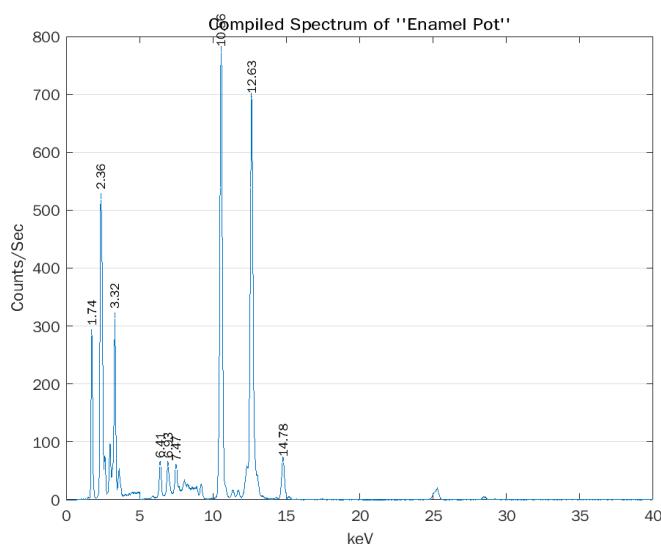


Figure XIX.11 pXRF of the outside of the enamel pot. The strong peaks at 10.56, 12.63 and 14.78 are characteristic lead (Pb) peaks. The sulphur peak at 2.36 KeV is also partially representative of lead as well as of sulphur. The small peaks at 6.39, 6.93, 7.50 and 8.04 KeV are indicative of small amounts of iron (Fe), cobalt (Co) and copper (Cu). The relatively low copper peak, associated with the metal of the pot, might be explained by the presence of strong lead signals which partially hide the lower signals.

Based on what is known of the production method of Battersea enamel, it is thought that a lead white may have been used as part of the white base layer. As the enamelling process is a glass firing process, often the colour applied to the metal in a powdered state is not the same as the colour of the fired material. The identification of the materials used to colour the enamel blue is beyond the scope of this research. Silicon was likely part of all the enamel layers. The small copper peak in the spectrum is likely evidence of the metal of the pot itself. The relatively low intensity of this signal can be explained by interference and blocking of signals by the overlaying enamel layers.

The copper identified in the background reading is visible as a small peak in all spectra obtained of the paint in the pots. In the following interpretation of the pXRF readings of the paint in the pots, a strong copper peak in a spectrum is considered evidence of a copper-containing pigment in the paint mixture whereas a weak copper signal is attributed to interference of the copper in the pot itself.

Naturally occurring ochres, hydrated iron oxide pigments, are among the oldest pigments, having been identified in cave paintings and artworks throughout the ages.<sup>434</sup> They are stable pigments, and they are generally considered to be good driers.<sup>435</sup> In the nineteenth century, with the development of industry, it was possible to create purer synthetic iron oxide pigments, called Mars colours. These did not contain traces of aluminium and silicon which are associated with the natural earth pigments.<sup>436</sup> As the lids do not describe the pigments as being Mars, it was expected to find the less pure, naturally occurring ochre in this paint pot.



Figure XIX.12 PB1 'Brown Oker' in visible light stacked photograph, 200 x 0.67 magnification.

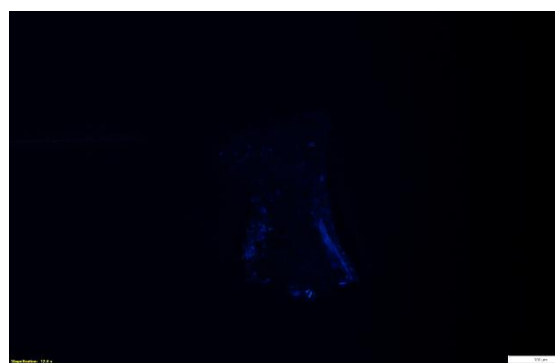


Figure XIX.13 PB1 'Brown Oker' in ultraviolet light stacked, 200 x 0.67 magnification.

Fragments from the 'Brown Oker' sample appeared a rich brown colour under the microscope (Figure XIX.12 and Figure XIX.13). Warm golden yellow particles can be seen within the fragment. These might indicate the presence of another pigment in this paint mixture. Some black particles can also be seen in the sample fragment. In ultraviolet light none of these particles fluoresce. There is slight fluorescence along the side edges of the samples (Figure XIX.13). This

<sup>434</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 134; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 586-590; Winter et al., *Artist. Pigment. A Handb. Their Hist. Charact. Vol. 4*.

<sup>435</sup> Winter et al., *Artist. Pigment. A Handb. Their Hist. Charact. Vol. 4*.

<sup>436</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 129 & 134; Winter et al., *Artist. Pigment. A Handb. Their Hist. Charact. Vol. 4*; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 538-539 & 586-590.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 367  
fluorescence does not clearly correspond to particles or other materials visible in the visible light image.

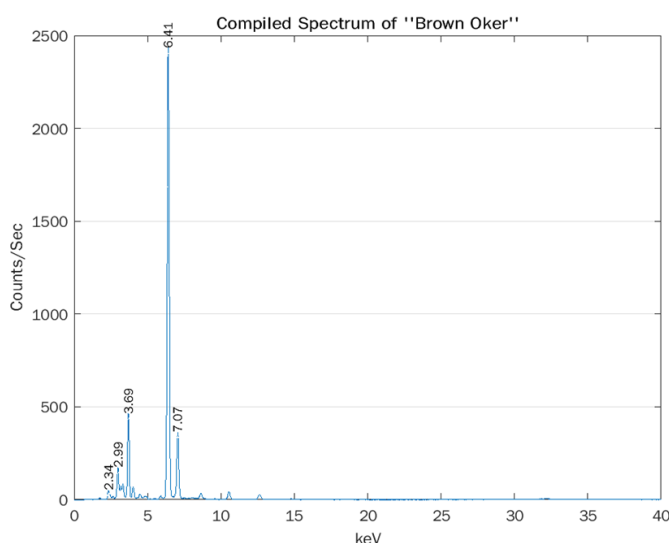


Figure XIX.14 pXRF spectrum 'Brown Oker': The strong peaks at 6.41 and 7.05 KeV are clear indications of the presence of iron (Fe). The calcium (Ca) peak at 3.69 KeV indicates a calcium containing additive.

With pXRF, a strong peak for iron was detected (Figure XIX.14). This is a good indication that an iron oxide pigment is indeed present in the pot labelled 'Brown Oker'. The smaller calcium, barium, zinc and lead peaks indicate the presence of additives such as calcium carbonate or sulphate and barium sulphate. Additionally, a zinc white, a zinc oxide, may have been used as a lightener and to bulk up the paint or zinc sulphate, a compound commonly used as a drier, may have been added to the paint.<sup>437</sup> The lead could indicate the presence of a lead acetate drier or more likely a red lead to adjust the tone of the paint mixture. However, no evidence of white or red particles was found within the sample fragment. The trace amounts of silicon and aluminium may be an indication that a natural earth pigment was used. The trace peak of manganese could mean that a small amount of umber, a manganese iron oxide pigment, was also part of the mixture or that there is slight contamination from a manganese-containing pigment, such as Burnt Umber. SEM-EDX analysis

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<sup>437</sup> Brown et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 1*, 172; Carlyle, "Paint Driers Discussed in 19th-Century British Oil Painting Manuals." 73.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 368 supports the interpretation of the pXRF data that an iron oxide pigment is present. However, no significant amounts of lead or zinc were identified with SEM-EDX suggesting that the lead and zinc detected with pXRF are the result of contamination rather than that they are part of the paint mixture. The fillers calcium carbonate and calcium sulphate have both been identified within the sample with SEM-EDX.

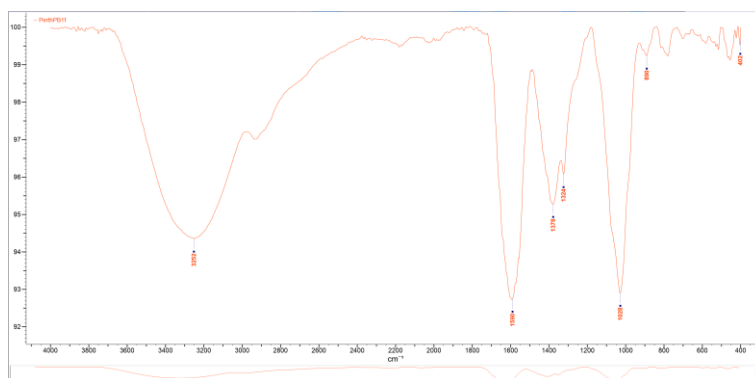


Figure XIX.15 ATR-FTIR PB1 'Brown Oker' sample spectrum including labels for the strongest peaks (shown in transmittance).

ATR-FTIR analysis did not reveal any further indications of the presence of additives or fillers in the paint mixture (Figure XIX.15). The peaks in the fingerprint region indicate that an ochre is present. However, determining the exact type of ochre present is a difficult process.<sup>438</sup> The differences in the FTIR spectra of different ochres is relatively small. All ochres contain similar organic bonds and functional groups, meaning that the peaks for all ochres can be found at approximately the same wavelengths. However, the chemical structures of the different minerals, e.g. goethite or haematite, which can constitute an ochre, differ. This difference in structure causes the peaks in the fingerprint area of different ochres to vary in intensity and shape. As a result, it is possible to identify the presence of an iron oxide pigment, but it cannot easily be stated exactly which iron oxide pigment was used. The peak at approximately  $3200\text{ cm}^{-1}$  is the OH stretching band and can be both indicative of the gum and of the OH in

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<sup>438</sup> Bikiaris et al., 'Ochre-Differentiation through Micro-Raman and Micro-FTIR Spectroscopies: Application on Wall Paintings at Meteora and Mount Athos, Greece', 10-17.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 369 raw ochres. Comparison to a Brown Ochre standard spectrum shows that there are similarities but no exact match to the brown ochre standard was found (Figure XIX.16). Moreover, due to the presence of gum in this sample, it is not possible to state whether the ochre pigment is raw or burnt.

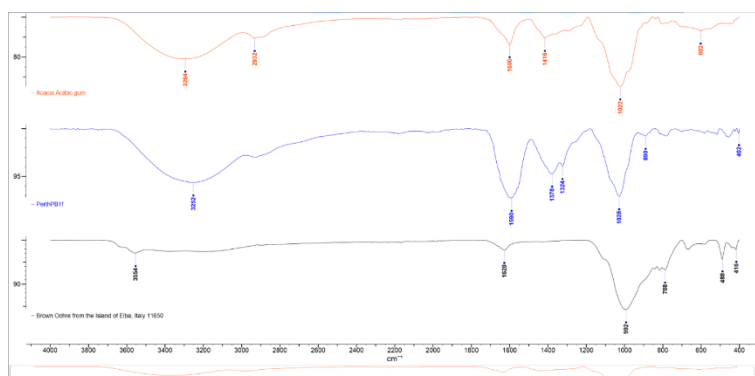


Figure XIX.16 ATR-FTIR PB1 'Brown Oker' PB1 spectrum (blue) comparison to a brown ochre (black) and a gum Arabic (orange) standard as stacked spectra rather than overlaid spectra. Includes labels for the strongest peaks (shown in transmittance).

## XIX.VII Dutch and Brown Pink

Dutch and Brown pink, despite their name, are yellow lake pigments. Dutch pink is a bright yellow lake pigment made from quercitron bark or Buckthorn berries precipitated on alum, chalk or a different calcium-containing substrate.<sup>439</sup> Brown Pink is a deeper colour variant of this yellow lake pigment and is precipitated on a similar substrate or a ferrous sulphate substrate.<sup>440</sup> In nineteenth-century treatises, Carlyle has identified that the quercitron variant of the lake pigment

<sup>439</sup> Harley, 'Artists' Pigments c.1600-1835: A Study in English Documentary Sources'. 107-114. ARTECHNE project, "Dutch Pink | ARTECHNE Database"; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 149; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 304; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*. 520.

<sup>440</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 149; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 304; Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*. 520.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 370 was thought to be more stable than the berries variant. However, even when based on quercitron bark, the pigments were not stable.<sup>441</sup>



Figure XIX.17 PB2 'Dutch Pink' in visible light stacked, 100 x 0.67 magnification.

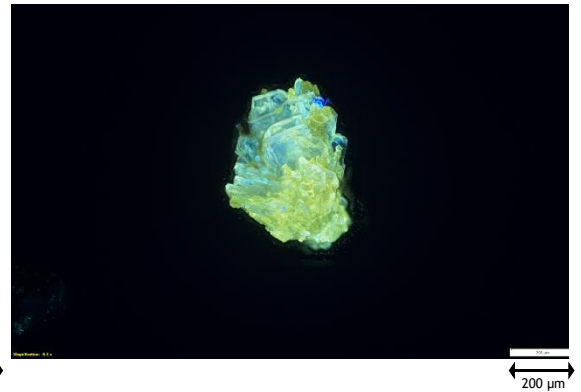


Figure XIX.18 PB2 'Dutch Pink' in ultraviolet light stacked, 100 x 0.67 magnification.



Figure XIX.19 PB8 'Brown Pink' in visible light stacked, 200 x 0.67 magnification.

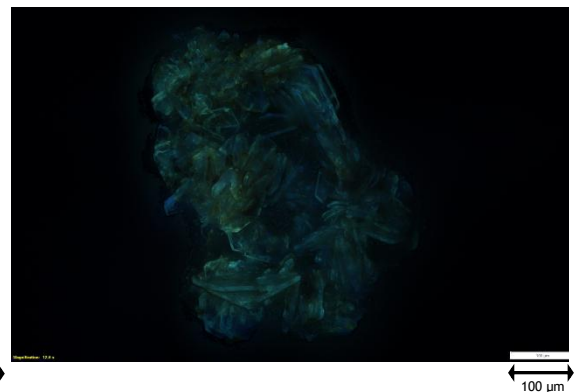


Figure XIX.20 PB8 'Brown Pink' in ultraviolet light stacked, 200 x 0.67 magnification.

Both the Dutch and Brown Pink sample fragments appeared highly crystalline under the microscope (Figure XIX.17, Figure XIX.18, Figure XIX.19 and Figure XIX.20). The fragments have a strong angular structure. Dutch pink is a bright yellow colour and Brown pink is a relatively light brown pigment.

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<sup>441</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*.



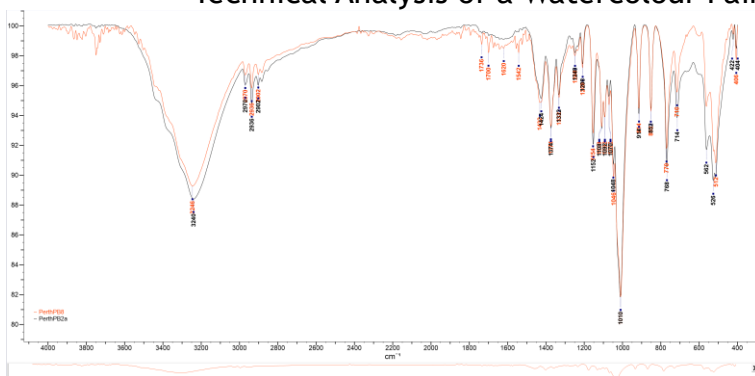


Figure XIX.21 ATR-FTIR PB2 'Dutch Pink sample spectrum (black) comparison to an overlay spectrum of the sample PB8 Brown Pink (orange). The overlay shows how similar the two sample spectra are (shown in transmittance).

The angularity of the samples could not be explained based on the knowledge of the pigments and potential substrates. ATR-FTIR analysis of the samples revealed that the Dutch Pink and Brown Pink samples are highly similar (Figure XIX.21). Comparison to reference standards of the lake pigments quercitron lake and Italian Pink did not yield a match (Figure XIX.22 and Figure XIX.23).

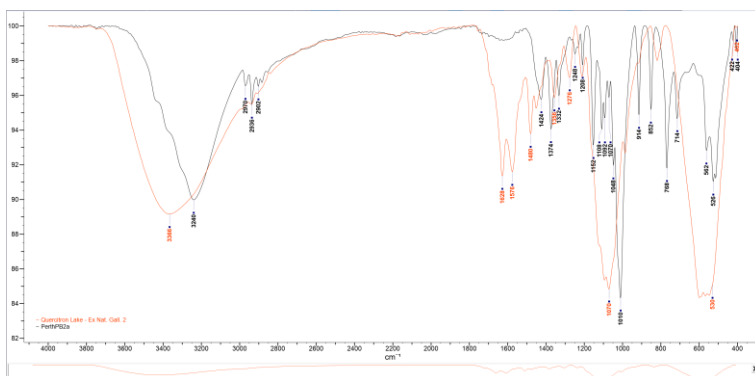


Figure XIX.22 ATR-FTIR PB2 'Dutch Pink sample spectrum (black) comparison to an overlay spectrum of a Quercitron lake standard (orange). The overlay indicates that there is no clear match between the quercitron lake standard and the Dutch Pink. Includes labels for the strongest peaks (shown in transmittance).

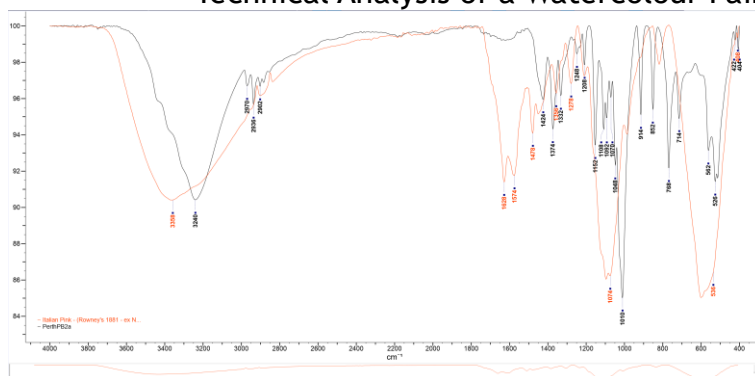


Figure XIX.23 ATR-FTIR PB2 'Dutch Pink sample spectrum (black) comparison to an overlay spectrum of a Italian Pink standard (orange). The overlay indicates that there is no clear match between the Italian Pink standard and the Dutch Pink. Includes labels for the strongest peaks (shown in transmittance).

The reference spectra of quercitron lake and Italian Pink both show peaks at approximately the same places (3366, 1628, 1576, 1480, 1070 and 530 and 3358, 1628, 1574, 1478, and 536  $\text{cm}^{-1}$  respectively). The strong peaks at 1628, 1575, and 1480  $\text{cm}^{-1}$  are absent in the sample spectra of the lake pigments from the paintbox. Additionally, instead of the strong, slightly broad peaks at 1070 and 530  $\text{cm}^{-1}$  visible in the reference spectra, in the sample spectra multiple sharp peaks are visible in these areas. This difference in the peaks visible in the sample spectra, indicates that there is no match of the sample spectra to that of the lake pigments in the reference library. Interestingly, the sample spectra showed strong similarities with a reference spectrum of dextrose, a sugar (Figure XIX.24), especially in the fingerprint region of the spectrum where multiple sharp peaks are present. The broad peak at approximately 3200-3400  $\text{cm}^{-1}$  is typical of OH-stretching in polysaccharides, including gum and sugar, and is probably indicative of both in the case of these samples.

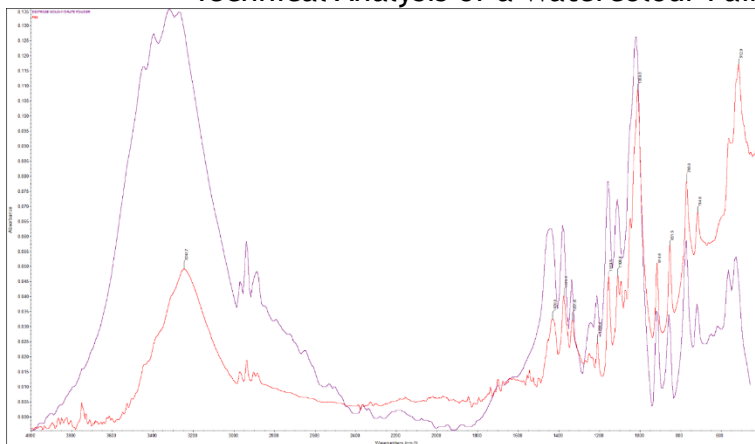


Figure XIX.24 ATR-FTIR PB8 'Brown Pink' sample spectrum (orange) compared to an overlaid reference spectrum of dextrose monohydrate powder (purple). The sample spectrum shares many peaks with the dextrose reference spectrum indicating that some saccharide is present in the sample. Includes labels for the strongest peaks (shown in absorbance).

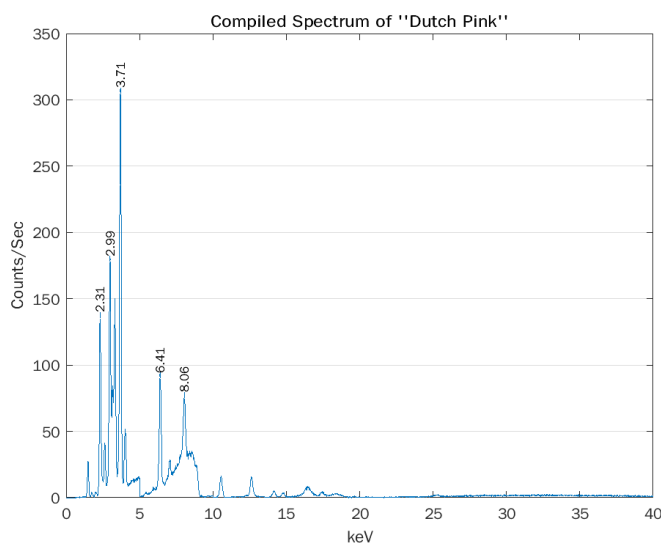
In artist's manuals it was sometimes advised to add a saccharide compound to the paint mixture to ensure that the watercolour paint mixture would not become too brittle and would remain soluble in water.<sup>442</sup> The presence of a saccharide explains the crystalline structure of the sample fragments. No other samples examined with the microscope and analysed with ATR-FTIR show any evidence of the addition of dextrose or similar, suggesting that only to the lake pigment mixtures a saccharide was added. There is no clear reason for why this addition was made only to the lake pigments. Nothing in historical sources suggests the addition of a saccharide compound specifically to lake pigment watercolours. Doerner describes the addition of saccharides as a general step in the process of making watercolours.<sup>443</sup>

ATR-FTIR did not allow for the identification of the organic component of the lake pigment as the fingerprint region is dominated by the strong peaks associated with the saccharide. Further analysis will have to be conducted if the organic component of the lake pigments is to be identified. Additionally, no

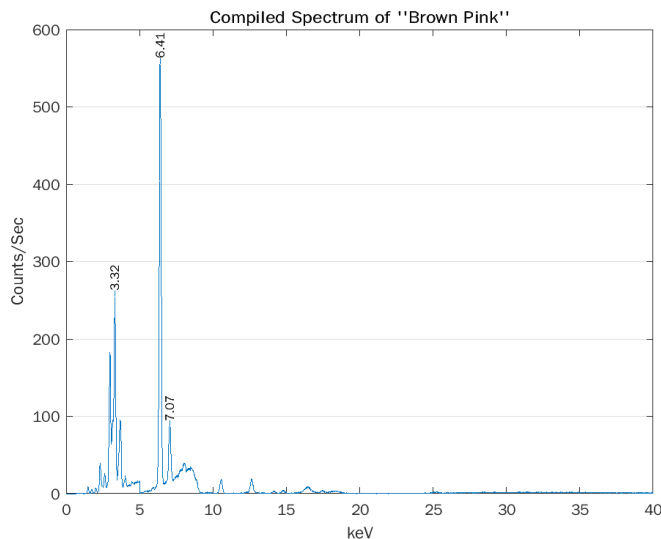
<sup>442</sup> Doerner, *The Materials of the Artist and Their Use in Painting with Notes on the Techniques of the Old Masters*, 257; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 28.

<sup>443</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*, 489 & 520; Doerner, "The Materials of the Artist and Their Use in Painting, with Notes on the Techniques of the Old Masters", 257.

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evidence of additives or the presence of other pigments was found with this  
analysis.



**Figure XIX.25 pXRF 'Dutch Pink:** The strong peak at 3.71 KeV indicates a calcium that the lake pigment was likely precipitated on a calcium substrate. The small iron (Fe), 6.41 KeV, peak indicates that some iron oxide might be part of the mixture or has contaminated the paint.



**Figure XIX.26 pXRF 'Brown Pink:** The strong peak at 6.41 KeV indicates an iron (Fe) containing pigment. The peak at 3.32 KeV indicates potassium (K). Small calcium (Ca) peaks are seen at 3.69 and 4.01 KeV.

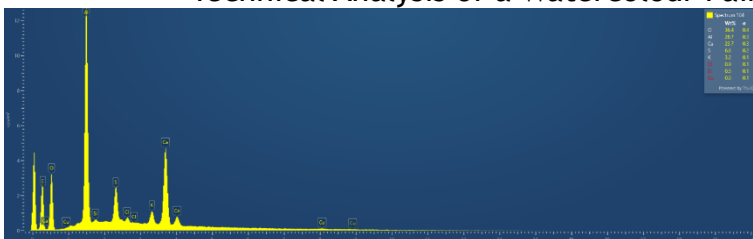


Figure XIX.27 PB2 SEM-EDX Site 104: The strong aluminium peak in combination with the potassium peak is likely an indication of a lake substrate. Additionally, the presence of calcium and sulphur indicate that a calcium sulphate has been detected.

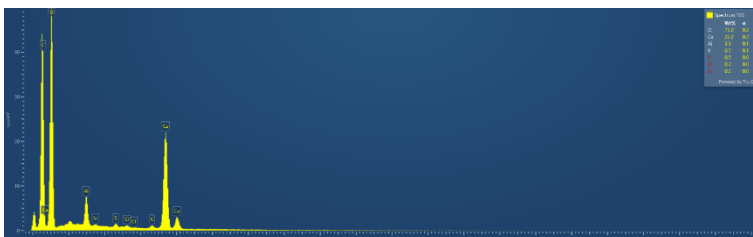


Figure XIX.28 PB2 SEM-EDX Site 105: The calcium peak with a lack of sulphur indicates that a different calcium compound is also present in this sample. This is likely a calcium substrate for a lake pigment or a calcium carbonate.

The substrate of the organic lake pigment could be detected with pXRF and SEM-EDX. The detection of both calcium and aluminium in the sample of Dutch pink makes the identification of the substrate complicated (Figure XIX.27 and Figure XIX.28). The combination of calcium and sulphur could indicate the presence of a calcium sulphate filler. However, a calcium containing substrate cannot be excluded as EDX-analysis of a site revealed the presence of calcium but little to no sulphur.

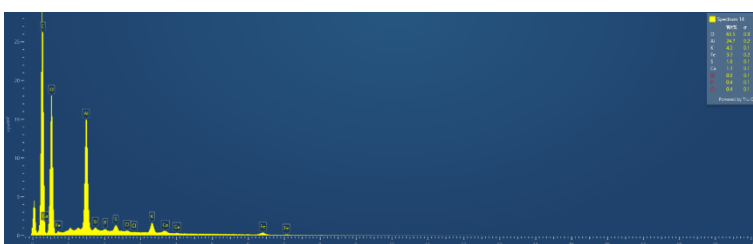


Figure XIX.29 PB8 SEM-EDX Site 14: The aluminium and potassium peaks are indications that a potash alum substrate for a lake pigment is present.

It seems that a potash alum substrate was used for Brown Pink (Figure XIX.29). Some iron has also been identified in the Brown Pink sample, this could indicate

Technical Analysis of a Watercolour Paintbox Owned by Cameron 376  
that a ferrous sulphate mordant was used for the lake pigment, as described by Harley in his discussion of recipes for Brown Pinks.<sup>444</sup> It is also possible that a little brown iron oxide pigment is included in the paint mixture to subtly adjust its tone. This is thought to be more likely as it was known in the nineteenth century that Brown Pink was a light sensitive pigment. Adding some iron oxide, a stable pigment, would have ensured that the Brown Pink pigment would have appeared more stable. Due to the crystalline structure of the sample, distinguishing individual particles in either the Dutch Pink or Brown Pink samples has proved difficult and in the backscattered electron image obtained with SEM-EDX, few individual particles were clearly observable within the sample.

The iron and copper peaks in the Dutch Pink pXRF spectrum (Figure XIX.25) indicate that other pigments are part of this paint mixture. An iron oxide yellow could have been added to bulk out the pigment and to create a more stable colour as the lake pigment is not lightfast.<sup>445</sup> Carlyle has identified in a book by Fredrick Accum that the green pigment Verdigris, a copper acetate, was added to Dutch pink as an adulterant.<sup>446</sup> This could explain the copper peak in the spectrum, which is thought to indicate more than the metal of the pot. The presence of lead and zinc likely relates to additives such as zinc and lead driers or pigments used to influence the tonality of the paint mixture. The trace of cadmium indicates some cadmium yellow might be part of the mixture or that there is slight contamination. With SEM-EDX it was possible to further identify the presence of a copper pigment within the sample, suggesting that a little Verdigris is likely part of the mixture. Evidence of an iron oxide has also been found with SEM-EDX. However, no evidence of the presence of a zinc or lead pigment or drier or of cadmium could be identified with certainty with SEM-EDX,

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<sup>444</sup> Harley, 'Artists' Pigments c.1600-1835: A Study in English Documentary Sources', 112-113.

<sup>445</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*. 520.

<sup>446</sup> Carlyle, 'Authenticity and Adulteration: What Materials Were 19th Century Artists Really Using?', 56.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 377 suggesting these elements relate to contamination of the sample rather than a pigment or drier included in the paint mixture.

A trace of manganese in the pXRF spectrum of Brown Pink (Figure XIX.26) may be an indication that some umber was added, or a manganese drier is part of the paint mixture. It was known that Brown Pink was a bad drier, therefore a drier might have been added to the mixture to improve the pigment properties.<sup>447</sup> The traces of aluminium and silicon can be an indication that a naturally occurring earth was the basis for the iron oxide pigment. The small lead peaks could indicate that a lead pigment such as lead white or red lead was added to bulk the paint mixture or to influence the tone of the mixture or as a drier, for instance lead acetate, to improve the drying properties of the paint.<sup>448</sup> No manganese was detected with SEM-EDX, therefore, the manganese identified with pXRF might relate to a contaminant rather than a compound part of the paint mixture. As burnt umber, a manganese iron oxide, is another pigment found within the paintbox it is possible that contamination of the Brown Pink has occurred during use of the paintbox.

Both the Dutch and Brown Pink lake pigments are present in the paint mixture. However, it appears that additions of iron oxide pigments have been made. In the case of Brown Pink, potash alum substrate appears to have been used. Dutch Pink was precipitated on a chalk substrate. No clear evidence has been found that additives or driers have been added to the mixture to enhance the drying properties of the lake pigments.

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<sup>447</sup> Carlyle, *The Artist's Assistant: Oil Painting Instruction Manuals and Handbooks in Britain 1800-1900 with Reference to Selected Eighteenth-Century Sources*. 520.

<sup>448</sup> Carlyle, 'Paint Driers Discussed in 19th-Century British Oil Painting Manuals'.



The stable, deep blue pigment Prussian blue was discovered in the early eighteenth century, around 1704 by Diesbach.<sup>449</sup> The potassium hexacyanoferrate pigment was quickly adopted as a stable deep blue colour. It was a popular pigment ever since it first appeared on the art market until around 1970 when it was replaced by phthalocyanine blue.<sup>450</sup>

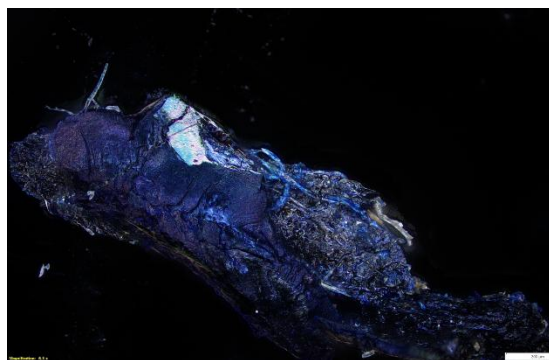


Figure XIX.30 PB3 'Prussian Blue' in visible light stacked, 100 x 0.67 magnification.

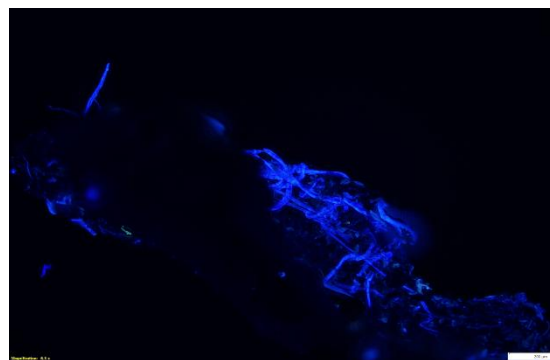
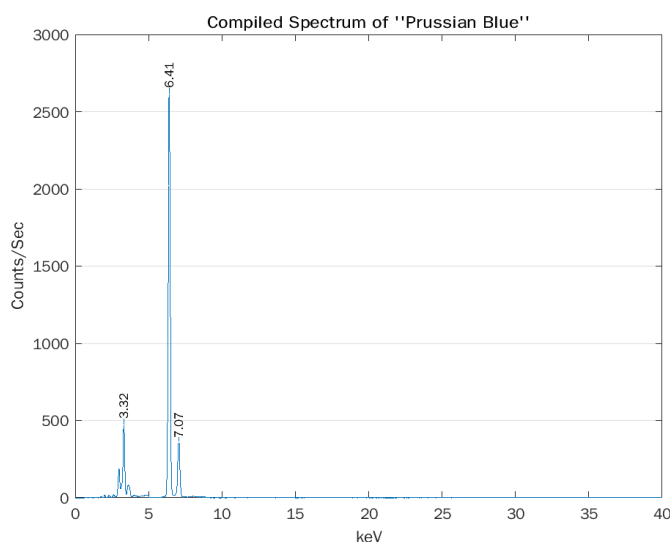


Figure XIX.31 PB3 'Prussian Blue' in ultraviolet light stacked, 100 x 0.67 magnification.

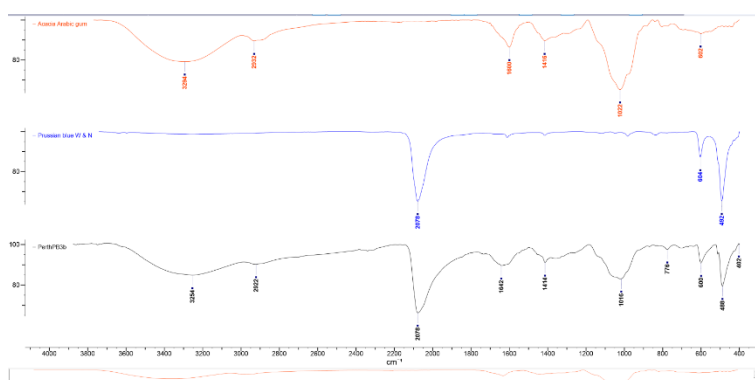
The deep blue colour of Prussian Blue can be seen in the sample fragment from the paintbox (Figure XIX.30). Aside from several brush hairs, indicating the use of the paint pot, there is no clear evidence of contamination or particles which do not correspond with the blue pigment. In ultraviolet light, the brush hairs attached to the paint fragment are more clearly visible (Figure XIX.31). No other components of the paint fragment show fluorescence.

<sup>449</sup> Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 149-150; Riederer et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 3*, 191-193.

<sup>450</sup> Riederer et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 3*, 1997, 194-195.



**Figure XIX.32 pXRF Prussian Blue':** The strong peaks at 6.41 and 7.05 KeV are clear indications of the presence of iron (Fe). The medium potassium (K) peak at 3.32 KeV evidence that a true Prussian Blue is likely part of the paint mixture.



**Figure XIX.33 ATR-FTIR PB3 'Prussian Blue' sample spectrum (black) stacked comparison to a Winsor & Newton Prussian Blue standard (blue) spectrum and a gum Arabic standard (orange) spectrum.** The strong peaks at 2078cm<sup>-1</sup>, at ±600cm<sup>-1</sup> and at ±490cm<sup>-1</sup> are evidence that the sample is indeed Prussian blue. The broad peak at ±3294 cm<sup>-1</sup> and 2922cm<sup>-1</sup> as well as the peak at ±1022 cm<sup>-1</sup> indicate that a gum Arabic is part of the sample mixture (shown in transmittance).

The purity of this pigment was confirmed by pXRF and ATR-FTIR (Figure XIX.32 and Figure XIX.33). In the pXRF spectrum, the strong iron and potassium peaks and the lack of any other strong or medium peaks indicates that the pigment used in the paint mixture of this pot is a largely pure Prussian blue. The traces of calcium, phosphor, silicon, and sulphur might indicate the presence of a little bone black and calcium sulphate or carbonate additive in the mixture.

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However, with ATR-FTIR no evidence for these potential additives was found, suggesting that these detected elements may be the result of contamination. The FTIR spectrum obtained supports the conclusion that the paint in this pot is Prussian blue. A strong correspondence to a reference spectrum of pure Prussian blue, with its typical cyanide peak at  $2078\text{ cm}^{-1}$ , with few deviations indicates that the sample appears to be relatively pure. The only compound that could be conclusively identified with ATR-FTIR not associated with Prussian Blue, is gum Arabic, the binder of the paint mixture.

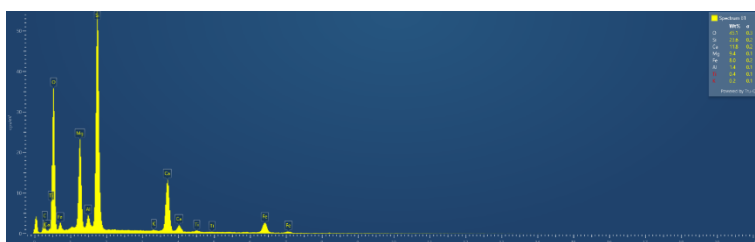


Figure XIX.34 SEM-EDX PB3 Site 81: A silicon compound has been detected as indicated by the silicon peak. Some calcium compound was also detected, likely a calcium carbonate as no sulphur has been detected.

SEM-EDX analysis revealed that some calcium and sulphur are present within the sample and therefore it is thought that a little gypsum, calcium sulphate, is part of the paint mixture (Figure XIX.34). SEM-EDX analysis supported the conclusion that the sample consisted largely of a pure Prussian blue with few additives present.

### XIX.IX Burnt Umber

Similar to ochres, umbers have been in use for a long time.<sup>451</sup> Umbers, too, are naturally occurring earth pigments. Umber is a manganese iron oxide pigment that was used as a pigment both in a raw and burnt form. Burnt umber is a dehydrated manganese iron oxide.

<sup>451</sup> Winter et al., *Artist. Pigment. A Handb. Their Hist. Charact. Vol. 4.*

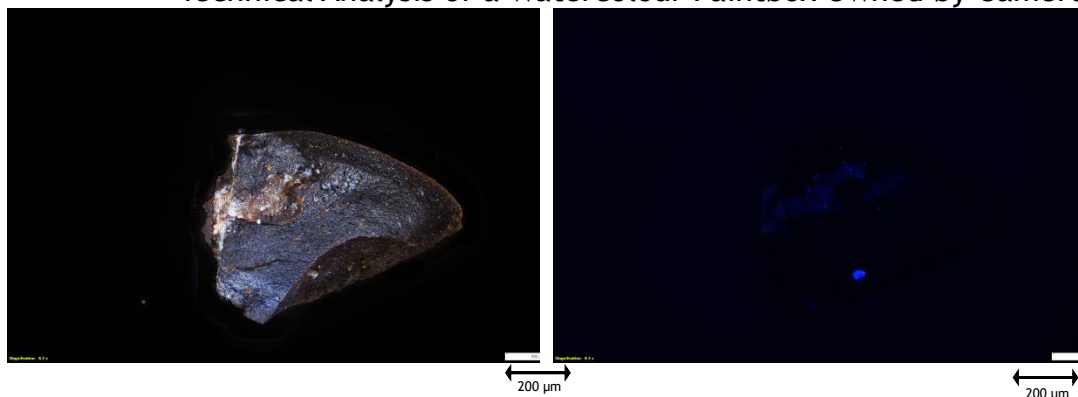


Figure XIX.35 PB4 'Burnt Umber' in visible light stacked, 100 x 0.67 magnification.

Figure XIX.36 PB4 'Burnt Umber' in ultraviolet light stacked, 100 x 0.67 magnification.

The dark brown colour of burnt umber can be seen in the sample fragments from the 'Burnt Umber' paint pot (Figure XIX.35). There are some slightly lighter brown areas visible in the sample, specifically along the edges where the sample is thinner. Within the sample a transparent particle, near the bottom, can be seen. In ultraviolet light, this particle shows clear fluorescence (Figure XIX.36). Furthermore, there is some fluorescence in the lighter area of the sample along the left edge. It is not certain what the source of the fluorescence is. As the fluorescence can be seen running horizontally through the sample it might be an indication of the medium or of a type of pigment particle that is spread through the sample along this axis.

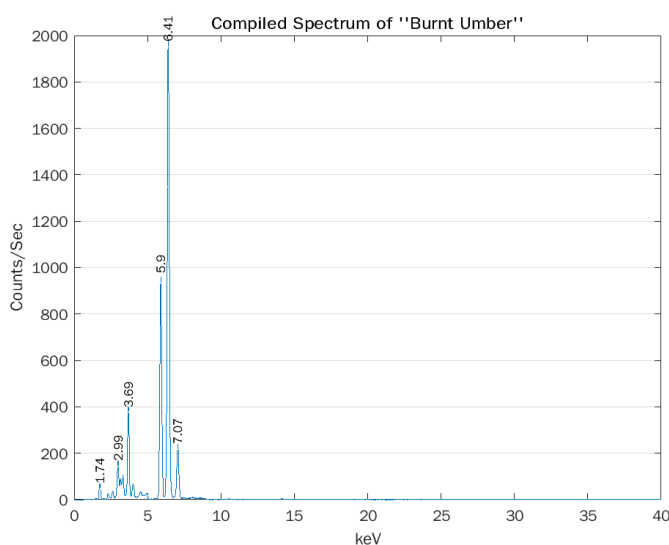


Figure XIX.37 pXRF 'Burnt Umber': The strong peaks at 6.41 and 7.05 KeV are clear indications of the presence of iron (Fe). The strong peak at 5.90 KeV is associated with manganese (Mn). The two peaks together indicate that an umber is part of the paint mixture. The medium peak at 3.69 KeV is evidence of the presence of some calcium (Ca).

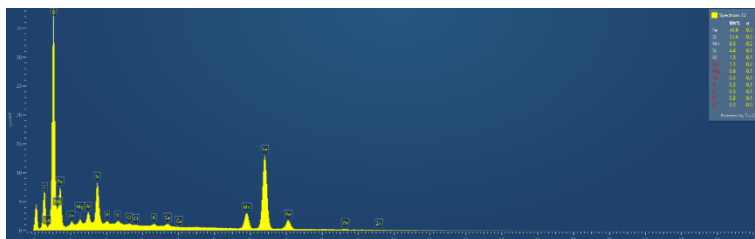


Figure XIX.38 SEM-EDX PB4 Site 32: The clear iron and manganese peaks, in combination with the silicon and aluminium peaks are evidence that the sample contains an umber.

The strong iron and manganese peaks in the pXRF and SEM-EDX spectra are a clear indication that the paint mixture in this pot indeed contains an umber (Figure XIX.37 and Figure XIX.38). The medium calcium peak and the trace of barium indicate the presence of additives such as barium sulphate and calcium sulphate or carbonate. Calcium was identified with SEM-EDX as well, but sulphur was not detected in the same areas, suggesting that a calcium carbonate is present in the sample. The presence of silicon and aluminium detected with both pXRF and SEM-EDX can be an indication that the umber pigment used was made from a naturally occurring ore. The phosphor trace could relate to a bone black. There are also traces of chlorine and potassium for which no clear explanation has yet been found. They may relate to slight contamination of the paint.

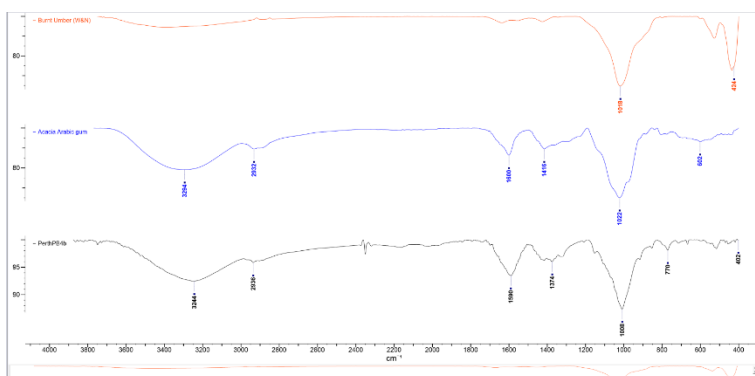


Figure XIX.39 ATR-FTIR PB4 'Burnt Umber' sample spectrum (black) stacked comparison to a W&N Burnt Umber standard (orange) and a gum Arabic standard (blue). The broad peak at  $\pm 3294\text{cm}^{-1}$  and  $2922\text{cm}^{-1}$  as well as the peak at  $\pm 1022\text{cm}^{-1}$  indicate that a gum Arabic is part of the sample mixture. There is a

The ATR-FTIR spectrum is a partial match for that of a burnt umber standard (Figure XIX.39). Even though the peaks do not match exactly the similarity is enough to be able to state with some certainty that the main pigment in this paint pot is indeed an umber as was indicated by the SEM-EDX and pXRF analysis. Due to the presence of gum, which has a broad OH peak at  $\pm 3200$ , it is not possible to conclude from the ATR-FTIR spectrum whether the umber has been dehydrated, burnt, or is of the raw variant. There is no clear evidence with FTIR that an additive such as calcium sulphate, calcium carbonate or barium sulphate is present in the paint. Some ivory black may be present in the paint mixture.

### XIX.X Blue Black

Blue black is a black carbon pigment that historically was adulterated with a blue pigment, most often the organic pigment indigo.<sup>452</sup> Carbon black pigments can have a variety of organic origins.<sup>453</sup> Ivory or bone black is made from calcined animal bones. Charcoal black is made from the remains of a wood fire. As the name suggests it is similar to the drawing material. Lamp black was originally made from the soot collected from oil lamps or fireplaces. However, later a synthetic version of this pigment was prepared. Each pigment has a slightly different tonality, with ivory or bone black being a little bluer than charcoal black for instance. All these different black pigments consist largely of carbon with few other elements present, such as phosphorus and calcium in bone blacks.

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<sup>452</sup> Townsend et al., 'Later Nineteenth Century Pigments: Evidence for Additions and Substitutions'. 67.

<sup>453</sup> Winter and Fitzhugh, 'Pigments Based on Carbon'; Harley, 'Artists' Pigments c.1600-1835: A Study in English Documentary Sources'.157-158.

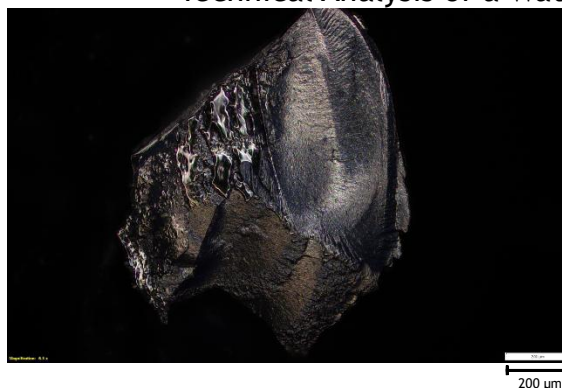


Figure XIX.40 PB5 'Blue Black' in visible light stacked, 100 x 0.67 magnification.

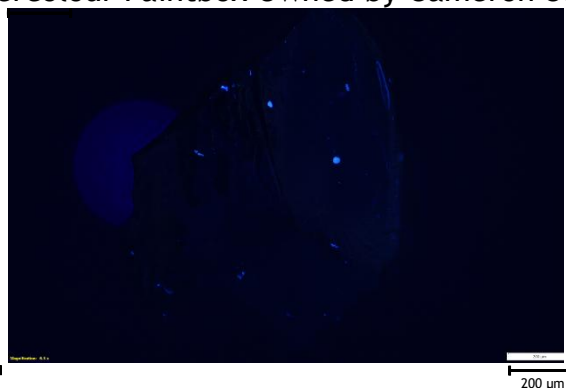


Figure XIX.41 PB5 'Blue Black' in ultraviolet light stacked, 100 x 0.67 magnification.

The blue black sample from the paintbox appears a solid black under the microscope (Figure XIX.40). The surface of the sample is quite shiny. In ultraviolet light, the presence of some specific particles spread throughout the sample is revealed (Figure XIX.41). In the visible light image, these particles cannot be identified. The identification of these particles in ultraviolet light indicates that there are different types of compounds, pigments or fillers, present within the black paint mixture.

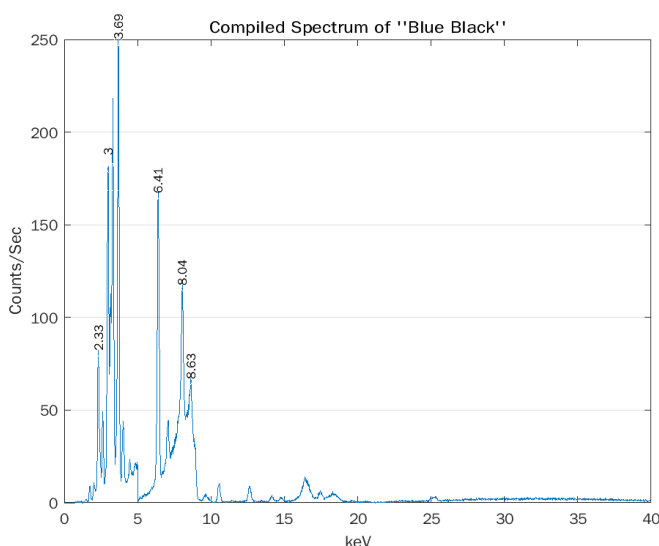


Figure XIX.42 pXRF 'Blue Black': In general the intensity of the peaks is relatively low. This was expected for a pigment thought to be a carbon pigment. In this spectrum, the strongest peak is calcium (Ca) as well as the presence of a potassium (K) peak at 3.33 KeV suggest that an ivory or bone black is likely part of the paint. The medium iron (Fe) peaks at 6.41 and 7.10 KeV are indications that some iron containing pigment is present in the paint mixture.



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Carbon is a light element and cannot be detected using pXRF. Therefore, in the pXRF spectrum, it was expected that only elements associated with fillers or additives would be identified. In the spectrum, elements indicating the presence of other pigments and fillers were identified (Figure XIX.42). The strongest peaks in the spectrum are attributed to calcium and potassium. Calcium in combination with a trace of phosphor may indicate the presence of a bone black. It cannot be excluded that the strong calcium peak is partially caused by a calcium-containing additive. However, it is more likely that the calcium peak relates to the black pigment found in the mixture. SEM-EDX analysis confirms the identification of a bone black as calcium and a trace of phosphorus have been detected (Figure XIX.43).



Figure XIX.43 SEM-EDX PB5 Site 42: The strong silicon peak indicates that a silicon compound is present. The calcium peak is an indication that a bone black may be present.

The strong iron and copper peaks in the pXRF spectrum and the detection of iron and copper with SEM-EDX indicate that the paint in the pot does not consist solely of the black pigment. The iron and potassium could relate to an iron oxide pigment or a Prussian blue. The latter would follow the common adulteration of a blue pigment having been added to a carbon black pigment.

The copper peak in the spectrum could be a signal from the pot itself. The lighter elements associated with the black pigment and the iron pigment will have only blocked a small number of the X-rays, allowing for a copper signal from the paint pot to be visible. Considering the count number of the strongest peak, the copper signal may indeed be from the pot. However, with SEM-EDX a trace amount of copper has been identified within the sample. This could

Technical Analysis of a Watercolour Paintbox Owned by Cameron 386 potentially indicate the contamination of the paint mixture itself rather than evidence of the paint pot.

Some zinc and lead have also been identified. A zinc drier or a zinc white may have been used as a bulking agent.<sup>454</sup> The lead is more likely to relate to a drier than to a lead pigment. The trace amounts identified could also relate to contamination of the pot with lead and zinc-containing pigments. Another potential indication of contamination with a dirty paintbrush is the presence of a trace of cadmium. This might indicate that some residue of a cadmium red or yellow, both cadmium sulphate pigments, is present. The trace of barium detected with both pXRF and SEM-EDX is an indication for a barium sulphate additive.

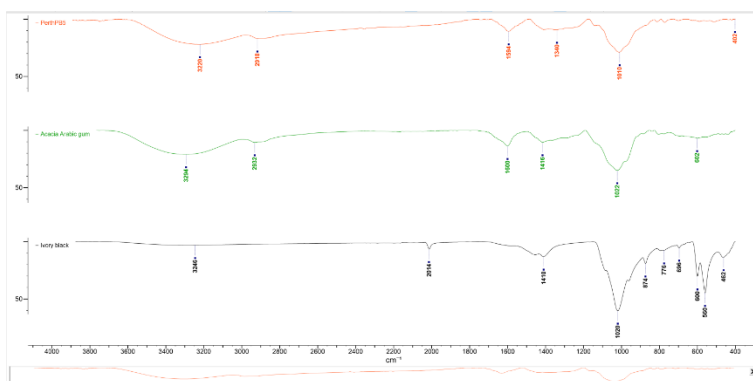


Figure XIX.44 ATR-FTIR PB5 'Blue Black' sample spectrum (orange) compared to Acacia gum Arabic (green) and Ivory black (black) as stacked spectra. As can be seen the spectra overlap quite closely. Overall the sample spectrum is the weakest of the three spectra in the fingerprint region. The ivory black peak at  $2014\text{cm}^{-1}$  is missing in the sample spectrum, and the peaks at  $600\text{cm}^{-1}$ ,  $560\text{cm}^{-1}$  and  $462\text{cm}^{-1}$  are not clearly present in the sample spectrum. However, the peak at  $\pm 1010\text{cm}^{-1}$  in the sample spectrum may be the shifted phosphate peak, visible at  $1020\text{cm}^{-1}$  in the reference spectrum (shown in transmittance).

ATR-FTIR showed a clear correspondence of the sample spectrum to that of an Ivory black standard (Figure XIX.44). However, the spectrum for Ivory Black and gum Arabic are very similar with only slight differences in peak location in the fingerprint region. Ivory Black has two peaks at  $600$  and  $560\text{cm}^{-1}$  and a phosphate

<sup>454</sup> Brown et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 1*; Carlyle, 'Paint Driers Discussed in 19th-Century British Oil Painting Manuals'.

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peak at  $1020\text{ cm}^{-1}$  whereas gum Arabic only has one peak at  $602\text{ cm}^{-1}$ . In the sample spectrum, the fingerprint area does not contain strong peaks. Consequently, it is difficult to distinguish with certainty the peaks associated with ivory black from those of gum Arabic. It is likely that both ivory black and gum Arabic are present and that the mixing of the two compounds have caused some shifts in the peaks, for instance the phosphate peak. There is no evidence in the FTIR spectrum that a Prussian blue has been used or of any additives having been added.

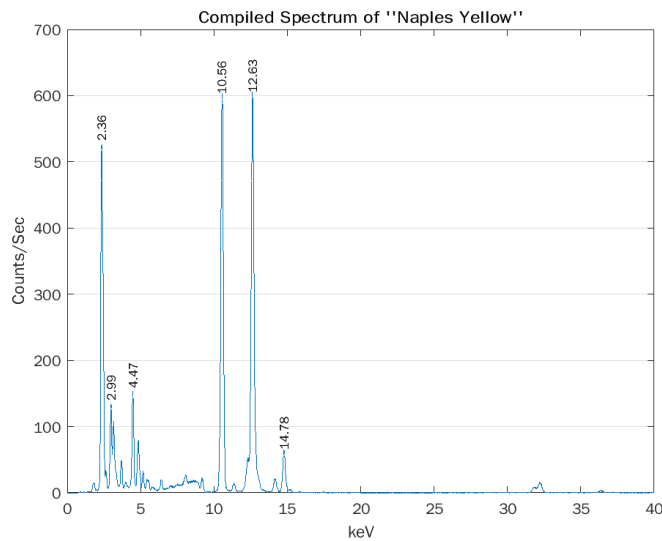
### XIX.XI Naples Yellow

Traditionally, Naples Yellow is a lead antimony yellow. It tends to have a warm yellow colour. However, by the mid-nineteenth century, the lead antimonate pigment was gradually being replaced by substitutions. The most common substitution was a paint mixture containing cadmium yellow with lead white or zinc white.<sup>455</sup> No evidence of a true Naples yellow nor an indication of this kind of substitution of Naples yellow was found with pXRF as no antimony, zinc or lead peaks were detected (Figure XIX.45).

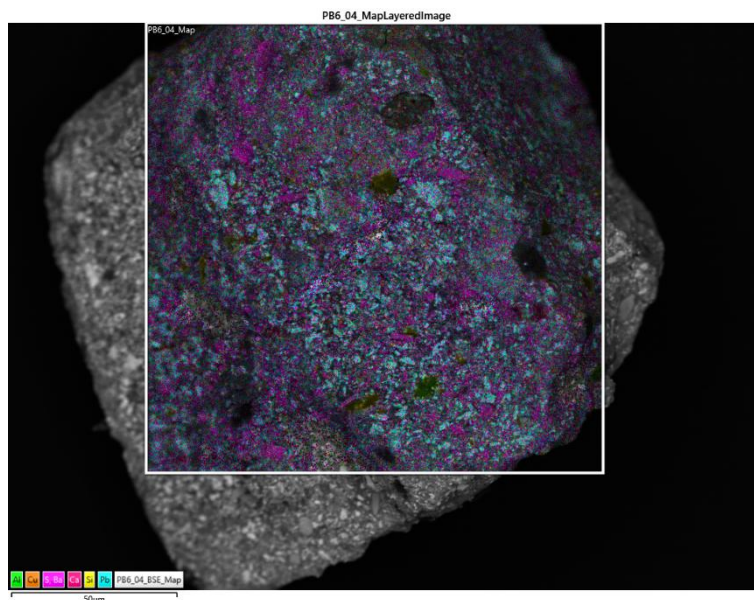
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<sup>455</sup> Townsend et al., "Later Nineteenth Century Pigments: Evidence for Additions and Substitutions", 67; Carlyle, "Authenticity and Adulteration: What Materials Were 19th Century Artists Really Using?", 58; Brown et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 1*, 219-220.

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**Figure XIX.45 pXRF 'Naples Yellow':** The strong peaks at 10.56, 12.63 and 14.79 KeV indicate lead (Pb). The strong sulphur (S) peak at 2.36 KeV also relates to lead due to peak overlap. Barium (Ba) is indicated by the peaks at 31.77 and 32.21 KeV and in the lower range peaks from 4.47 to 5.48 KeV.



**Figure XIX.46 SEM-EDX PB6 Element Map** showing that barium sulphate particles are spread throughout the sample. There are some coarse silicon particles in the sample. Lead is found throughout the sample. (aluminium = green, copper = orange, barium = pink, sulphur = pink, calcium - red, silicon = yellow, lead = blue).

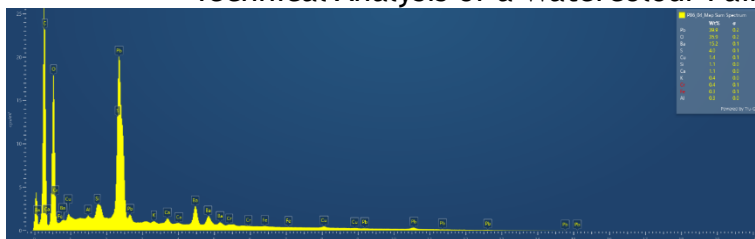


Figure XIX.47 SEM-EDX PB6 Map Sum Spectrum: Indicates that lead is the most prominent element within the sample. Barium and sulphur have also been clearly identified. No clear indication of other metals has been found within the sample suggesting that a lead white or a lead oxide was likely used.

A second substitution identified is the use of lead chromate, a chrome yellow.<sup>456</sup> No evidence for the presence of this compound has been identified either, as no chrome has been detected with pXRF nor did the ATR-FTIR spectrum correspond with a chrome yellow standard. SEM-EDX also did not show any evidence to indicate that these substitutions could be present (Figure XIX.46 and Figure XIX.47).



Figure XIX.48 PB6 'Naples Yellow' in visible light stacked, 100 x 0.67 magnification.

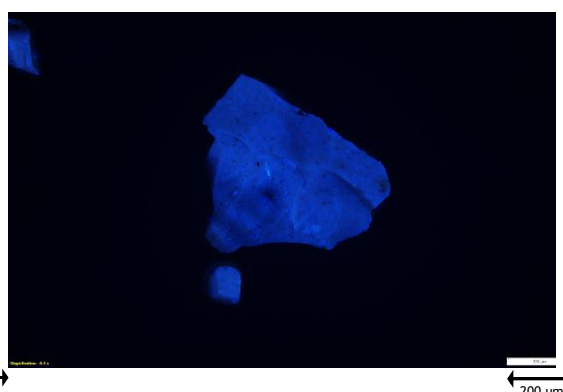


Figure XIX.49 PB6 'Naples Yellow' in ultraviolet light stacked, 100 x 0.67 magnification.

When a sample fragment was examined with the microscope, the typical yellow colour of Naples yellow was not found. Instead, the fragment has a pale brown colour (Figure XIX.48). Additionally, a bright red particle was identified in the centre of the fragment. Two black particles are also embedded in the sample. The colour and the identification of differently coloured particles embedded

<sup>456</sup> Brown et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 1*, 219-220.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 390 within the sample are a good indication that the 'Naples Yellow' from the paintbox is not a true Naples yellow but a mixture of different pigments. The entire sample appears to fluoresce somewhat in ultraviolet light. In the ultraviolet light image, more individual fine particles become visible (Figure XIX.49). None of these particles fluoresce. Instead, they appear black in the blue fluorescent sample.

Another potential substitution to be found for Naples Yellow is yellow lead oxide, such as massicot. In the examination of Whistler's *Old Battersea Bridge*, a substitution of lead monoxide for Naples yellow has been identified.<sup>457</sup> The SEM-EDX results appear to support this conclusion.

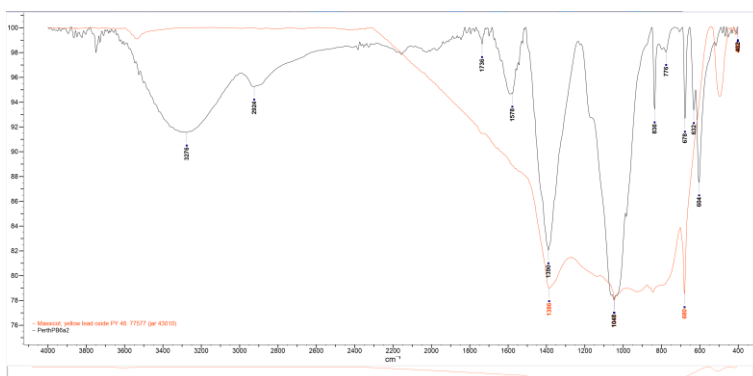


Figure XIX.50 ATR-FTIR PB6 'Naples Yellow' sample spectrum (black) compared as an overlay to a Massicot, yellow lead oxide, standard spectrum (orange). There is no clear match between the sample spectrum and the standard, therefore it cannot be concluded based on the ATR-FTIR spectrum that a massicot is part of the paint mixture of this sample. Includes labels for the strongest peaks (shown in transmittance).

However, the ATR-FTIR spectrum does not indicate a clear similarity between the sample spectrum and a massicot standard spectrum (Figure XIX.50). Traces of iron in the pXRF spectrum indicate that some yellow iron oxide is probably part of the paint mixture. The calcium and barium peaks are indications that fillers may have been added to the mixture. SEM-EDX clearly shows the presence of a barium sulphate additive in the sample (Figure XIX.51). This is supported by the broad peak, thought to be an accumulative peak, at 1048, and the sharp peaks

<sup>457</sup> Townsend, 'Whistler's Oil Painting Materials'. 691.

Technical Analysis of a Watercolour Paintbox Owned by Cameron 391 at 604 and 632  $\text{cm}^{-1}$  seen in the ATR-FTIR sample spectrum. Some calcium sulphate may also be present throughout the sample.

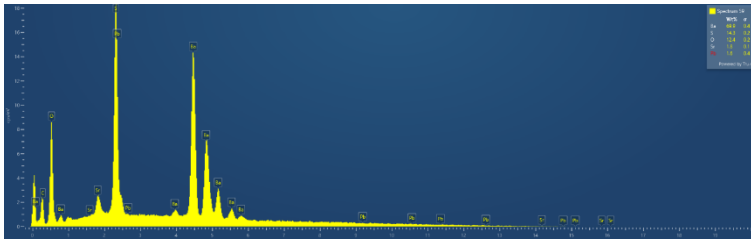


Figure XIX.51 SEM-EDX PB6 Site 59: The barium and sulphur peaks clearly indicate that this particle is a barium sulphate particle.

Joyce Townsend found a fourth substitution for Naples Yellow during the analysis of Winsor & Newton oil paints. Lead white with red and yellow lake pigments was found to substitute the lead antimony pigment in the W&N sample book for Naples Yellow.<sup>458</sup>

Aluminium and calcium were detected in spots throughout the sample with SEM-EDX, potentially indicating the presence of a lake substrate (Figure XIX.51 and Figure XIX.52).

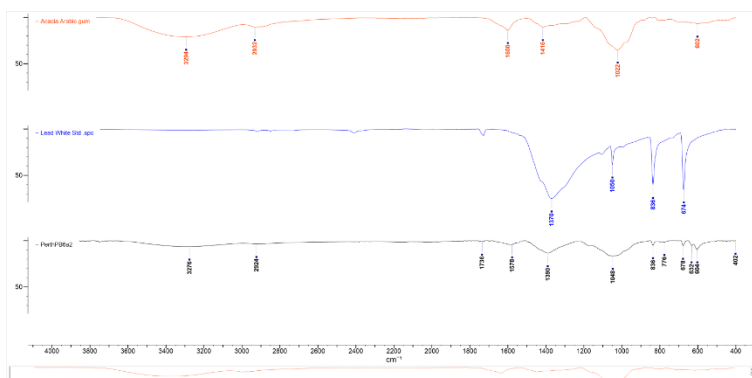


Figure XIX.52 ATR-FTIR PB6 ‘Naples Yellow’ sample spectrum (black) compared to the stacked spectra of a gum Arabic standard (blue) and a lead white standard (orange). A clear indication of the presence of gum Arabic in the sample has been found. The broad peaks at  $\pm 3294\text{cm}^{-1}$  and  $2922\text{cm}^{-1}$  as well as the peak at  $\pm 1022\text{cm}^{-1}$  indicate that a gum Arabic is part of the sample mixture. An indication that a lead

<sup>458</sup> Townsend et al., ‘Later Nineteenth Century Pigments: Evidence for Additions and Substitutions’, 74.



ATR-FTIR analysis pointed towards the presence of some lead-containing compound (Figure XIX.52). However, the evidence is inconclusive. There is some similarity with the spectrum of lead white, the typical peak of around  $1314\text{ cm}^{-1}$  was identified. But other characteristic peaks are lacking in the sample spectrum. No convincing evidence for the presence of lake pigments, for instance madder red or quercitron yellow, has been found. Further, more detailed analysis, for instance HPLC, will have to be carried out to be able to state with more certainty if a lake pigment is present and what lake pigment this might be.

#### XIX.XII Mineral Yellow

The name Mineral Yellow has been used to describe several yellow pigments with different chemical compositions, such as a lead chloride, lead arsenide, Naples yellow, or lead sulphate.<sup>459</sup> According to Field's *Chromatography*, 'Jaune Mineral' could further refer to a lead chromate, a patent yellow also known as Turner's yellow, or a Turbith mineral, a sub-sulphate of mercury.<sup>460</sup> Therefore, elements corresponding to a variety of pigments could reasonably be expected

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<sup>459</sup> Townsend et al., 68; Eastaugh et al., *Pigment Compendium: A Dictionary and Optical Microscopy of Historical Pigments*, 556.

<sup>460</sup> Field, *Chromatography, or, A Treatise on Colours and Pigments: And of Their Powers in Painting, &c.* 77-78.

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to be identified during the analysis of the sample from this pot.



Figure XIX.53 PB7 'Mineral Yellow' in visible light stacked, 100 x 0.67 magnification.

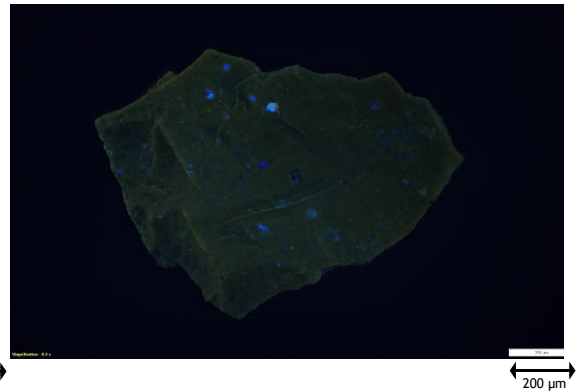
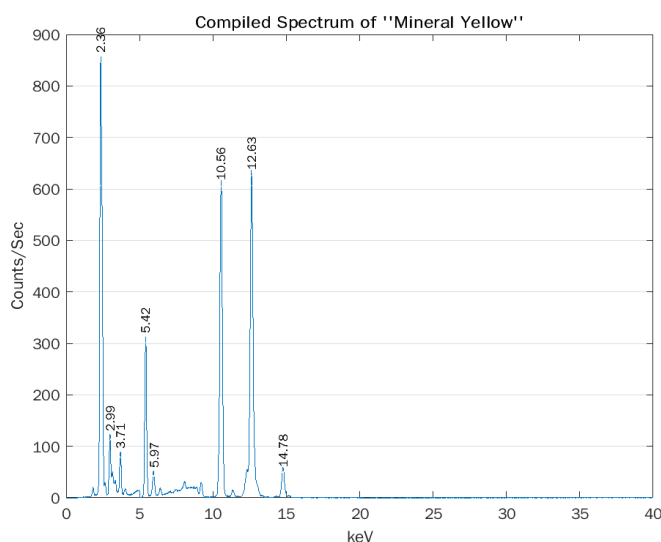


Figure XIX.54 PB7 'Mineral Yellow' in ultraviolet light stacked, 100 x 0.67 magnification.

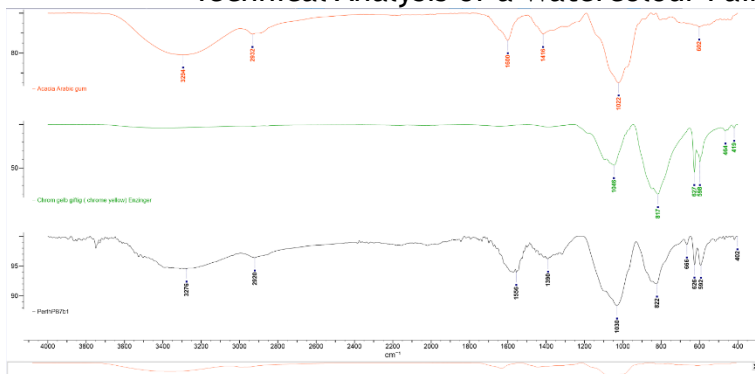
The fragment sample examined with a microscope revealed that the paint has a bright yellow colour with a green undertone. The right side of the fragment is completely green (Figure XIX.53). Overall, the particles within the fragment are quite fine and there is no large range of particle sizes. However, a large transparent particle in the centre of the sample and some coarser yellow and green particles within the sample fragment indicate the presence of different pigments and potentially a filler. Additionally, in the ultraviolet light image, more particles not visible in the dark field image show up (Figure XIX.54). These particles are all angular and seem to match in shape and colour with that of the large transparent particle in the visible light image.



**Figure XIX.55 pXRF 'Mineral Yellow':** The strong peaks at 10.58, 12.63 and 14.78 KeV are all characteristic of lead (Pb). The peaks at 5.42 and 5.94 KeV are indicative of chrome (Cr). The strong sulphur peak at 2.36 KeV is partially representative of lead due to peak overlap.

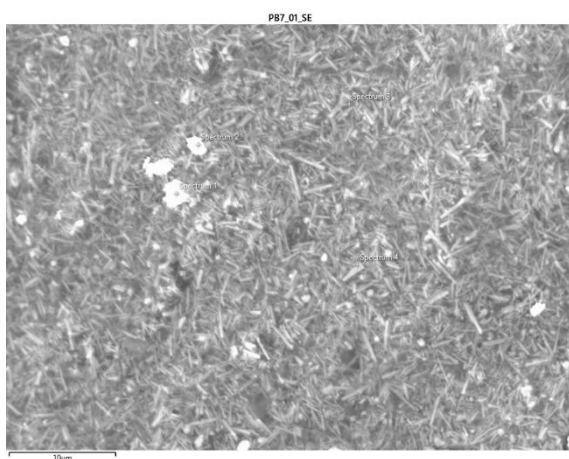
Strong lead, sulphur and chrome peaks were identified in the pXRF spectrum (Figure XIX.55). This indicates that a chrome yellow, a lead chromate, is part of this paint mixture. Chrome yellow became available as a pigment sometime between 1804 and 1809 and came into commercial production after 1818 after which it soon became a well-used pigment in watercolour.<sup>461</sup> Some calcium was also identified, most likely related to a calcium-containing additive such as chalk or gypsum. The trace of iron may be an indication that some iron oxide was mixed into this paint mixture, or could indicate contamination of the pot with an iron-containing pigment.

<sup>461</sup> Brown et al., *Artists' Pigments: A Handbook of Their History and Characteristics Volume 1*, 198; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 106.



**Figure XIX.56** ATR-FTIR PB7 'Mineral Yellow' sample spectrum (black) compared to the stacked spectra of a Chrome Yellow standard (green) and a gum Arabic standard (orange). The overlay shows clear similarities between the chrome yellow standard and the sample spectrum, specifically the peaks at  $\pm 822\text{cm}^{-1}$ ,  $\pm 627\text{cm}^{-1}$  and  $592\text{cm}^{-1}$  are a clear indication that a match has been found. The broad peaks at  $\pm 3294\text{cm}^{-1}$  and  $2922\text{cm}^{-1}$  as well as the peak at  $\pm 1022\text{cm}^{-1}$  indicate that a gum Arabic is part of the sample mixture. Includes labels for the strongest peaks (shown in transmittance).

The identification of chrome yellow with pXRF is supported by the ATR-FTIR spectrum of the sample which closely matches a reference spectrum of a standard of chrome yellow (Figure XIX.56). The chrome yellow and the gum Arabic standard spectra together match most of the peaks seen in the PB7 Mineral Yellow spectrum. There is no clear evidence of any fillers or additives in the sample spectrum despite traces of other elements having been detected with pXRF.



**Figure XIX.57** PB7 BSE image indicating the analysis sites 1-4.

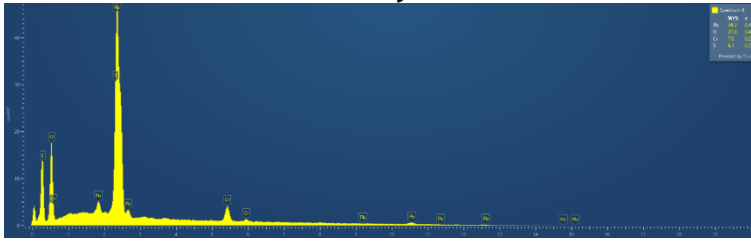


Figure XIX.58 SEM-EDX PB7 Site 4: The lead and chrome peaks are a clear indication that this sample contains lead chromate.

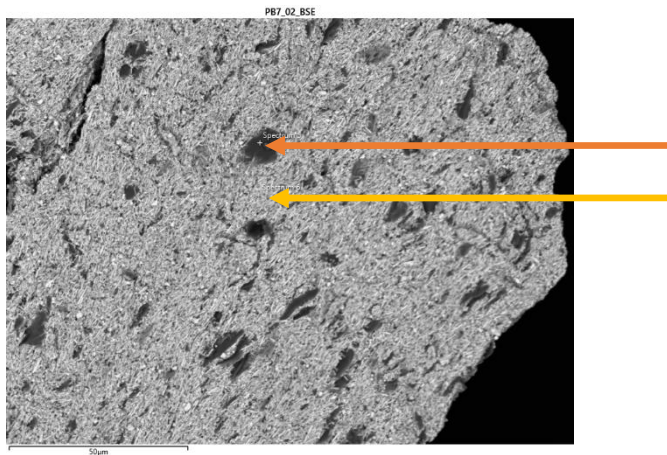


Figure XIX.59 PB7 BSE image indicating the analysis sites 5, orange arrow, and 6, yellow arrow.

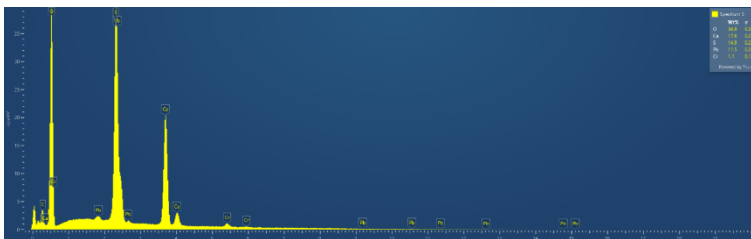


Figure XIX.60 SEM-EDX PB7 Site 5: The strong calcium and sulphur peaks indicate the presence of a calcium sulphate. The sulphur peak is partially masked by the lead from the lead chromate.

SEM-EDX further supports the identification of chrome yellow. The acicular particles visible in the backscattered electron image, when point analysed, reveal the presence of lead and chrome (Figure XIX.57 and Figure XIX.58). A calcium sulphate additive was identified in large particles in the sample (Figure XIX.59 and Figure XIX.60). Iron was also detected with SEM-EDX, this likely relates to an iron oxide pigment having been mixed in (Figure XIX.61).

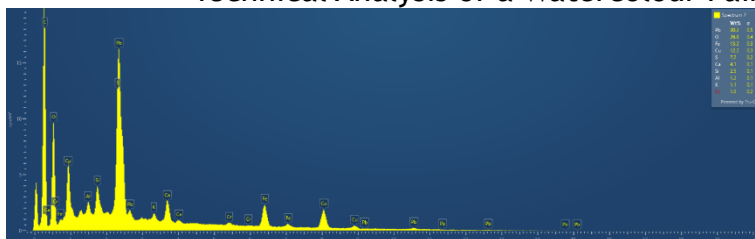


Figure XIX.61 SEM-EDX PB7 Site 7: In this site some copper has been identified, suggesting that a copper compound was added to the mixture. Additionally the detection of some iron suggests that some iron oxide may be part of the paint mixture.

Chrome yellow was not a particularly permanent colour. It tended to darken or brown with age. It has also been noted to turn green.<sup>462</sup> This latter aspect of chrome yellow can be observed within the sample from the paintbox. With pXRF, SEM-EDX nor with ATR-FTIR has a clear indication of other pigments been identified which could explain the green tone of the sample fragments. The green hue of the sample may be the result of the natural ageing process.

### XIX.XIII Conclusion

Questions remain about the acquisition of the paintbox, and regarding the paintbox itself. It is uncertain when exactly the paintbox was manufactured and sold by Roberson & Co. The objects within the paintbox have not been able to shed any light on a more precise dating of the paintbox (1841-1853). The enamelled pots were not standard paint containers and no limited range of paintboxes with these pots was identified in Roberson's catalogues. This suggests that perhaps this box was a special commission, although this seems unlikely as no evidence of similar commissions are known to exist. Cameron did not acquire this paintbox through the colourman as no reference to any paintbox was found within the records pertaining to Cameron's Roberson account.

Evidence that the paintbox has been used, has been found. It is uncertain if Cameron was the one to use the paintbox or whether it was used by a different artist before it came into Walker's and later Cameron's possession. Analysis of

<sup>462</sup> Feller et al., 190; Gettens and Stout, *Painting Materials: A Short Encyclopaedia*, 106-107.

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Cameron's watercolours might reveal more about whether he might have used the pigments identified within the paintbox and if so, how representative the pigments in this paintbox are for the pigments he used in paintings of this medium. Unfortunately, the technical examination of works in watercolour by Cameron is beyond the scope of this research. Additionally, it could be interesting in future research to compare the results of the pigment analysis of this paintbox with similar analysis of other Roberson paintboxes. This could reveal more information about whether the colourman had their own 'recipe' for making watercolours. It could also shed light on whether the enamel pots were a Roberson manufactured product or whether they originated elsewhere.

Despite the questions remaining regarding Cameron's acquisition and use of the paintbox, it provides unique and invaluable insight into the materials available to the artist. The paint mixtures in the pots correspond largely with the label with few additions rather than substitutions. For all paint mixtures sampled a tentative identification of pigments has been made, and the binder could be identified as a gum, most probable gum Arabic. The pigments have been identified as follows: Brown Oker contains an iron oxide pigment, likely a natural ochre. Prussian Blue indeed contains a Prussian blue with trace amounts of calcium sulphate. The lake pigments Dutch and Brown Pink were precipitated on metallic substrate, with potash alum appearing to have been used for Brown Pink and a chalk substrate for Dutch Pink. The analysis revealed evidence of the addition of a saccharide to the binding medium gum Arabic resulting in the crystalline structure seen in the samples. This is interesting as no saccharide has been identified in any of the other samples analysed. The organic component of these lake pigments has not yet been identified. The carbon pigment in the Blue Black pot is likely to be ivory black and evidence of an addition of an iron-containing compound has been found. Burnt Umber contains mainly a manganese iron oxide pigment. The name Mineral Yellow has referred to various pigments throughout history. The mineral yellow from the paintbox has been identified as a chrome yellow, one of the pigments Field lists in his *Chromatography* as being sold as mineral yellow. The perhaps most interesting discovery was made during



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 analysis of the paint from the pot labelled Naples Yellow. No evidence of a genuine lead antimonate has been found. The pigment has been substituted. However, it seems that the substitution identified in the Naples yellow pot from the paintbox is not one of the well-known substitutions of cadmium sulphide with lead or zinc white or chrome yellow. Instead, it appears that a lead-containing compound, perhaps lead white with lake pigments or a yellow lead oxide pigment, massicot, was used instead.

<i>Sample</i>	<b>Label and Description Colour</b>	<b>Microscopy: Sample Description</b>	<b>Pigments Identified</b>
<i>PB1</i>	Brown Oker; dark brown	Dark brown with yellow particles	Iron oxide, barium filler, and calcium carbonate and sulphate, gum Arabic.
<i>PB2</i>	Dutch Pink; light, yellow-brown	bright yellow with crystalline structure	Lake pigment on a calcium or aluminium substrate. Containing a sugar compound as well as gum Arabic.
<i>PB3</i>	Prussian blue; dark blue, near black	Dark blue, some fibres embedded	Prussian blue, calcium carbonate, gum Arabic.
<i>PB4</i>	Burnt Umber; dark brown	Dark brown, lighter along the edges where fragment is thinner.	Manganese iron oxide, probably umber, calcium carbonate, gum Arabic.
<i>PB5</i>	Blue black; black	Black with some transparent particles	Bone or ivory black, gum Arabic.
<i>PB6</i>	Naples Yellow; warm yellow	Light brown with red particles	Lead oxide or lead compound mixed with a lake pigment, barium sulphate, calcium sulphate.
<i>PB7</i>	Mineral Yellow; bright lemon yellow	Bright yellow and green with transparent particles.	Chrome yellow, calcium sulphate, gum Arabic.
<i>PB8</i>	Brown Pink; dark brown	Light brown with crystalline structure	Potash alum substrate, calcium sulphate, lake pigment, and a trace of iron oxide. Contains a sugar compound and gum Arabic.

Table XIX.1 Overview of pigments and binders identified in the paintbox samples. A more detailed table can be found in Appendix XVII.

## Appendix XX Overview of Paintbox Samples

<i>Sample</i>	<i>Label and Description Colour in Pot</i>	<i>Microscopy: Sample Description</i>	<i>pXRF</i>	<i>ATR-FTIR</i>	<i>SEM-EDX</i>
<i>PB1</i>	Brown Oker; dark brown	Dark brown with yellow particles	iron oxide, calcium and barium additives. Potential lead and zinc driers or pigments.	gum Arabic	Iron oxide with a calcium carbonate and calcium sulphate. Silicon indications for earth pigment.
<i>PB2</i>	Dutch Pink; light, yellow-brown	bright yellow with crystalline structure	Calcium substrate, iron oxide, zinc and lead compound potentially driers	gum Arabic, sugar compound	Aluminium and/or calcium carbonate substrate Calcium sulphate Indications that an organic pigment is present as no metallic pigment has been identified but substrates for lake pigments have been found (Al and Ca).
<i>PB3</i>	Prussian blue; dark blue, near black	Dark blue, some fibres embedded	Prussian blue, calcium additive	Prussian blue, gum Arabic	Prussian blue with an aluminium compound, a silicon compound and a trace of calcium carbonate.
<i>PB4</i>	Burnt Umber; dark brown	Dark brown, lighter along the edges where fragment is thinner.	Manganese iron oxide, calcium and barium additives	burnt umber, gum arabic	Umbre and calcium carbonate potentially. Natural manganese iron oxide, silicon presence.

<i>PB5</i>	Blue black; black	Black with some transparent particles	iron oxide, calcium and phosphate containing pigment. Potentially a zinc and lead pigments or driers	ivory black, gum Arabic	Bone black with silicon
<i>PB6</i>	Naples Yellow; warm yellow	Light brown with red particles	lead oxide, iron oxide	gum Arabic	Lead oxide or other lead compound with barium sulphate and calcium sulphate A silicon compound
<i>PB7</i>	Mineral Yellow; bright lemon yellow	Bright yellow and green with transparent particles.	lead chromate, calcium additive	Chrome yellow, gum Arabic	Lead chromate and a calcium sulphate with a little iron oxide and copper pigment.
<i>PB8</i>	Brown Pink; dark brown	Light brown with crystalline structure	Calcium substrate, iron oxide, zinc and lead compound potentially driers	gum Arabic, sugar compound	A lake pigment on a potash alum substrate and calcium sulphate. With a trace of iron oxide.
<i>Enamel Pot Background</i>	Bright blue	-	Cobalt pigment, lead white, iron oxide pigment, copper metal pot	-	-

## Appendix XXI Technical Examination Documentation

### XXI.I A French Harbour

#### **General information** (*cataloguing data used by the owner*)

Acquisition number/identifier: GLAHA43429

Collection/owner: Hunterian Collection (Bequeathed by Prof. J.M. Wordie)

Name of Examiner: Tess Visser

Location of Examination: ConsLab2 Hunterian Kelvin Hall

Examination Date: January 2020

Artist: David Young Cameron

Title: *A French Harbour* (The painting has also been referred to as *Fishing Village* on labels and in object history files)

Date: 1894, the painting was exhibited in 1895 at the Glasgow Art Club and perhaps also at the RSA.<sup>1</sup>

Measurements: Height: 89.2 cm; Width: 127.1 cm; Depth: 2.9 cm

Medium/support: Oil on canvas

Description: The painting depicts a harbour scene with figures and boats. On the left side, a group of figures is walking towards the boats in the centre where two figures can be seen working in a boat. Another single figure sits in a boat on the right side of the painting. In the background a boat is sailing away. In the distance white houses with red roofs are visible against a backdrop of hills and a cloudy sky. It is possible that the hills are actually sea, but that the yellowed varnish has caused the area to appear greener and therefore suggest hills rather than sea. In the foreground, a basket is depicted on the left as well as two large rectangular sails and on the right a harbour ring is shown. It is hard to state what time of day the scene depicts but it is most likely an early morning or dusk scene.

Provenance: *A French Harbour* was bought from the artist by William Wordie, who lent two paintings by Alexander Mann to "Scottish Exhibition", Glasgow 1911, and lived 52 Montgomene Crescent, Kelvinside, Glasgow. It then belonged to Professor J.M. Wordie. The painting was given to the Hunterian in 1952 together with A. Roche's *Head of a Young Girl* and J. Reid Murray's *Landscape with Two Calves and a Lake* (266).<sup>2</sup>

Last checked: 24 February 1994

Analysis Conducted: Photography (normal light, raking light, ultraviolet light), IRR, XRF, sampling (cross-sections) SEM-EDX

## Painting Support

### Support

Material: Canvas

Weave type: tabby/plain (open weave)

Weave count (threads/cm<sup>2</sup>): 14 warp/cm<sup>2</sup> 14 weft/cm<sup>2</sup> (fine canvas)

Tacking margin: (*location*) The original canvas is attached with tacks to the outer edge of the stretcher. The strip lining has been stapled to the reverse. In the original canvas, previous tack holes are visible.

Auxiliary support (stretcher/strainer): (*material, number of bars, fixed/expandable/blind, number of keys, dimensions of bar*)

Stretcher with one cross brace in the middle of the longest side. When looking at the verso, each corner of the stretcher has two keys, except the bottom left corner, which only has one key inserted. The cross brace is keyed at the top and bottom, with the key at the top being on the opposite side of the brace from the key at the bottom.

Comments: (*manufacturer identifiers: e.g. colourman stamps*)

No stamps are visible.

At the top of the cross brace, there is a label from the Hunterian Gallery:

‘This is the property of HUNTERIAN ART GALLERY  
The University. Glasgow G12 8QQ  
Tel. 041 - 339 8855 Ext  
Artist: D. Y. Cameron  
Title: Fishing Village with Figures and Boats  
No: 266’

In the bottom left a small adhesive label reads:

‘GLAHA43429 “A French Harbour”, Cameron, Sir David Young, 1894-1894, painting, oil  
\*barcode\* \*000033975\*’

Along the top and right-hand bar, residue from adhesive labels or tape is visible. It is unclear what might have been attached here. Due to the length of the residue, it seems that adhesive tape was most likely used.

Condition: (e.g. tears, draping, detachment from stretcher)

The canvas is in plane and taut. It has been lined with a transparent material, i.e. Mylar or Melinex, as well as having been strip lined, with wax and resin.

There is a tear in the original canvas which is not clearly visible in the paint surface but can easily be seen through the transparent material on the reverse. The tear becomes visible when the painting is viewed in transmitted light. When it is known the tear is there, it is possible to identify the area on the recto of the painting.



Detail photograph of *A French Harbour* showing the loss in canvas and the repair.

The reverse has been painted with a black paint as well as a dark yellow. Along the bottom, two solid black lines are visible as if they have been painted on.

The strip-lining has left the edges of the original canvas extremely brittle. Excess of the lining adhesive is clearly visible. The original canvas has split at some of the corners where the strip-lining keeps it adhered to the stretcher. At the edges of the original canvas, it is no longer adhered to the strip lining allowing small pieces to fall from the painting during de-framing or when moving the painting. Two pieces of original canvas from along the tacking margin that fell off during de-framing have been saved with the samples taken from the painting.

It may be that the strip-lining is responsible for the 'sinking in' phenomenon of the paint mentioned in the 'paint' section. Though this 'sinking in' may also be the result of the open weave of the canvas.

The transparent lining is likely to have been applied in the 1970s or after.<sup>3</sup> No record of the treatment has yet been found, if such a record exists. Within the object history files, no mention is made of a lining treatment nor of the transparent material on the reverse. As the painting came into the Hunterian collection in 1952, the treatment is likely to have been carried out on request of the Hunterian.

In normal light, some coloured brushstrokes are visible on the reverse that could have belonged to a previous composition. An infrared reflectograph was taken of the reverse to establish if a composition was present and if the transparent lining may have been applied to allow this composition to remain visible. The reflectograph does not show any clear underdrawing. It appears that the verso was painted first and covered in the black or dark paint before being turned over and re-stretched as it is currently. The dark paint can be seen underneath the stretcher bars and reaches to the extreme edges of the canvas. This would not have been possible if the canvas had already been stretched as it is currently.

Microscopy of the cross-section and SEM-EDX analysis of a sample of the verso has revealed that a chalk ground, a lead white layer and two paint layers are present on the verso. With SEM-EDX a potential thin third paint layer can be seen which is not visible in the microscopy images of the cross-section. This suggests that a composition was started on the verso. The top layers are dark and contain mainly darker particles. However, some yellow particles and a few red particles can also be seen.

### Ground/Preparation Layers

*(commercial, artist's own, coverage)*

Commercially applied ground. Cusping is only visible on the left edge of the painting, suggesting that the canvas was cut from a larger commercially ground piece after which it was attached to the stretcher. It seems likely that the verso contains a commercially applied ground, and that upon turning the canvas over and re-stretching it, Cameron applied a ground layer himself on the recto. This ground layer does not appear to reach the edges of the canvas suggesting that it was only applied on the area which he intended to paint. Around the edges, it is possible that the ground layer applied to the recto has sunk into the weave as a consequence of the lining treatment.

In a cross-section of the verso analysed with SEM-EDX analysis, two ground layers can be seen. A chalk ground and a thin lead white layer with barium sulphate as an additive.

Potentially a red priming layer was applied to the recto as red pigment has been identified throughout the painting during microscopy examination. Furthermore, with the XRF indication of mercury has been found in all areas examined, suggesting that vermilion may have been used. The cross-sections from the recto did not clearly reveal the presence of a ground or a toning layer. This is likely because the samples were taken from the extreme edges which were probably most strongly affected by the lining treatment. Additionally, Cameron may not have applied a toning layer all the way over the foldover edge, similarly with his ground.

Size on support: Not visible with naked eye or microscope.

Colour of ground: White

Application features: none visible

Number of layers: 2 on the verso, likely 1 on the recto

Binding media: *(estimated or confirmed by analysis)* oil



Character/texture of ground: The ground seems smooth but cross sections will help in determining the character of the ground more.

The ground on the reverse has two layers, a chalk and a lead-white layer.

### **Composition/underdrawing/underpainting/incising**

Instrument/Medium: None identified

Extent/Characterisation: No underdrawing has been identified.

Pentimenti: A ship was painted sailing on the water to the left of the boat with two sails still visible in the final composition. Potentially the figure group, bottom left, was slightly differently arranged. However, it is difficult to determine exactly how the group may have been differently arranged. Above the heads of the figure with the white cap carrying a basket and the figure of the lady at the end of the group, thicker paint application is visible. In the infrared, nothing is visible here in terms of different shapes, but the thicker application could indicate that the heads were depicted higher up, overpainted and finally painted lower down. Or that more heads (and figures) were initially planned and then overpainted. However, no clear evidence for either suggestion has been found yet.

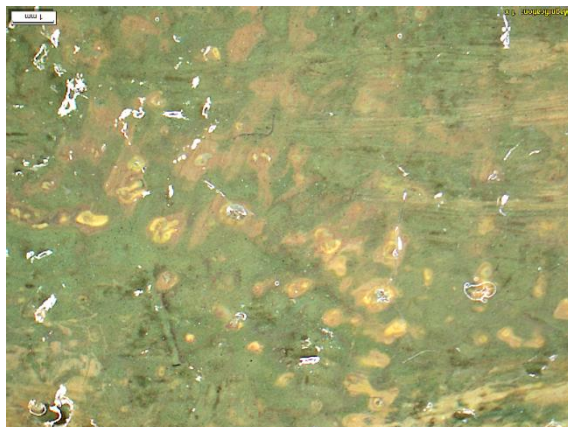
The large, rectangular sail on the left side seems to have had a different shape, being more triangular and showing more of the sail behind it.

The large sail on the boat in the background appears to have been altered somewhat; the top sail and its clear delineation have been added on later on in the painting process.

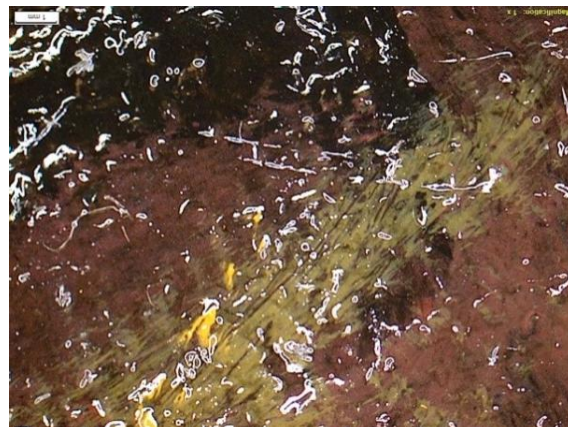
### **Paint**

*(estimation of medium: oil, acrylic, household, resin, water-based etc)*

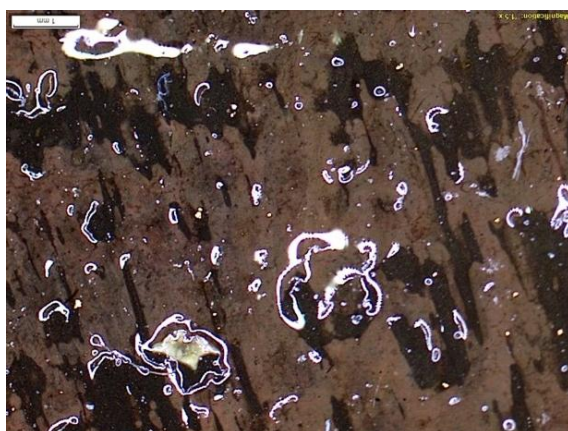
# Oil paint



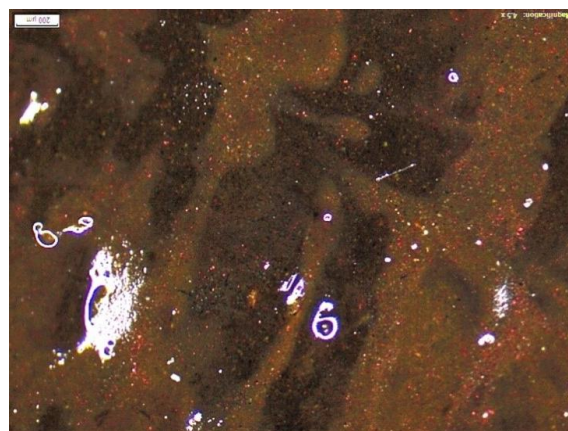
Hills to the right of the large rectangular sails, fluid paint application, 1x.



Application of little medium over dry paint in the basket in the left corner, 1x



Application of little medium over dry paint in the bottom right corner. A white protrusion visible in the bottom right corner, 1.5x



Sail of the boat in the middle of the painting showing different pigments, 4.5x

Paint application: (*method of application, surface texture*) The paint is applied opaque and has been applied relatively dry in some areas where impasto is still visible and more fluid in other areas where the paint seems to have spread a bit.

Even though the overall appearance of the painting suggests a rather thick paint layer, there are areas where the canvas weave is clearly visible, and the paint is more thinly applied or Cameron may have rubbed in or scraped his paint. The lining treatment may have also caused the paint to sink into the weave a little, making the canvas weave more prominent in the paint surface. Areas of a fluid and thinned paint application are visible.

The paint has been applied in a stiff paint, resulting in clear impasto. The impasto may have been altered and flattened during the lining treatment. The paint was applied wet-in-wet and wet over mostly dry. Quite a few brushstrokes are visible which cover the underlying paint without mixing but create a kind of feathery look as if little medium was present on the brush during this application.

The paint may have been mixed on the palette as often different pigments are visible in one brushstroke.

The lines between the different shapes, figures and background are often blurred as a similar mixture of pigments is used for both the main shapes in the painting and the background. To offset the figures and prominent features such as sails and boats, the artist has in places outlined the shapes, for instance the sails on the left side of the painting.

Almost all areas of the painting of which micrographs have been taken contain some red or are painted over a red layer.

The darkened varnish makes it hard to understand if this scene is a day or night-time scene. Additionally, the lining treatments seem to have influenced the paint surface, making it harder to read the impasto.

Utensils used for paint application: the paint was applied with square brushes of various sizes. From a wide brush (2-3 cm) to a thinner brush (0.5 cm) for the details such as the mast of the boat.

Pigment palette: *(estimate/provide results of analysis)*

*Microscopy:* Based on the particles visible, it is possible two different red pigments are present. One with a slightly reflectant, irregular particle and the other with a darker red, non-reflectant, square particle.

Green, yellow, black and red pigment particles are seen throughout the work.

*XRF:* Lead white, vermillion, green pigment, iron oxide yellow, iron oxide brown (no Mn therefore no Umber), charcoal black, carbon black. A Chrome green and/or yellow.

*SEM-EDX:* cadmium sulphate (verso), vermillion, red lead, chromium oxide green

Filler: Barium sulphate (XRF and SEM-EDX on the verso).

Binding media: *(results of analysis)* oil (untested)

Phenomena: *(e.g. blanching, sinking, pitting, bubbles, cracking, wrinkling)*

Wrinkling is visible throughout the painting. The most prominent wrinkling can be seen in the bottom centre. Smaller areas of less obvious wrinkling are visible throughout the entirety of the painting, for instance in the sky and the sails. These areas of wrinkling may be the result of a drying defect in the paint layers. However, it cannot be excluded that the wrinkling was also influenced by the lining process.

There are small drying cracks throughout the painting, but they do not form large complex structures and they do not disturb the overall image. The cracks appear not to extend through the ground layer.

**Condition** (*post-production features: e.g. flaking, paint loss, scratches*)

There is some paint loss along the edges where the paint layer may have been slightly damaged by the frame or by removal of the frame. There are few protrusions visible in the painting. It is possible the protrusions visible relate to the formation of lead soaps. Overall, the paint seems to be in fairly good condition and is still well adhered to the canvas.

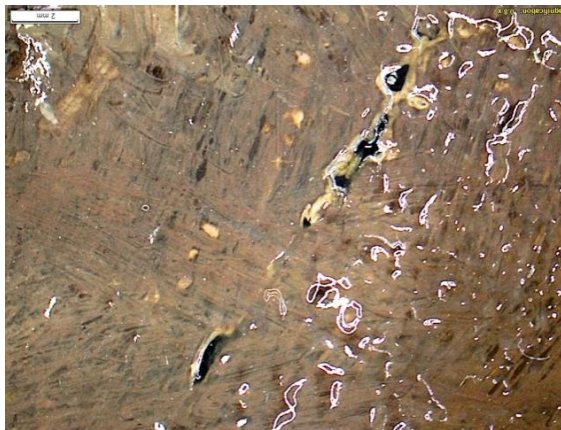
A prominent phenomenon is the apparent sinking of the ground into the canvas weave. Especially along the edges the ground appears to have completely sunk into the canvas weave. A thin pigmented layer is visible on top of the weave, indicating that these areas may have been painted with a brush with little medium, skirting only over the tops of the weave. This phenomenon is most prominent along the bottom edge of the painting. This could be the result of the open weave, although the lining process may have influenced this phenomenon as well.



Bottom edge on the left-hand side, shows the sinking of the ground in between the canvas weave with only a pigmented layer still visible on top of the weave, 2x.

An abrasion to the paint surface is visible in the area where the boat has been overpainted by the houses. In this abrasion a white paint layer can be seen and a black layer. This black may correspond to the sail that was painted here initially although no similar areas of black have been identified in the other sails.





Abrasion in paint surface to the right of the large rectangular sails in the area of the houses, 0.8x.



Detail of the abrasion showing black paint underneath the white, 4.5x.

### Varnish (*natural, synthetic, partial, location*)

The most recent varnish is likely to be synthetic.



Photograph of *A French Harbour* in ultraviolet light.

The varnish is glossy and appears to be quite thick. Depending on the lighting conditions the varnish can inhibit the legibility of the painting due to its glossiness.

Two varnishes are visible on the painting. One varnish was applied most likely while the painting was framed, covering everything but the extreme edge, as a slight difference in fluorescence is noticeable around the edges of the painting. Before this varnish was applied, a different varnish covering the entirety of the painting is visible (around the edges).

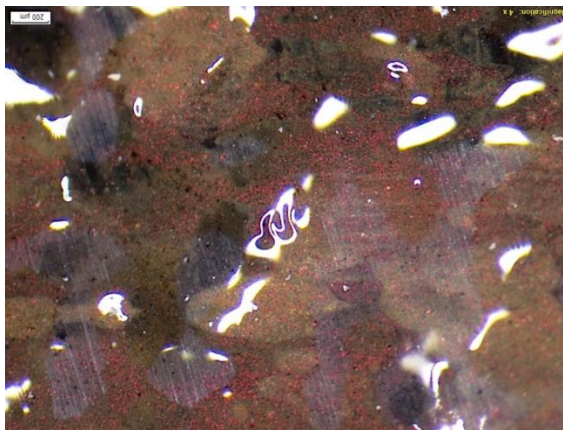
There are a few areas which do not fluoresce that most likely correspond to areas of retouching.

When looking at the ultraviolet image, the brush application of the varnish becomes visible. Along the bottom edge the ends of strokes can be seen, where the varnish has

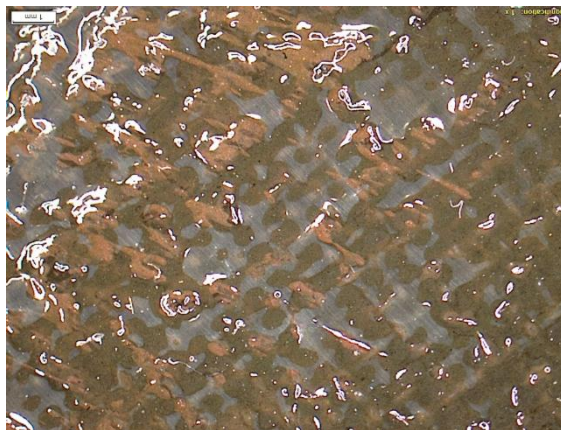
pooled slightly and fluoresces more. In other areas, diagonal brushstrokes can be seen in the varnish layer.

Condition: The varnish is yellow and darkens the overall image of the painting.

Throughout the painting, there are areas that appear to be milkier, as if a semi-transparent white surface covers the paint layer. In these areas cracking can be seen inside the varnish layer, in some of these areas reaching the surface of the varnish layers. These milky areas do not follow a specific shape or brushstroke and seem to have randomly generated and spread. As more than one varnish layer is present on the painting, it is likely that one of the lower varnish layers is cracking and detaching from the paint layer. Especially in the valleys between the weave the cracking can be seen.



Ground underneath group of figures showing cracking in the varnish layer, 4x.



Varnish cracking to the left of the group of figures, 1x







**Signature/Inscription** (*transcription, medium, location*)

The painting has not been signed.



Condition Diagram



-  Severe Wrinkling
-  Tear in canvas
-  Brush Hairs
-  Drying crack
-  Thicker paint
-  Delaminating varnish



## XXI.II Cloister at Montivilliers

### General information (*cataloguing data used by the owner*)

Acquisition number/identifier: GLAHA43431

Collection/owner: Hunterian collection

Name of Examiner: Tess Visser

Location of Examination: ConsLab2 Hunterian Kelvin Hall

Examination Date: January 2020

Artist: David Young Cameron

Title: *Cloister at Montivilliers*

Date: 1900-1908

(most likely made after Cameron's visit to Montivilliers in France in 1903)

Measurements: Height: 28.4 cm; Width: 25.2 cm; Depth: 0.7 cm (closest to a figure no. 3: 22x27 cm)

Medium/support: oil (untested) on panel

Description: *Cloister at Montivilliers* depicts the cloisters at the abbey of Montivilliers in France on a sunny day. Two nuns are depicted, one sitting and the other entering the cloisters from a landscape in the background. A building with a red roof is a prominent feature. Another building can be seen in the background, potentially attached to the cloisters. Next to the red building and in the background an open sky and a grassy landscape are depicted, suggesting the cloisters to be in a rural location. Overall, the scene is painted loosely and gives an impression of the cloisters.

Cameron visited France in 1903, after which he painted this picture.

The abbey and its cloisters were no longer a functioning monastery run by nuns by the time Cameron visited as it had stopped being in use as such at the end of the eighteenth century. The abbey and its cloisters are located in the centre of the town of Montivilliers, making it unlikely that such an open sky and landscape as Cameron depicted were actually visible at the cloisters.<sup>1</sup> Therefore, it may be possible that Cameron depicted a Romantic scene, looking back towards the time the abbey and its cloisters were in use by the nuns.

Provenance: Owned by T. & R. Annan & Sons Ltd.; Purchased by Professor Alec L. MacFie on 29 May 1944 for £68-15-0. The painting was donated to the Hunterian by Professor Alec L. MacFie in 1979 (573).

Last checked: Condition check was executed 24 February 1994.

Analysis: Microscopy, IRR, Photography (normal light, raking light, UV, IRR), XRF, SEM-EDX, FTIR

## Painting Support

### Support

Material: panel, appears to be a hard wood with a red tone. Further examination of the panel boards is required to identify the specific wood used.

Pieces: The panel consists of 2 pieces. The join of the two boards can be seen on the verso running vertically through the middle of the panel. The seam is very smooth and is not visible from the front. It is visible on the back because the wood grain of the two panels differ. The edges of the panel have been bevelled.

Comments: (*manufacturer identifiers: e.g. colourman stamps*)

No colourman stamps visible. Three adhesive labels have been applied to the verso (see figure).

Top: Adhesive label related to unnamed exhibition:

‘Sir D.Y. Cameron 1865-1945  
Cloister at Mt. Villiers.  
Oil on Panel  
Lender: Hunterian Gallery’

An adhesive label from the Scottish Arts Council:

‘The Scottish Arts Council  
Exhibition THE GLASGOW BOYS  
Artist SIR D.Y. CAMERON  
Cat. No. & Title CLOISTER AT MONTEVILLIERS c.1908  
Size & Medium  
Owner MISS.M.M. MACFIE  
11 Rothesay Terrace, Edinburgh 3, Tel. 031-225 2769’

Adhesive label, T & R Annan & Sons

Handwritten:

‘“*Cloister at Montivilliers*” Painting on panel by Sir D.Y. Cameorn, R.A. circa, 1903  
[Typed] From T. & R. Annan & Sons 518 SAUCHIEHALL STREET GLASGOW, C.2’

Discolouration of the panel indicates that another adhesive label was once attached to the panel but has been partially removed; some remnants of this label are still adhered to the panel. Furthermore, paper remnants of adhesive tape or labels can be seen forming a rough square. The bevelled edges appear to have never had a label or tape adhered to it.

Condition: (e.g. tears, draping, detachment from stretcher)

Good, panel is stable. Paper remains from tape can be seen on the reverse.

### Ground/Preparation Layers

(commercial, artist's own, coverage)

The ground was likely commercially applied but seems to have been altered by the artist while he was working on it. This is discussed further below.



Ground layer and panel visible through loss/abrasion along the top edge of the painting, 4.5x.

Size on support: Not identifiable with stereo microscopy or naked eye.

Colour of ground: Creamy white

Application features: At the bottom, through the light brown paint, a ribbed texture can be seen. This could relate to the application of the ground with a brush. The irregularity of the ribbing suggests a brush is more likely than a comb, as with the latter a more regular ribbing pattern would be expected. In raking light, this ribbing is more visible throughout the whole of the painting. However, this same texture is not visible in the areas of the sky where the artist may have altered the ground, or used a different paint application.

Number of layers: 1, zinc white ground

Binding media: (estimated or confirmed by analysis) oil

Character/texture of ground: slightly ribbed (brush application)

## Composition/underdrawing/underpainting/incising

Instrument/Medium: Pencil or charcoal, a dry medium



Underdrawing line of right side of arch in background, 4.5x.

Extent/Characterisation: Detailed sketch of architecture and the seated nun including guidelines for the perspective.

Pentimenti: The seated nun was drawn in closer towards the arch but was moved forward in the painting stage. The arch in the background was pointed in the underdrawing but is rounded in the final image. The perspective has slightly changed, clearest when looking at the horizon which has been lowered in the final image. The pillars on the left had a slightly different shape in the underdrawing. At the top the pillars tapered outward, and, on the inside, they had a diagonal beam leading from the pillar to the crossbeam. The ceiling may have been initially planned with two cross beams instead of the one visible in the final composition. However, it is also possible these lines were drawn to aid in the development of the perspective.

## Paint

*(estimation of medium: oil, acrylic, household, resin, water-based etc)*

Oil paint

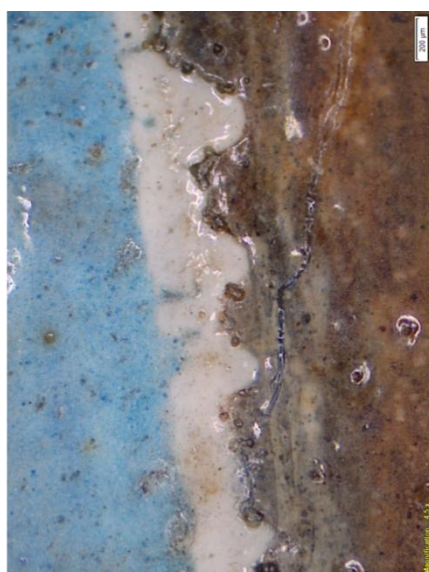
Paint application: *(method of application, surface texture)* smooth application, paint seems to have been thinned before application. The blue and green areas appear to be painted more thickly in comparison to other areas in the painting. However, this could be due to the use of opaquer, less thinned paints in these areas. The surface is relatively smooth.

The paint has been applied wet-in-wet and mixed on the palette. For instance, within the sky varying shades of blue are visible within one brushstroke indicating that the paint was not fully mixed before being applied. Furthermore, there are several examples of wet-in-wet application; the highlight in the first balustrade shows that the underlying paint was not fully dry before the highlight was applied, and the red roof shows bright red mixed in with a brown pigment.

However, there are also a few areas in which the paint was allowed to dry before a next layer was applied. The nun in the foreground and the red 'fabric' are painted over the light brown layer and do not seem to have blended with this brown layer, implying that the light brown layer was dry when the nun was painted.

In a few areas in the painting, green strokes can be seen, for instance on the wall above the seated nun. The colour is also visible around the arch in the background and the wall of the building with the red roof. What the purpose is of these green strokes is unclear. The green appears much stronger in the photograph than in real life, where it is visible but not as obvious.

It is possible that the sky was originally a different colour, for instance a darker blue, which can be seen in a crack running into a pillar (see fig. 3). This could indicate that originally the sky was a darker blue, as if a night sky, and that the artist later decided against this darker colour and replaced it with a brighter shade of blue to create a daylight scene.



Blue visible in crack as well as potential palette knife marks along the edge where the sky and pillar meet, 4.5x

The highlights, applied in one single stroke, have been painted with a mixture including red, brown, yellow and an opaquer paint, therefore being the opaquest part of the architecture. In the ceiling, diagonal brushstrokes were used, leading towards the top centre to suggest a slanted roof.

A slight pooling of the thinned paint can be seen, for instance at the bottom of the shadows created by the pillars. This indicates that the painting was painted or dried upright. The shadow of the first painting, most in the foreground, has a drop of paint running down on the left side, near the balustrade (fig. 4).





Fluid paint application in the shadow of the pillars running across the path, detail.

In the light brown path, a few brushstrokes are clearly visible and there is a bit of impasto in the strokes (fig. 6). The strokes run largely horizontally and do not cover the entire width of the path. It is a combination of several brushstrokes running slightly different paths. The tops of these brushstrokes appear lighter as if the layer of light brown paint is thinner here.



Brushstrokes along the path with slight texture, detail.

Utensils used for paint application: brushes of various sizes. Medium to soft brushes. Relatively narrow/small (0.5 cm) in details to slightly wider (2cm) brushes in architectural elements.

Palette knife for scraping away paint layer/ground in sky areas.

Pigment palette: *(estimate/provide results of analysis)*

**Microscopy:** Within the painting red, black, green, yellow and blue particles have been identified. With microscopy black particles with a splinter shape have been identified. These are associated with charcoal black. The morphology of the yellow particles was hard to discern within the painting. The particles appear coarse and square-like. The green and red particles were present in all brown areas. Both particles were fine and angular. In the discussion of the samples taken from this painting in Appendix F2, a more detailed description of the particles can be found.

**XRF:** Charcoal black, carbon black, vermillion, iron oxide browns, iron oxide yellows, lead white, a zinc containing pigment, a green pigment, a yellow pigment, cobalt blue, red lake

**SEM-EDX:** zinc white, lead white, vermillion, iron oxide, chromium oxide, red lead, iron oxide red. Barium sulphate and a calcium compound have also been detected.

**Binding media:** thought to be oil

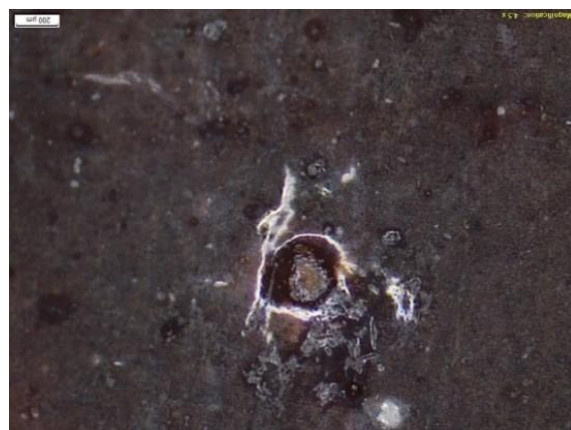
**Phenomena:** (*e.g. blanching, sinking, pitting, bubbles, cracking, wrinkling*)

Drying cracks visible throughout the painting, but especially prominent in the dark area of the ceiling. The cracking may be caused by the use of a megilp or a bituminous paint, both of which were common in the nineteenth century.<sup>2</sup> Medium analysis with FTIR will be carried out on a sample taken from the edge of this dark brown paint to identify what is causing this cracking.

Irregularities, such as protrusions and white spots, are visible throughout the painting. It appears that these spots are found within the paint layers. They may be metal soaps related to lead white in the ground layer. Analysis of a paint cross-section will provide more information on the composition of the ground. This may further clarify if these spots are lead metal soaps.



White spot coming through along a crack to the left of the central beam in the ceiling, 30x.



Protrusion in the dark brown area to the right of the central beam in the ceiling, 45x.

**Condition** (*post-production features: e.g. flaking, paint loss, scratches*)

See condition diagram below.

Some losses are visible along the edges where a frame may have been previously attached.

Some irregularities can be seen in the paint surface. White spots and protrusions, likely lead soaps, can be seen throughout the painting, see above.

The drying cracks run in the paint layers revealing the ground layer in the cracks.



Some of the drying cracks in the ceiling, for instance to the right of the central beam have been retouched. This retouching is visible with the naked eye and made clearer with a microscope. In the ultraviolet image, the retouching is visible in those areas that are not fluorescing.

Overall the adhesion of the paint layers to each other and the support is good with no delamination being visible. However, within the varnish layer air bubbles are visible and here some delamination within the varnish layer may be seen.

**Varnish** (*natural, synthetic, partial, location*)

The varnish is most likely synthetic.

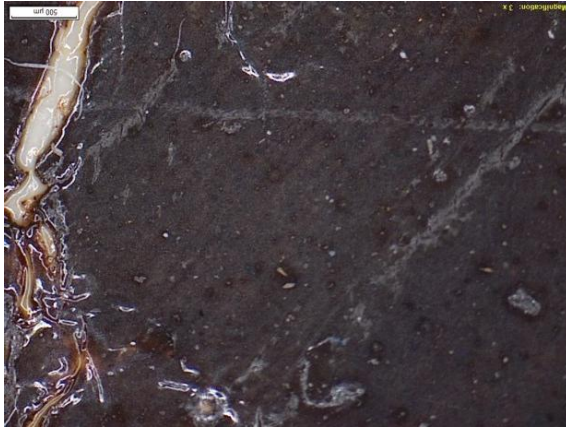
A varnish layer has been applied overall. However, potentially the painting has been partially cleaned in the lighter areas or an extra varnish layer was applied over the dark ceiling area as the colour of the fluorescence is slightly different. The majority of the painting fluoresces a blue-white, whereas the ceiling area has a green tinge to it.



Photograph of *Cloister at Montivilliers* in ultraviolet light.

The varnish was likely applied with a brush; with a microscope a brushstroke is visible in the top right corner going diagonally towards the centre of the painting.

A scratch runs horizontally through the varnish layer, near the top, see the condition diagram below.

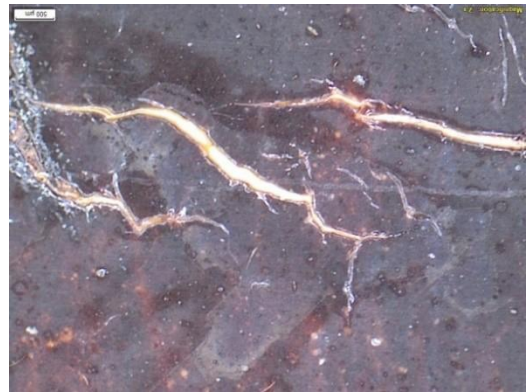


Diagonal brushstroke and scratch in varnish visible near the top right corner, 3x.

Condition: The varnish is glossy when examined with the naked eye. When viewed under the microscope, the varnish appears milky and contains air bubbles as well as other discrepancies such as a matt spot.



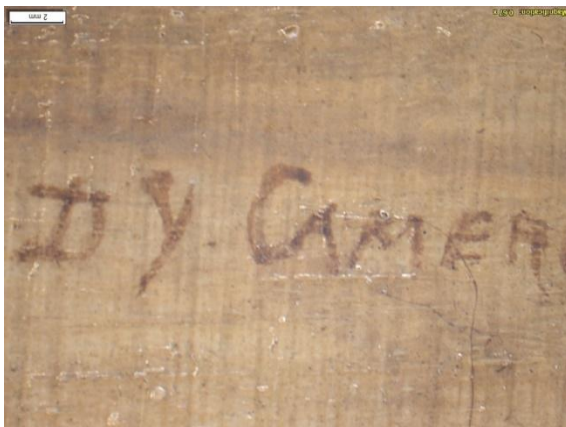
Small matt area within varnish layer along the top edge, 2.5x.



Air bubbles in varnish layer towards the right of the central beam in the ceiling, 2x.

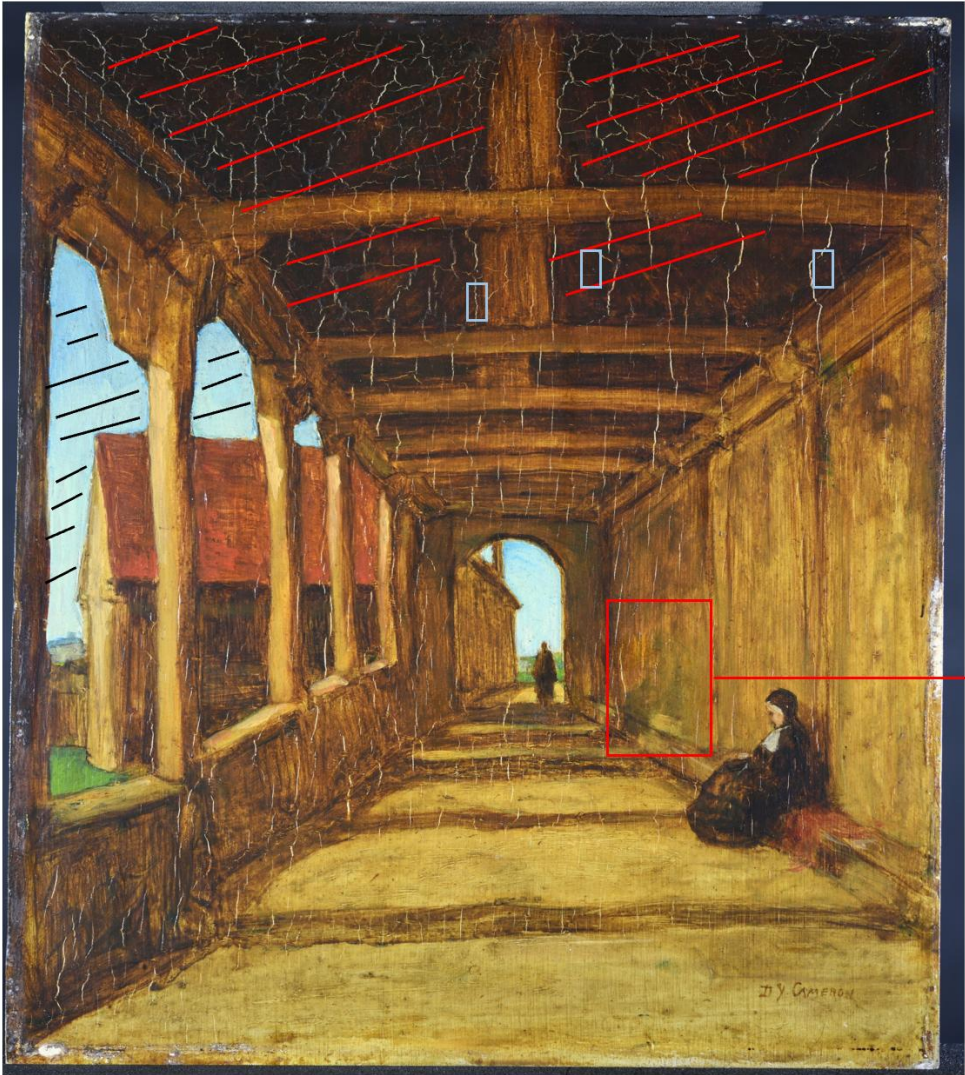
**Signature/Inscription *transcription, medium, location***

Signed in brown paint in the bottom right corner: D.Y. Cameron (fig. 13).



Signature in the bottom right corner, 6.7x.

Condition Diagram



Pentimenti

- Severe cracking
- Different surface texture
- Protrusion



### XXI.III Morning in Lorne

**General information** (cataloguing data used by the owner)

Acquisition number/identifier: GLAHA43432

Collection/owner: Hunterian collection

Name of Examiner: Tess Visser

Location of Examination: ConsLab2 Hunterian Kelvin Hall

Examination date: November 2021

Artist: David Young Cameron

Title: *Morning in Lorne*

Date: Unknown. Most likely after 1900.

Measurements: Height: 92.4 cm; Width: 48.8 cm; Depth: 2.4 cm

Medium/support: oil (untested) on canvas

Description: A landscape of the Lorne area (Argyll and Bute) of the highlands at dawn or early morning. The sun is still low in the sky, below the horizon. The sun seems to be rising behind the hills and mountains, that are the main subject of the painting. A warm red and yellow hill is featured in the midground and breaks up the foreground and the background.

In the foreground, the edge of a lake or river can be seen coming from the bottom right and ending in the middle of the foreground. A fence and a highland hut are visible on the bottom left. Beyond the fence, two donkeys can be seen. In the middle there may be a figure although it is hard to make out what exactly is depicted here.

The big mountain seen in the painting may be Ben Cruachan seen from the side of Taynuilt (west of Ben Cruachan).

Provenance: gift from Professor Alec L. Macfie, 1973

Analysis: Microscopy, IRR, Photography (normal light, raking light, ultraviolet light), XRF, SEM-EDX, FTIR

**Painting Support**

Support

Material: canvas

Pieces: 1

Weave type: plain weave. There are some areas with weave faults, for instance in the big hill in the middle of the background. There are other areas with a slight weave fault where the weave seems to be slightly lifted.

Weave count (threads/cm<sup>2</sup>): 11-12/cm weft

Tacking margin: (*location*): over the foldover edge. The canvas has been further attached to the stretcher with tacks on the verso.

Auxiliary support (stretcher/strainer): (*material, number of bars, fixed/expandable/blind, number of keys, dimensions of bar*) Stretcher with two crossbars. There are two keys in all corners but the top right corner (seen from verso), in which there are no keys. The horizontal crossbar has been keyed with one key from the top on the right side. The vertical crossbar has one key inserted to the left of the top of the bar.

Comments: (manufacturer identifiers: e.g. colourman stamps)

The canvas has been primed on both sides. The white colour of the canvas visible on the verso is the same colour as that visible along the extreme edges of the recto's tacking margins to the stretcher.

There are no colourman stamps on the verso.

On the horizontal and vertical crossbars, something has been written. A white material was used to write 'James' on the horizontal crossbar. There may be something written after 'James' but this cannot be read. It is possible that 'James' refers to James Connell & Sons, picture dealers in London and Glasgow. James Connell was Cameron's agent in Glasgow and London from 1899 until the early 1930s (Bill Smith 'Vision of the Hills', p98).

On the vertical crossbar something is written in pencil. Due to the loan label attached to the crossing point of the vertical and horizontal bars, the pencil writing cannot be read.

At the top edge, along the middle, of the canvas on the verso has been written 'Morning in Lorne D.Y. Cameron' in pencil.

The loan label reads:

'HUNTERIAN ART GALLERY  
University of Glasgow, Glasgow G12 8QQ  
Tel: 0141 330 5431

ON LOAN  
GLAHA NO: 43432  
ARTIST: D. Y. CAMERON  
TITLE: *Morning in Lorne*

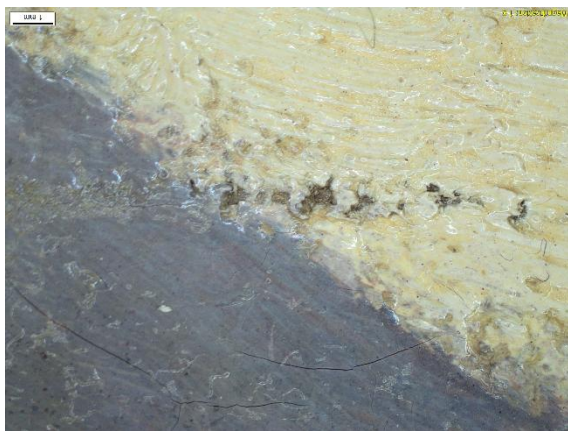
MEDIUM: oil painting  
TO: Principal's Lodging; lower drawing room  
03/02/2002  
HUNTERIAN ART GALLERY'

Condition: (e.g. tears, draping, detachment from stretcher)

There are no tears in the support. However, the canvas is no longer taut and in plane. In both top corners, the canvas can be seen to have gone slightly slack.

On the verso, in the top right corner (as seen from verso) a small tear in the canvas can be seen. On the recto no evidence of this slight tear can be seen.

In the blue hill in the middle of the painting, a weave fault can be seen.



Weave fault in canvas, 1x.



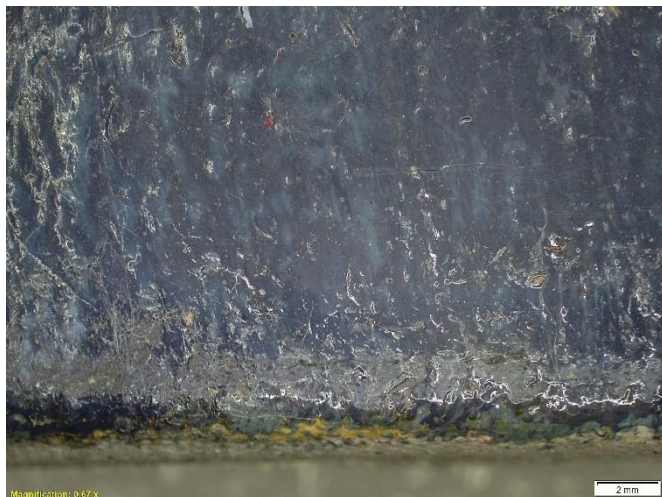
Weave fault in canvas, 0.67x.

### Ground/Preparation Layers

(commercial, artist's own, coverage)

The canvas has been commercially prepared. As is evidenced by it having been applied to the extreme edges of the canvas, and by both recto and verso having been primed.

There are a potential three other layers: A creamy-yellow white layer which has been applied over the entire recto of the canvas and can be seen on the foldover edges on the verso of the painting; a light grey layer which can be seen on the foldover edges of all sides but does not reach the verso; and a warm yellow layer which has been applied only to the surface on which the landscape has been painted on the recto. It is just visible underneath the paint on the foldover edge. It is possible that the light grey layer is not an actual preparation layer but instead shows dirt accumulation along the foldover edges of the canvas.



Yellow paint layer visible underneath the sky paint on the foldover edge, 0.67x.

The white ground layer and the creamy-yellow priming layer were likely commercially applied as both are visible on the verso of the painting.

Size on support: (not identified)

Colour of ground: The first ground appears to be white. However, there is a slightly warmer creamy white layer. Above this there appears to be a light grey toning layer and a warm yellow layer.

Application features: It appears to have been applied vertically, as a slight ribbed texture is visible across the entire surface of the painting.

Number of layers: potentially 4; 2 commercially applied ground layers and 2 toning layers.

Binding media: (estimated or confirmed by analysis): oil (to be confirmed)

Character/texture of ground:

The ground appears relatively smooth.

Composition/underdrawing/underpainting/incising



Instrument/Medium: No underdrawing has been identified with infrared reflectography.

Extent/Characterisation: NA

Pentimenti: Slight changes have been made to the hills in the background on the right side. The red and yellow hill seem to have been expanded upon from an initially smaller size and the blue-purple hill next to it has been rounded more along the top.

In the middle-distance, the middle of the painting, Cameron changed a small group of people, to a lone figure or a tree.

In the infrared photograph, a tree, painted towards the right edge of the painting, is more clearly visible than it is in the visible light image. It shows that there is no great detail to this tree.

## Paint

(estimation of medium: oil, acrylic, household, resin, water-based etc)

Oil paint

Paint application: (method of application, surface texture)

The paint has been applied wet-in-wet. In some areas, a relatively dry paint was lightly dragged over the surface with a brush. There is evidence of impasto having been flattened with a palette knife in the sky and a palette knife mark is visible in a light brown hill in the foreground. It seems that the paint in these light brown hills has been potentially partially scraped away or rubbed in. The paint here is very thin, and the canvas weave is very pronounced in these areas. In most of these areas the white ground remains visible on top of the weave. However, there are several small spots where the white ground appears abraded or has been largely removed from the weave fibres. Within the paint layers there is no clear evidence for what tool Cameron may have used to scrape or rub his paint. Evidence for the use of a palette knife in other areas of the painting has been found, therefore he might have used the palette knife here too.



Palette knife mark in brown hill, 0.67x.



Wet-in-wet paint application, 0.67x.

It is possible that Cameron rubbed in or scraped off his paint. The ground layer is still visible on top of the pronounced canvas weave; therefore, it seems unlikely that Cameron was very vigorous and rough in his scraping or rubbing. Instead, it is probable that if he did scrape or rub, he did so gently and carefully. It is interesting to note that in an area where the canvas weave is very pronounced in a brown hill a palette knife mark is visible. It seems he may have used a palette knife with a light brown ochre to create a highlight in this area.



Scraped back paint, 0.67x.

In the sky too, there are areas where the canvas weave is more pronounced. Based on examination with the microscope it is thought possible that Cameron flattened the paint with a palette knife and in doing so pushed the paint in the valleys between the canvas weave. As a result, the canvas weave appears more prominent, but a little of the coloured paint for these areas can be seen in between and on top of the weave. This latter aspect differs from the brown hill areas where only the white ground layer has remained visible on top of the weave. Cameron may have used a palette knife for the smoothening and blending of all the colours of the sky.

Utensils used for paint application: brush, palette knife, potentially a rag or other tool to rub in the paint.

Pigment palette: (estimate/provide results of analysis)

After *microscopy* and *XRF*:

At least two blues, light blue and a dark blue pigment particles have been identified.

Two red pigments: a deep, dark red and a bright red

Red, yellow, potentially an orange pigment, black, green, and white.

*XRF*: Chromium oxide green, Cobalt Blue, Lead white, Zinc white, Barium sulphate, vermillion, cadmium yellow, iron oxide yellow and/or red, a red lead most likely, and a carbon black.

Binding media: (results of analysis)

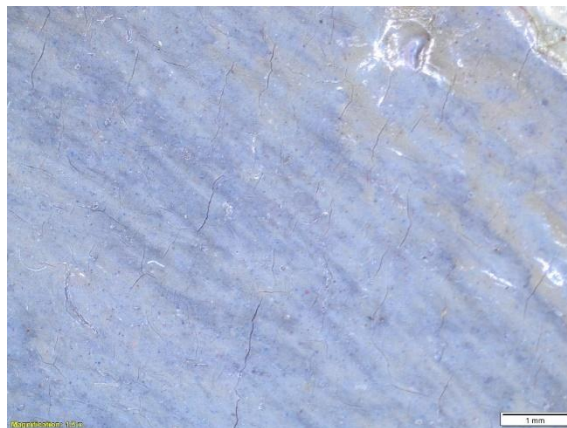
Phenomena: (e.g. blanching, sinking, pitting, bubbles, cracking, wrinkling)

There is fine cracking throughout the painting, specifically in areas of thicker paint such as the sky or the blue and red hills in the distance. The cracking where it has become a little wider shows the directly underlying paint layer but not further towards the ground. Only one crack has been identified which clearly shows the ground, along the extreme left edge of the painting in the area of the dark brown hill next to the hut. Generally, the cracks are quite short, and several short cracks can be found near each other.

There are some protrusions, potentially metal soaps, visible in the paint surface. Most protrusions are currently still under the paint surface. However, a few spots have broken through.



Protrusion, likely a metal soap, 2x.



Cracking in purple hill background, 1.5x.

There may be a slight indentation along the edges of the painting where a frame flattened and left an indent in the paint.

**Condition** (post-production features: e.g. flaking, paint loss, scratches)



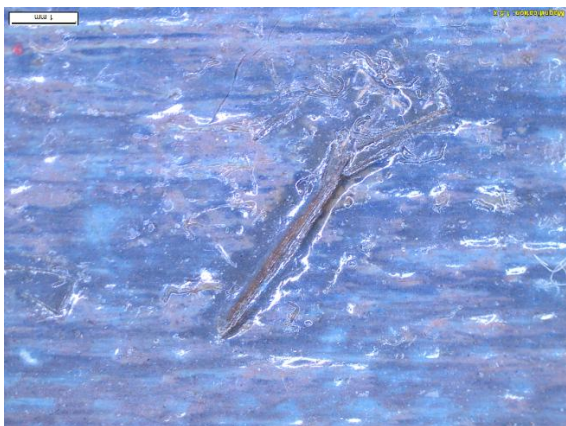
There is an abrasion to the paint in the sky where a pit has been formed in the paint layers revealing the canvas weave. Along the top left edge, likely where a frame has once been attached, an abrasion can be seen which reveals the canvas weave. Here, some fibres, potentially from the frame, can be seen stuck in the varnish.



Abrasion to paint revealing canvas weave along the extreme left edge, 1.5x.



Abrasion along the top left corner, likely due to a frame, 1.5x.



Fibre stuck in paint, 1.5x.

Varnish (natural, synthetic, partial, location)



Ultraviolet light image of *Morning in Lorne* showing an even varnish layer.

A synthetic/natural varnish has been used. It is not a very thick varnish layer.

A varnish has been applied over the entire surface of the painting. It is most clearly visible in the bottom half of the painting in ultraviolet light. It has a somewhat yellow tone to it.

Condition: The varnish is glossy, but not to such an extent it interferes with the legibility of the paint surface with the naked eye. However, especially in the darker areas of the painting, the foreground, the varnish interferes with the legibility of the surface when examined with a microscope. The varnish is either cracking or fibres from a brush are stuck in it. In general, the somewhat hazy appearance of the varnish prevents details from the paint layers from being visible in the foreground.



Milky looking varnish, 0.67.



Fibres or brush hairs stuck in varnish, 2x.

**Signature/Inscription** transcription, medium, location)

The painting has been signed in the bottom right corner 'D.Y. Cameron' in a thin brown paint.

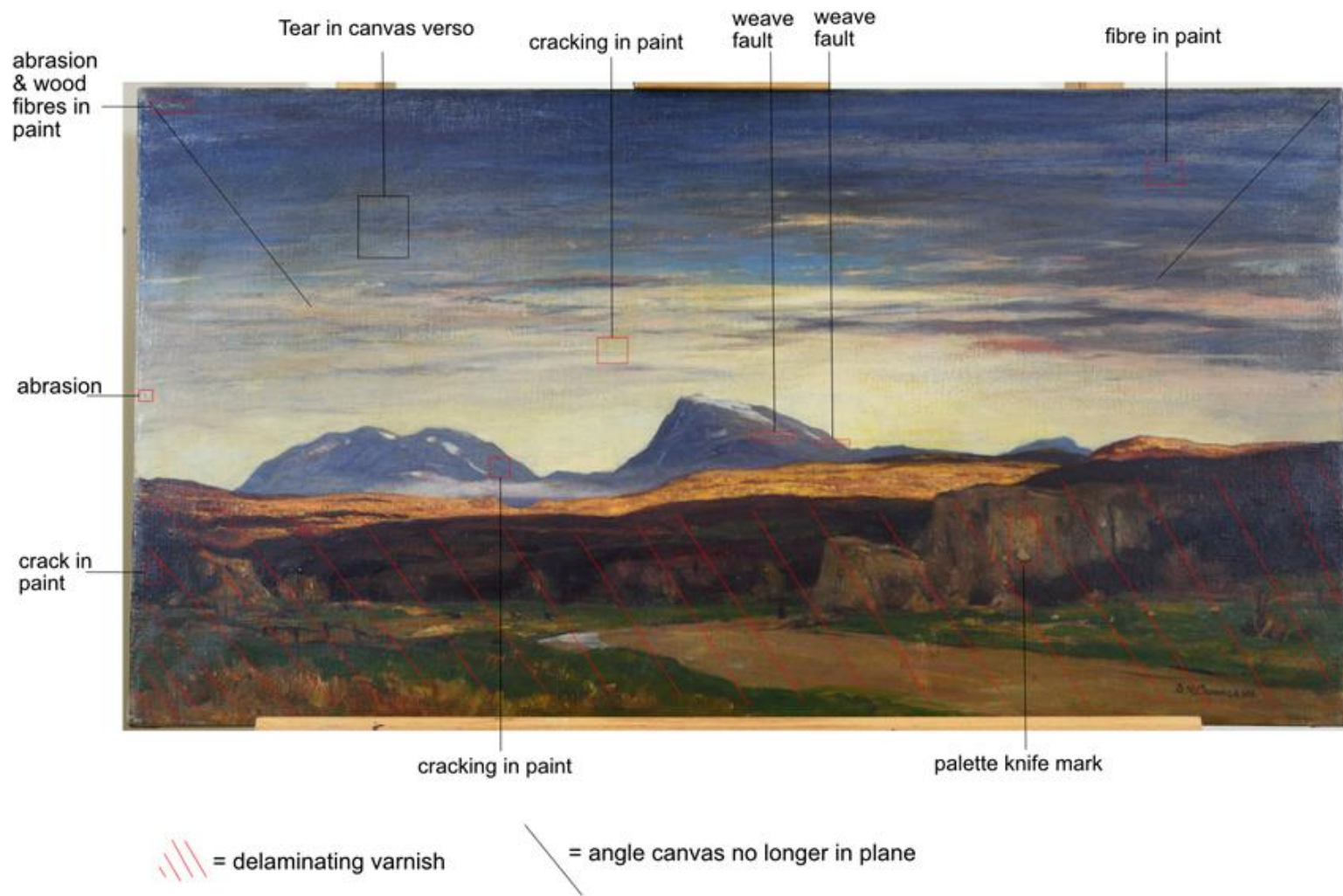
There are no further inscriptions in the painting or on the verso.



Signature in thin paint across a scraped paint layer, bottom right corner, 0.67x.



# 8. Condition Diagram





## XXI.IV Uplands in Lorne

**General information** (cataloguing data used by the owner)

Acquisition number/identifier: GLAHA43427

Collection/owner: Hunterian collection

Name of Examiner: Tess Visser

Location of Examination: ConsLab2 Hunterian Kelvin Hall

Date: August 2022

Artist: David Young Cameron

Title: *Uplands in Lorne*

Date: 1880-1945 (probably after 1900)

Measurements: Painting: Height 14.1 cm Width 18.2 cm Depth 0.3 cm

Frame: Height: 26.4cm x 30.2 cm

Medium/support: oil (untested) on panel

Description: *Uplands in Lorne* is a landscape painting of the Lorne area of the highlands (Argyll and Bute). In the background a tall hill is placed centrally. In front of this are smaller hills, with little to no recognisable vegetation. In the foreground, a small group of people is visible. Indications of what might be trees can also be seen.

Provenance:

Owned by Ian MacNicol

Purchased by Professor Alec L Macfie; 1898-1980: 1969 £165

Owned by The Hunterian (574)

Analysis: Microscopy, IRR, Photography (normal light, raking light, ultraviolet light), XRF, ATR-FTIR, Imaging FTIR, SEM-EDX, X-Radiography, Imaging Fourier Transform Spectroscopy (IFTS)

## Painting Support

### Support

Material: panel, seems to be a hardwood

Pieces: 1

Condition: (e.g. tears, draping, detachment from stretcher)

The panel is bevelled along the extreme left edge. It is a relatively thin panel (0.3 cm). There are no splits in the wood. The painting is slightly warped. The rough right edge of the panel suggests that it was cut from a larger piece.

On the recto, indentations can be seen along the middle of the top and bottom of the panel. Both at the top and at the bottom, two indentations can be seen. The fact that slight cracking can be seen around the edges of these indentations suggests that the underlying paint layers were already dry but the top paint layers were still malleable enough to fold into the indentation without cracking. This could be an indication of a clamp or pin used to keep the painting on an easel when painting *en plein air*. The indentations could potentially also refer to a previous attaching mechanism for a frame, although this seems less likely.



Indentation in panel along the top of the panel, 1x.

The verso of the panel has been covered in a white paint layer. pXRF analysis revealed this to mainly consist of zinc white and a little lead white. The paint seems to have been applied quickly and is not even.

Comments: (manufacturer identifiers: e.g. colourman stamps)

Verso of Frame:

At the top there is a green label which reads 'MACFIE 14'.

Partially overlaid this label there is a white label

'GLAHA43427 Store: MS20 (handwritten)  
CAMERON, David Young, Sir; (Scottish; 1895-1945)  
"Uplands in Lorne" (oil painting)

At the bottom there is a label reading:

‘GLAHA:43427, “Uplands in Lorne”, Cameron, Sir David Young, 1880-1945, painting, oil [barcode \*000033973]’

Verso of Painting:

In the centre of the verso there is a label which reads:

‘This is the property of  
HUNTERIAN ART GALLERY  
The University, Glasgow G12 8QQ  
Tel: 041 - 339 8855 Ext

Artist: Sir David Young Cameron (handwritten)  
Title: *Uplands in Lorne* (handwritten)  
No: MACFIE COLL. 14. (handwritten)’

Along the bottom edge residue of adhesive tape can be seen.

Supposed marks on reverse according to EMu: incised on verso “D. Y. Cameron”; inscr. On verso “*Uplands in Lorne*”. The ‘U’ of *Uplands in Lorne* can just be made out where it is mostly hidden by the Hunterian’s adhesive label.

### Ground/Preparation Layers

(commercial, artist’s own, coverage)

Size on support: unknown

Colour of ground:

No clear ground visible on the panel. Through the paint and through gaps in between areas of paint, the panel can be seen. It is possible that in the sky and in the light purple hill in the background a thin white layer was applied first. White has certainly been mixed with the blue paint in the sky and also forms part of the paint mixture of the purple hill. Therefore, slight areas of white or strokes where some more white is visible may simply be areas where the white has not been fully incorporated with the other pigments in the paint mixture.

The identification of zinc and lead in all areas analysed with pXRF suggests that contamination of the paint may have occurred through the use of a dirty brush or mixing

of paints on a palette. A partial ground or underpaint layer may have been used in areas of the sky and the purple hill.

Application features: vertical, in the raking light photograph and in the X-radiograph, vertical lines can be seen which do not correspond with the paint layers. These are scoring lines. A panel was typically scored before painting was commenced to increase the mechanical adhesion of paint to the support.

Number of layers: None

Binding media: (estimated or confirmed by analysis) NA

Character/texture of ground: No uniform ground layer is present on the panel.

### Composition/underdrawing/underpainting/incising

Instrument/Medium: No underdrawing or pentimenti are visible with infrared reflectography or without. The composition has been carefully planned, likely in sketches made before starting the painting or in careful underpainting before laying in the colour. In the X-radiograph obtained of this painting, in the area of the purple hill in the background some potential underpainting in a denser material can be seen.



Panel visible in a gap between cloud, sky and hill. The hill was carefully outlined and the sky painted around it, 1x.

### Paint

(estimation of medium: oil, acrylic, household, resin, water-based etc)

Oil paint (estimated)

Paint application: (method of application, surface texture)

The areas which contain some white are most opaque and seem to be most thickly applied. Some brushstrokes can be identified throughout the painting. The sky was painted largely in long horizontal strokes, except for around the outline of the hills.

The hills have been painted precisely and were carefully outlined.

In the foreground there are two spots that have some thicker paint. The bottom right corner, there is some yellow impastoed paint with an indentation potentially from the back of a brush or the tip of a palette knife. On the bottom left there is a brushstroke of thicker paint.

The dark brown hills appear glaze-like. Potentially a different or an additional medium to oil was used in these areas. The ultraviolet light image shows that these dark brown hills may contain some different additional medium to the rest of the painting. Despite the relative thinness, the paint mixture contains yellow, red and black particles and with the microscope appears quite opaque. Where it was thought that the panel was visible through the glaze-like layer, instead it appeared on examination with a stereo microscope as if a red layer may have been painted underneath the brown glaze.



The flat top of the white paint in this cloud might be due to the use of a palette knife, or could have been flattened by an old frame while the paint was still wet, 1x.

Utensils used for paint application: narrow, square brushes and palette knife.



Brush hairs embedded in the paint in the top left corner, 1x.



Pigment palette: (estimate/provide results of analysis)

After *microscopy*: red, blue, yellow, black, maybe green.

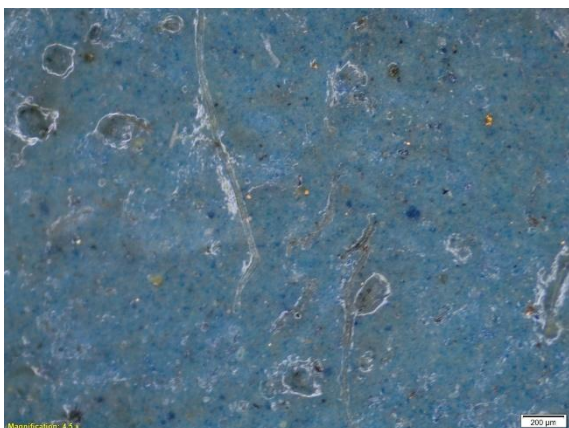
*XRF*: Cobalt blue, cerulean blue, red lead, lead white, zinc white, iron oxide (ochre), titanium white?, barium sulphate, vermillion, likely a carbon black that could not be detected with XRF.

*SEM-EDX*: Zinc white, lead white, cerulean blue, cobalt blue

Binding media: (results of analysis)

Phenomena: (e.g. blanching, sinking, pitting, bubbles, cracking, wrinkling)

There are no obvious phenomena in the paint. There is narrow, fine cracking throughout the painting. These cracks remain in the upper layers. The panel is not visible through any cracks.

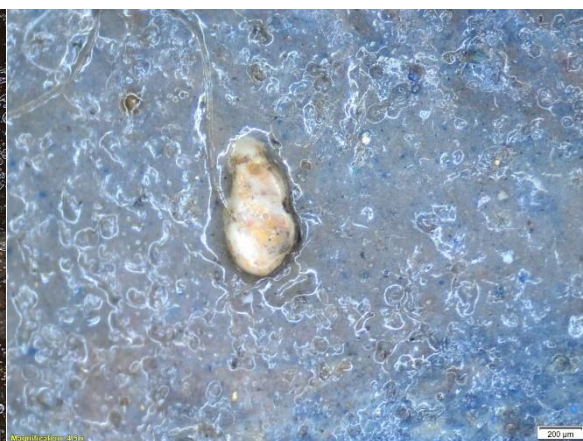


Small cracks in sky area appearing a lighter white-blue in the middle of the crack, 4.5x.

Throughout the painting there appears to be metal soap formation. In some areas the metal soap has protruded through the paint surface, in other areas they are still beneath the surface. Some of the white protrusions are large enough to be visible with the naked eye, for instance in the purple hill just above the blue shadowed hill.



White fleck on top of paint, still covered by a thin brown layer, 1x.



White protrusion in purple hill, 4.5x.



Protrusion light hill, 4.5x.



Protrusion in hill highlight, 1x.

**Condition** (post-production features: e.g. flaking, paint loss, scratches)

The condition of the paint is good. Along the left and right edge there are abrasions, most likely associated with a frame that was attached while the paint was still soft and malleable. Some of these abrasions reveal the panel or underlying paint layers, in other areas there are merely indentations in the paint layer.



Abrasion from previous frame on right edge most likely showing the panel and a red underlayer under the brown layer, 1x.



Abrasion from previous frame on right edge most likely showing a red underlayer under the brown layer. Gold leaf can also be seen in these abrasions, 1.5x.





Indentation of previous frame on left edge of the panel, 1x.

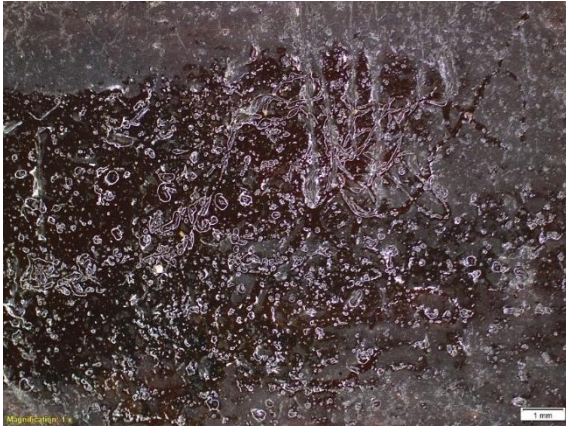
**Varnish** (natural, synthetic, partial, location)



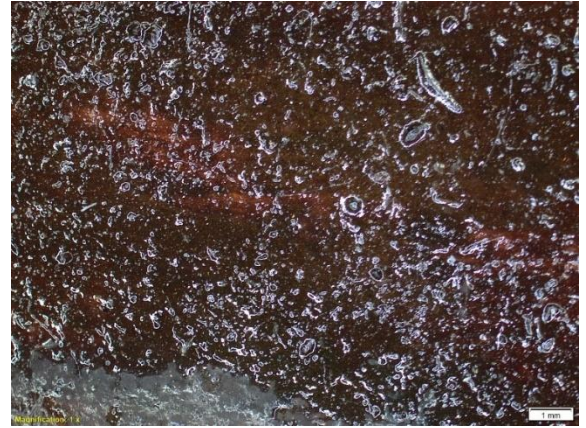
Ultraviolet light photograph of *Uplands in Lorne* showing a varnish layer and a drip of medium along the left edge. A different medium may have been used for the dark brown areas of the hills and a slight fluorescence of a pigment is visible in the purple hill.

There is a thin varnish applied to the entire surface, most likely a synthetic varnish.

Condition: Impurities are embedded in the varnish such as (small air) bubbles or dirt. These can inhibit the legibility of the underlying paint layers under magnification. There are also areas where the varnish appears milky. These milky areas can be found around the midground in the highlighted hills. These areas appear relatively matte next to the glaze-like dark brown hills. The milky areas of the varnish may be due to microcracking in the varnish layer. However, no clear evidence of microcracking or delaminating varnish has been found during microscopic examination.



Milky varnish as well as small bubbles or specks of dirt in varnish layer, 1x.



Shiny varnish with bubbles or dirt embedded. At the bottom the milky varnish can be seen, 1x.



Milky varnish, 1x.



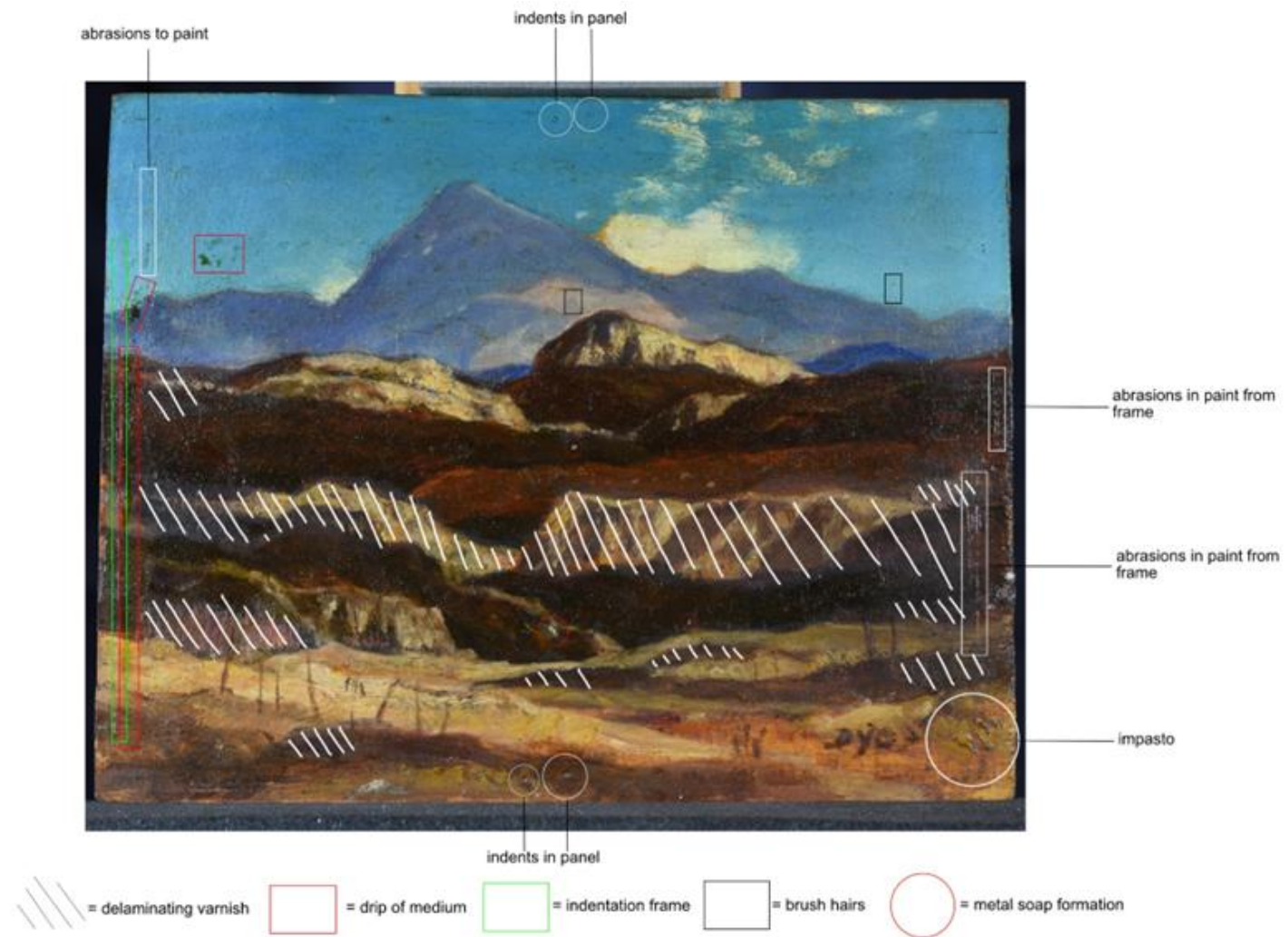
Signature bottom right corner 'DYC', 0.8x.

**Signature/Inscription transcription, medium, location)**

Bottom right signed 'D.Y.C.' in dark brown paint. The paint is thin, in a similar tone as the dark brown glazed hills, and the signature was painted with a small brush.



# 8. Condition Diagram



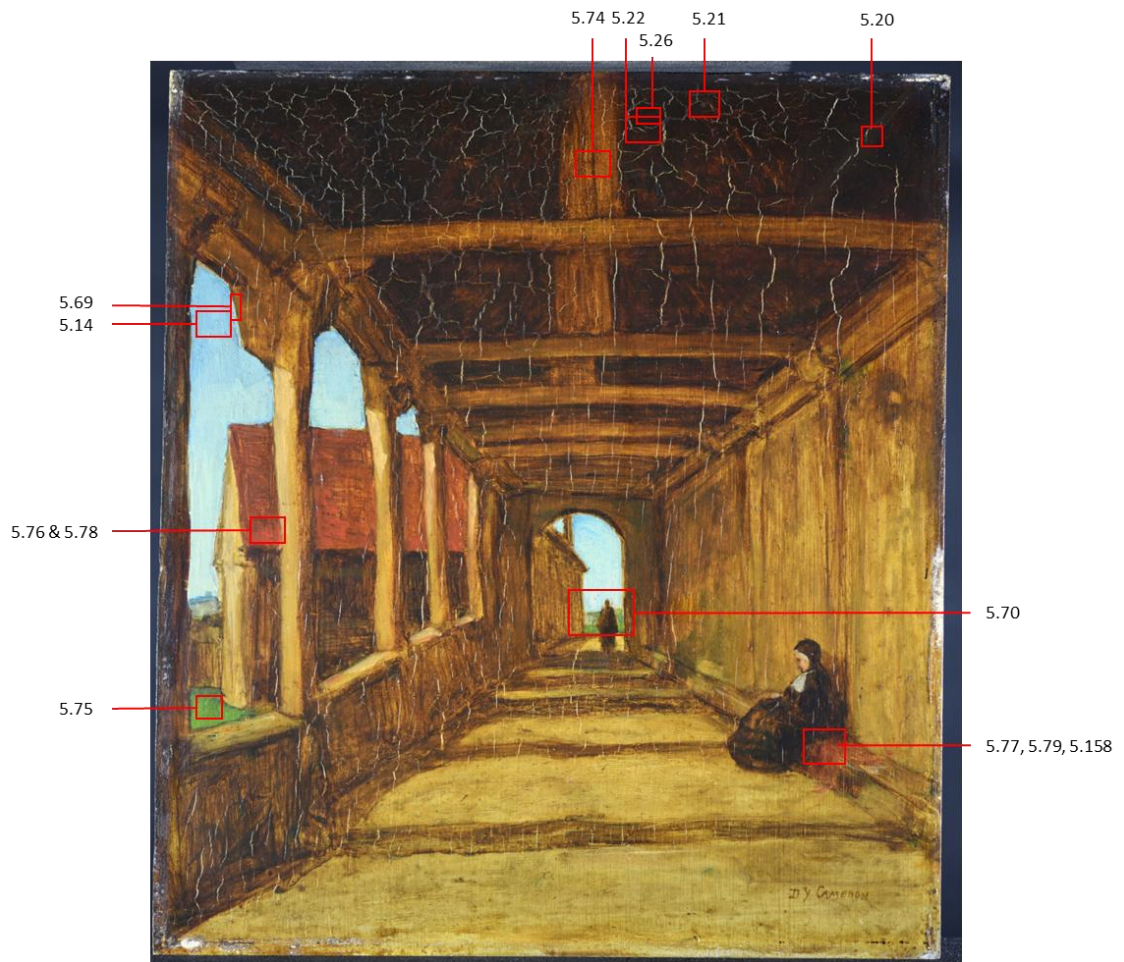
## Appendix XXII Micrograph Sites Referenced in Thesis Text

### XXII.I A French Harbour



Micrograph sites in *A French Harbour* indicated with their figure number.

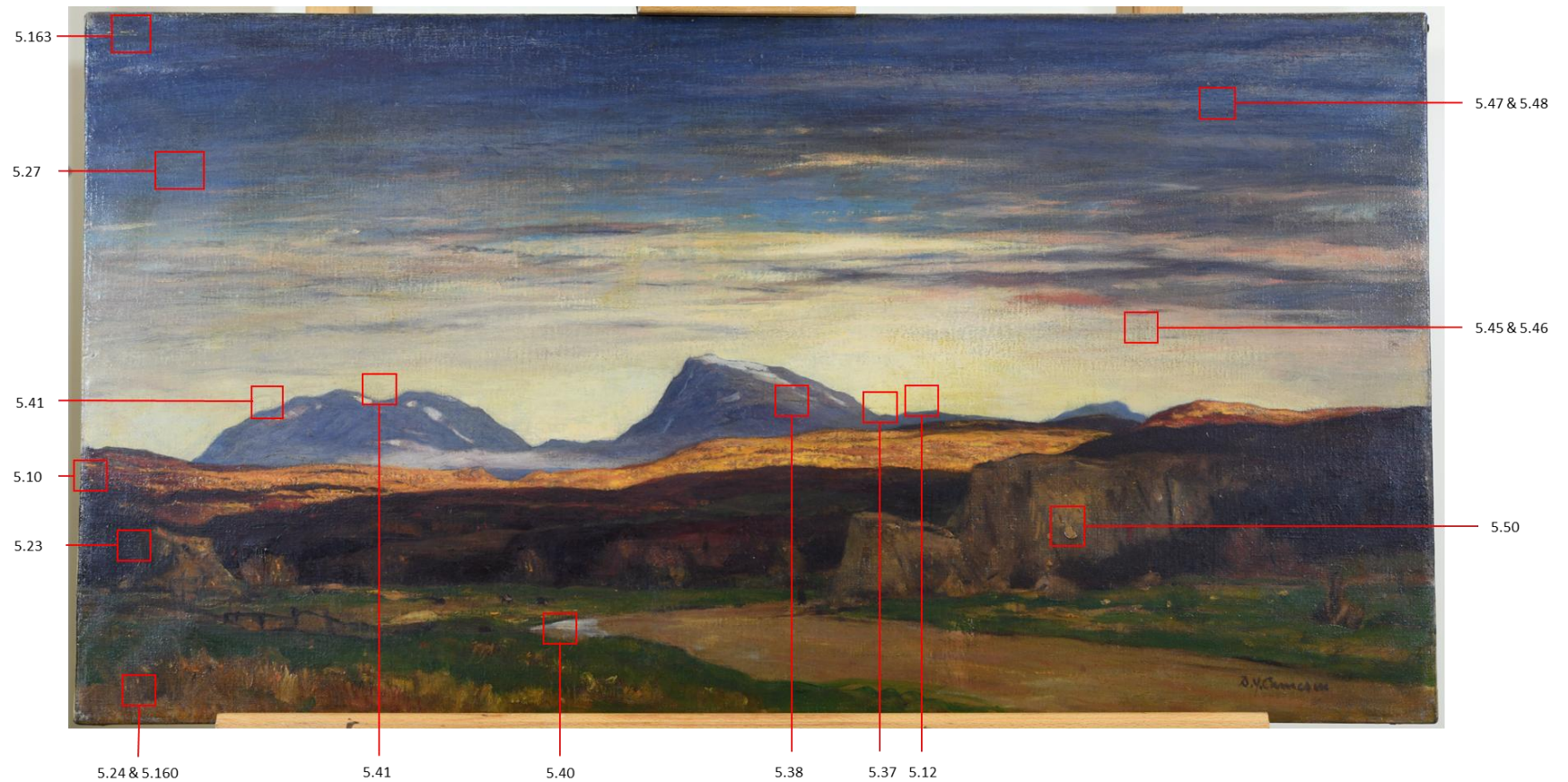
## XXII.II Cloister at Montivilliers



Micrograph sites in *Cloister at Montivilliers* indicated with their figure number.

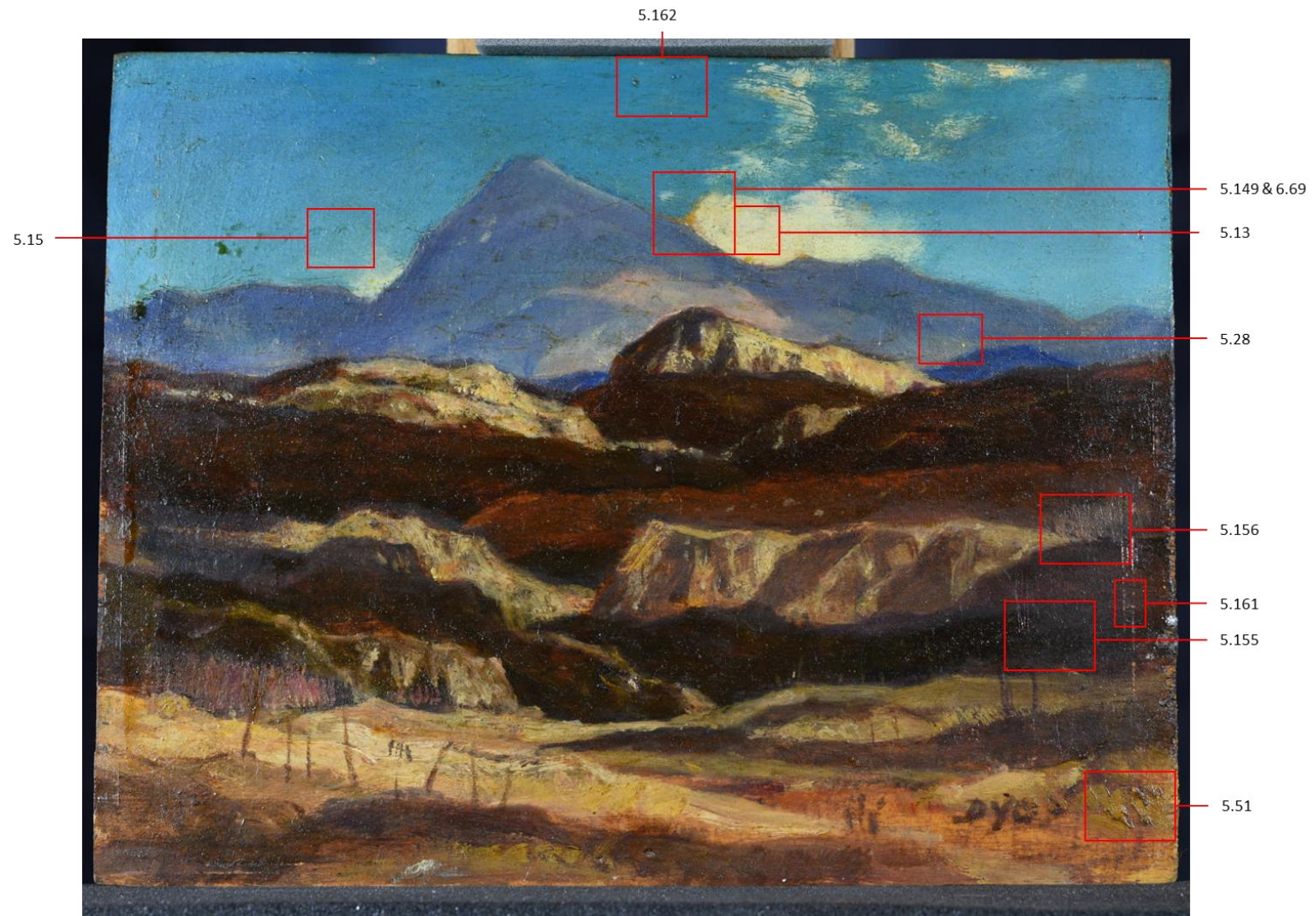


### XXII.III Morning in Lorne



Micrograph sites in *Morning in Lorne* indicated with their figure number.

XXII.IV Uplands in Lorne

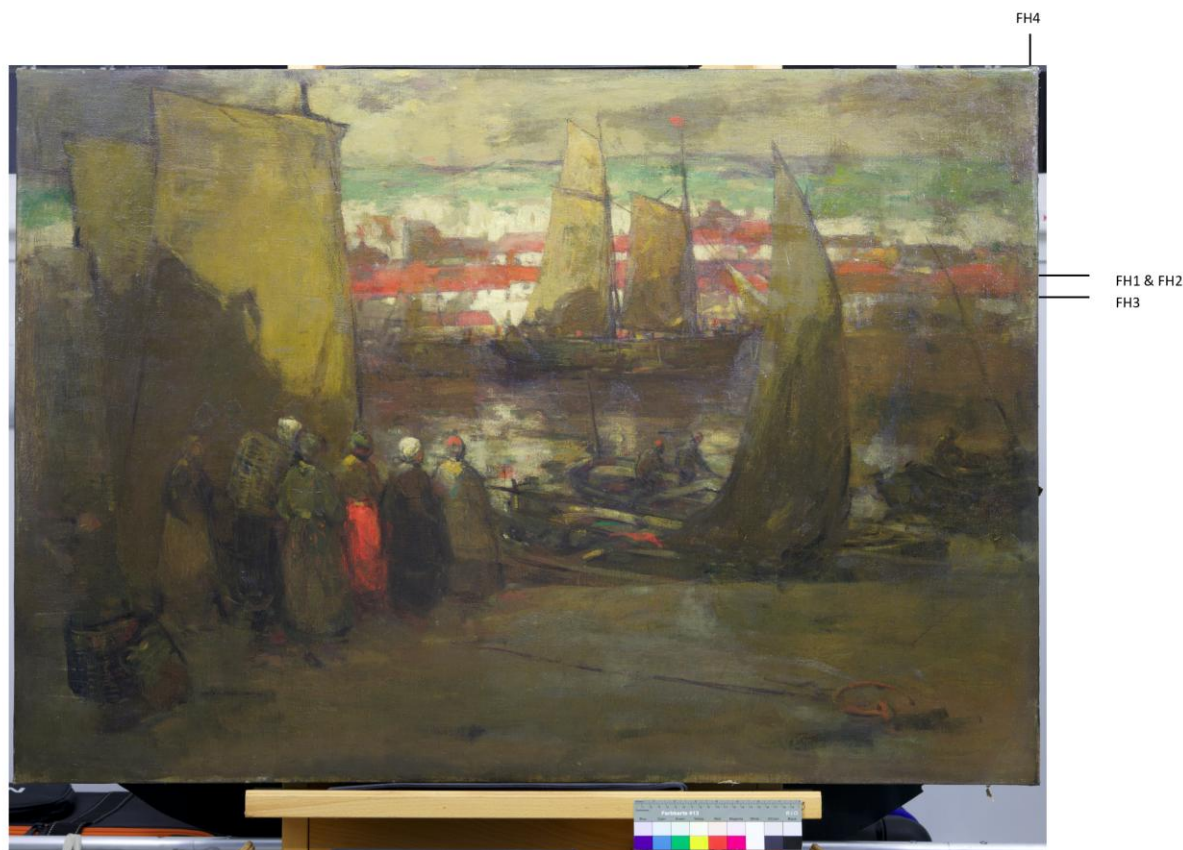


Micrograph sites in *Uplands in Lorne* indicated with their figure number.



## Appendix XXIII Sample Descriptions

### XXIII.I A French Harbour



#### Sample Diagram of *A French Harbour*

The samples taken from *A French Harbour* are all named FH after the painting and a number.

FH1 22.5cm from the extreme top edge, over the turnover margin of the extreme right hand edge.

FH2 27.8cm from the extreme top edge, 2mm in from the extreme right hand edge.

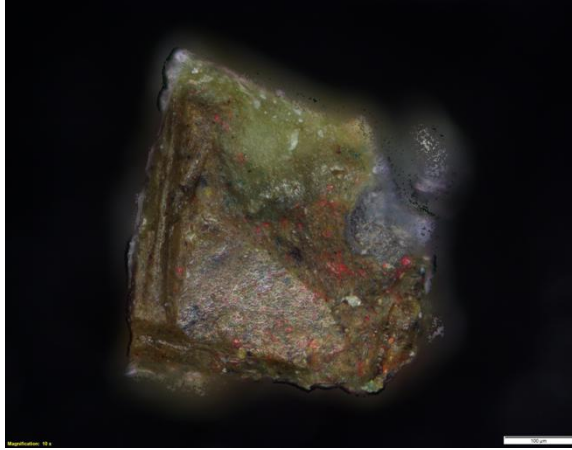
FH3 34.7cm from the extreme top edge, just over the turnover margin of the extreme right hand edge.

FH4 1cm from the extreme right hand edge, over the turnover margin of the extreme top edge.

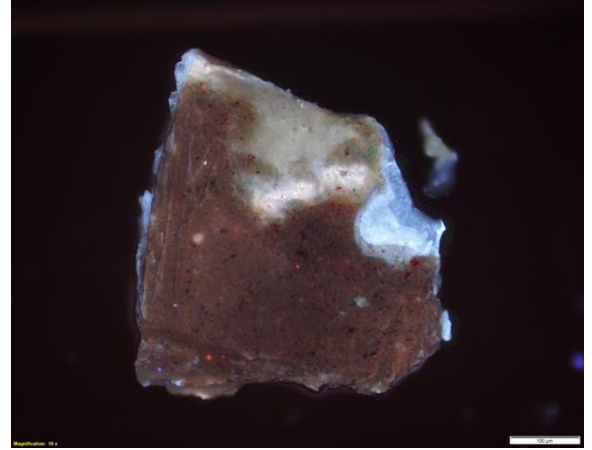
FH7 exists out of 3 small samples that were cut from a piece of painted canvas from the brittle, extreme edges that fell from the painting. One of the samples was embedded, and the other two were used for ATR-FTIR analysis.

Sample FH1

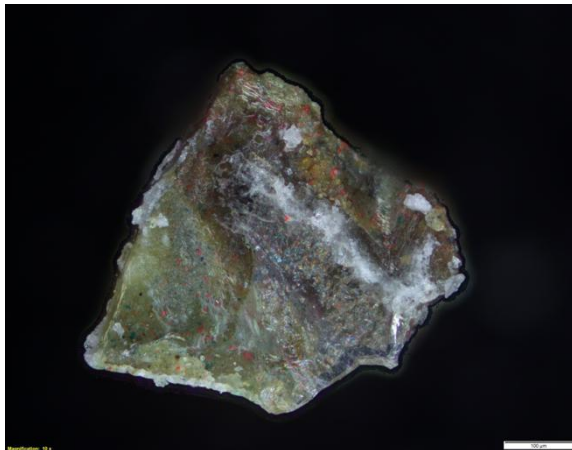
This sample was taken from the extreme right edge on the turnover margin. Both ground and pigment are present in this sample. A little ground is attached to the sample and it contains a relatively thick paint layer. The sample has been embedded as a cross-section for future analysis. 22.5cm from the extreme top edge, over the turnover margin of the extreme right hand edge.



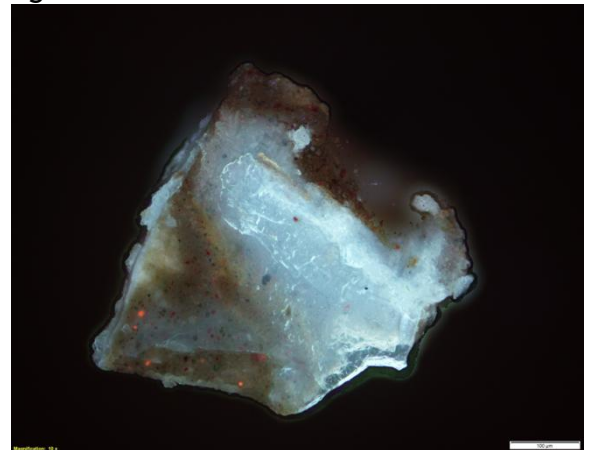
Sample FH1 Recto Stacked 100 x 0.67x, dark field.



Sample FH1 Recto Stacked 100 x 0.67x, UV light.



Sample FH1 Verso Stacked 100 x 0.67x, dark field.



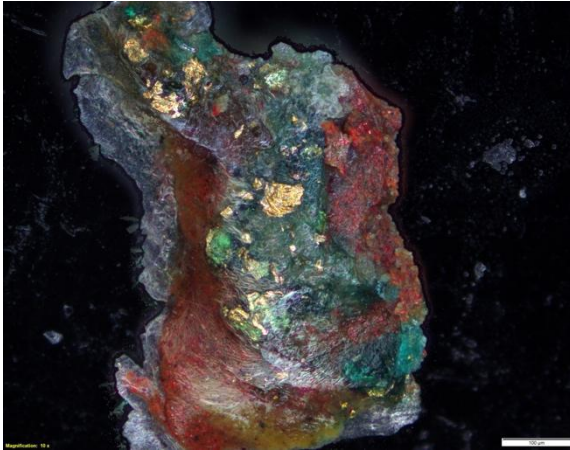
Sample FH1 Verso Stacked 100 x 0.67x, UV light.

<i>Layer</i>	Appearance and pigments used	Other characteristics, e.g. in UV light
<b><i>Recto</i></b>	<p>Opaque paint layer of a dark green colour. Rectangular, bright red particles are visible within this layer. Rounded black particles can be seen.</p> <p>Green particles visible in this sample are rectangular in shape.</p>	<p>The paint layer appears red. This could be due to red fluorescence of the green pigment if this is viridian or potentially a degraded lake pigment is present.</p> <p>Individual black particles are more visible in the ultraviolet image.</p> <p>Some of the red particles appear bright red with a slight orange tone. Indicating a vermilion or lake pigment may have been used.</p> <p>Underneath the paint layer a pale blue layer can be seen. This is likely to relate to the ground layer.</p>
<b><i>Verso</i></b>	<p>A fragmentary ground layer is visible.</p> <p>Red particles can be seen of a square to rectangular shape. The particles size varies from quite fine to coarse.</p> <p>Rectangular green particles can be discerned.</p>	<p>A few of the red particles fluoresce appearing bright red with an orange tone.</p> <p>A pale blue fluorescence can be seen in the fragmentary ground layer. No individual particles are visible within this ground layer.</p>

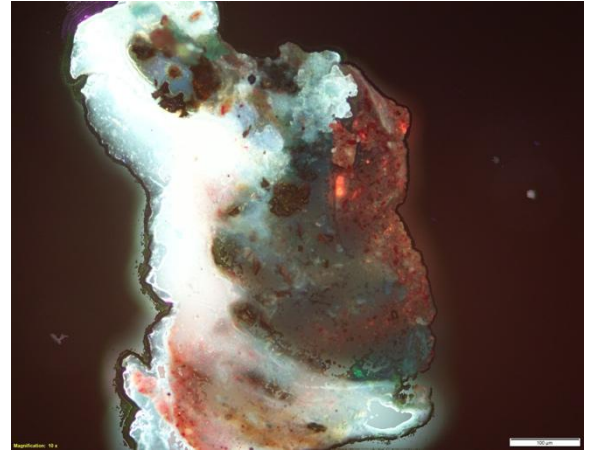
This sample has been embedded as a cross-section and will be analysed with SEM-EDX.

Sample FH2

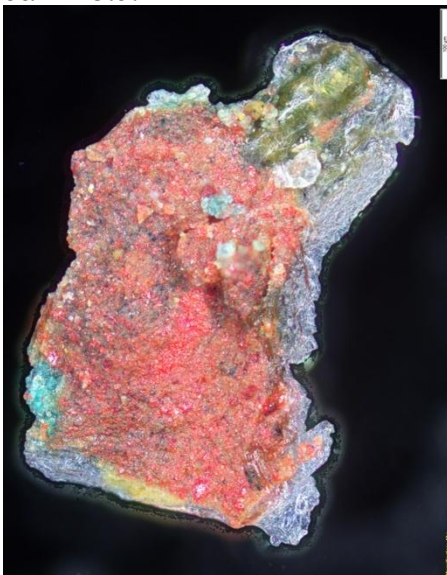
Taken from the extreme right edge from an area of impasto. It contains the red and green paint of the impasto. This sample has been embedded to be used for further pigment analysis with SEM-EDX. 27.8cm from the extreme top edge, 2mm in from the extreme right hand edge.



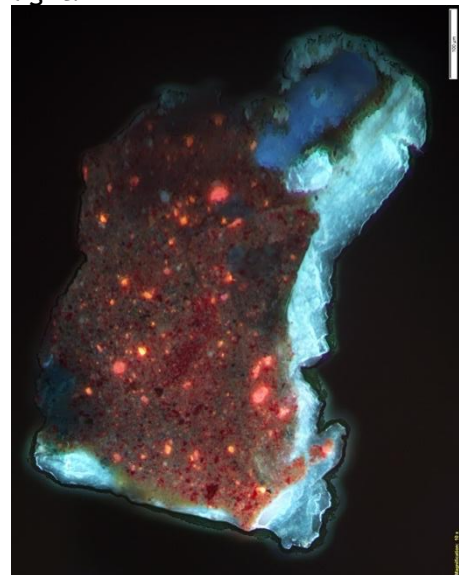
Sample FH2 Recto Stacked 100 x 0.67x, dark field.



Sample FH2 Recto Stacked 100 x 0.67x, UV light.



Sample FH2 Verso Stacked 100 x 0.67x, dark field.

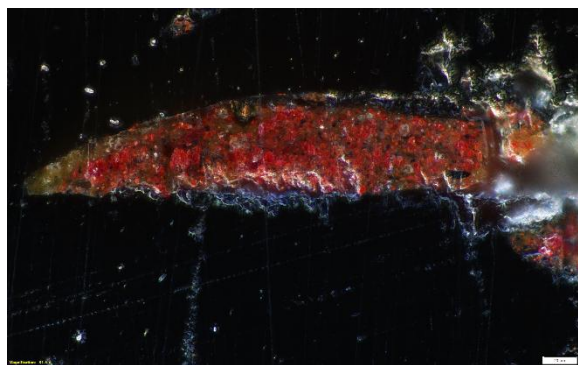


Sample FH2 Verso Stacked 100 x 0.67x, UV light.

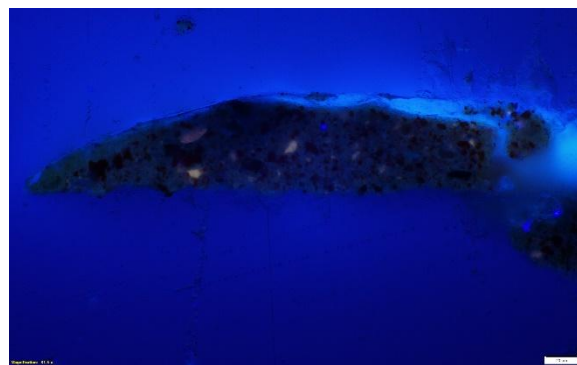


Layer	Appearance and pigments used	Other characteristics, e.g. in UV light
<b>Recto</b>	<p>Gold leaf likely from a gilded frame is visible.</p> <p>In the top green layer, at least two different greens appear to have been used. Dark green and light blue-green particles can be seen.</p> <p>A black pigment has been mixed in the red paint layer.</p> <p>Two red pigments may be present in the red layer. A warm dark red colour and a bright red can be seen in this layer.</p>	<p>Some of the red particles fluoresce bright red with an orange tone.</p> <p>A white layer, relating to a varnish perhaps, is visible.</p>
<b>Verso</b>	<p>A bright red pigment of fine particle size can be seen.</p> <p>Black particles, generally round, can be seen.</p> <p>A blue-green is visible as well as an olive green. The blue-green area appears to belong to the paint layer applied over the red layer. The olive green may have been applied before the red.</p> <p>A strip of yellow paint can be seen, but no individual particles were identified. The yellow is in one of the subsequent paint layers applied over the red.</p>	<p>The olive green area appears blue.</p> <p>Some of the red particles fluoresce bright red with an orange tone.</p> <p>All around the edge, a blue fluorescence can be seen. This may relate to a varnish layer.</p>

This sample has been embedded as a cross-section and analysed with SEM-EDX.



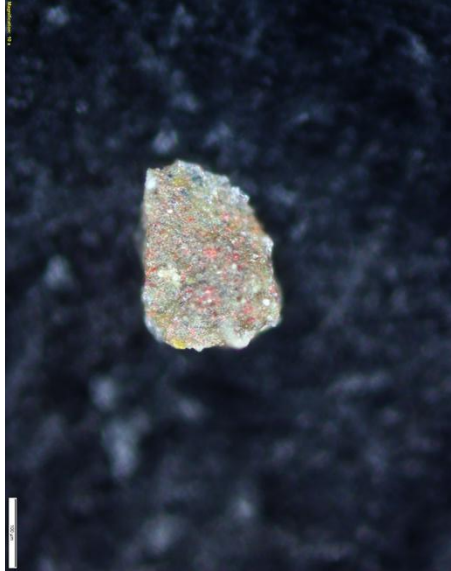
Cross-Section FH2 Stacked 500 x 0.67x, dark field



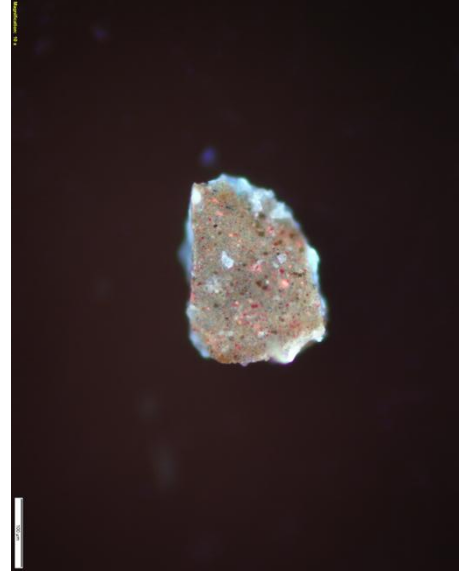
Cross-Section FH2 Stacked 500 x 0.67x, UV

Sample FH3a

This sample was taken from the extreme right edge. It contains two small flecks. The flecks consist of pigment layers and a little ground. The sample (FH3a) which contains the most ground out of the two flecks, has been embedded for further analysis of pigments and ground. The other sample (FH3b) is kept as a loose sample. 34.7cm from the extreme top edge, just over the turnover margin of the extreme right hand edge.



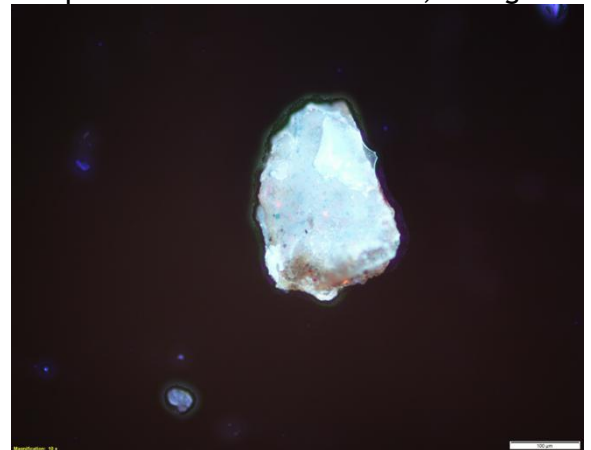
Sample FH3a Recto 100 x 0.67x, dark field



Sample FH3a Recto 100 x 0.67x, UV light



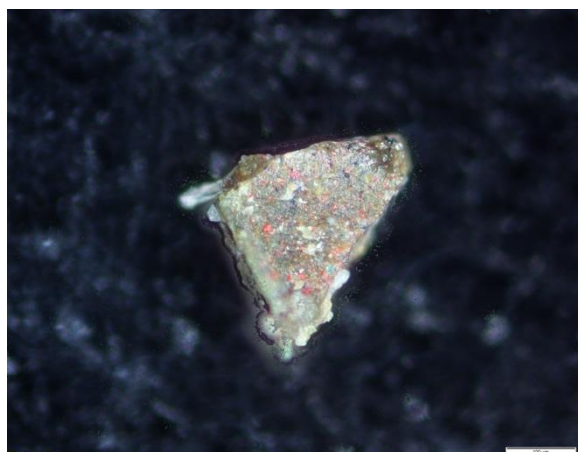
Sample FH3a Verso Stacked 100 x 0.67x,  
dark field.



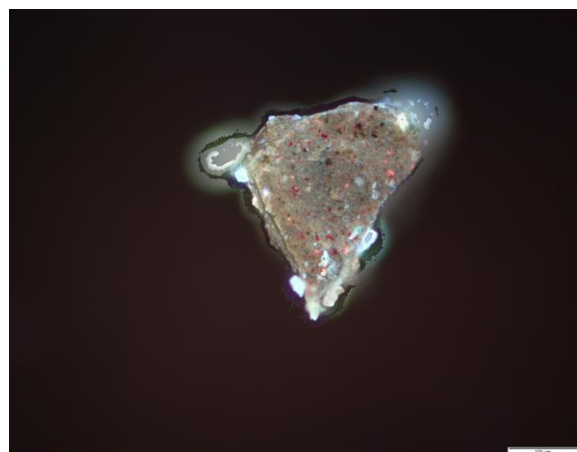
Sample FH3a Verso Stacked 100 x 0.67x,  
UV light.

<i>Layer</i>	Appearance and pigments used	Other characteristics, e.g. in UV light
<b><i>Recto</i></b>	<p>Rectangular red particles, bright in colour are visible.</p> <p>Fine black particles are dispersed throughout the sample.</p> <p>A small quantity of yellow particles is present.</p>	<p>Some of the red particles fluoresce a bright red with orange tone. The non-fluorescing red particles appear somewhat triangular.</p> <p>A pale blue fluorescence, probably related to the ground, can be seen around the edges.</p>
<b><i>Verso</i></b>	<p>A transparent ground layer appears to be present.</p> <p>Red particles can be seen of an angular shape. The red particles appear to be coarsely ground.</p> <p>A large, square green particle can be seen.</p>	<p>A pale blue fluorescence relating to the ground layer is present. Fluorescent red particles can be seen with a bright red-orange colour</p>

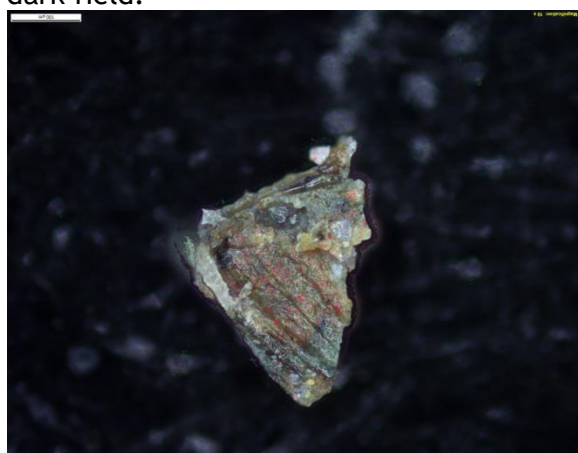


Sample FH3b

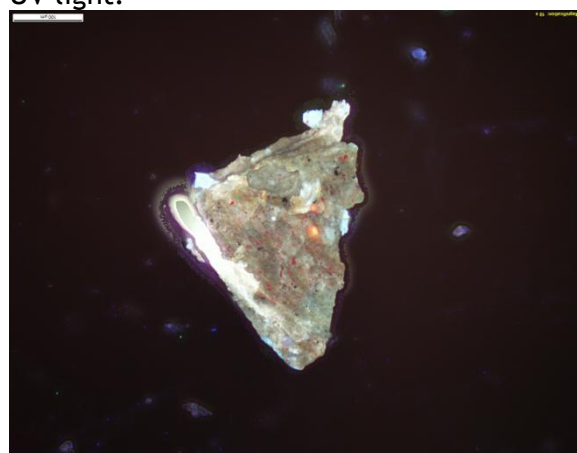
Sample FH3b Recto Stacked 100 x 0.67x, dark field.



Sample FH3b Stacked Recto 100 x 0.67x, UV light.



Sample sample FH3b Verso Stacked 100 x 0.67x, dark field.



Sample FH3b Verso Stacked 100 x 0.67x, UV light.

<i>Layer</i>	Appearance and pigments used	Other characteristics, e.g. in UV light
<i>Recto</i>	<p>Red particles, quite coarsely ground, are dispersed throughout the sample. They are rectangular in shape.</p> <p>A single bright blue-green particle has been identified.</p>	<p>A small quantity of the fluorescent red particle is visible.</p> <p>Aggregates of red pigment have become visible.</p> <p>Some green particles of various sizes have been identified.</p>

<b>Verso</b>	<p>A fragmentary transparent ground appears to be present.</p> <p>Red particles are visible throughout the sample, with variation in colour.</p> <p>Fine black particles are dispersed throughout the sample.</p>	<p>Few of the red particles fluoresce a bright red-orange.</p> <p>A very fine, blue particle has become visible.</p> <p>The fragmentary ground has a white fluorescence, especially along the edge.</p>
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This sample has not been embedded and will be used as a back-up as well as for analyses that require a loose sample should this be deemed desirable.

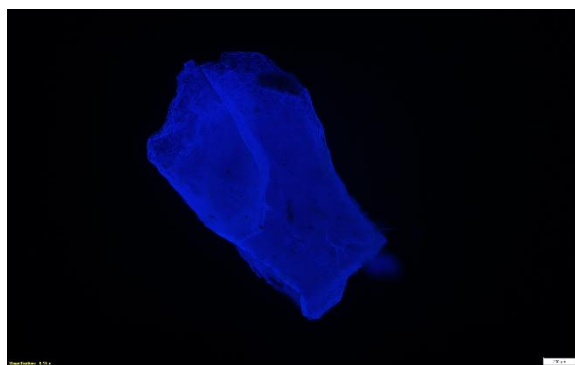
#### Sample FH4

This is a sample taken from the white material believed to be residue from the strip-lining, over the turnover edge at the top right corner of the painting. This sample is kept loose and was used for ATR-FTIR analysis.

1cm from the extreme right hand edge, over the turnover margin of the extreme top edge.



Sample FH4 Stacked Recto, 50 x 0.67x, dark field



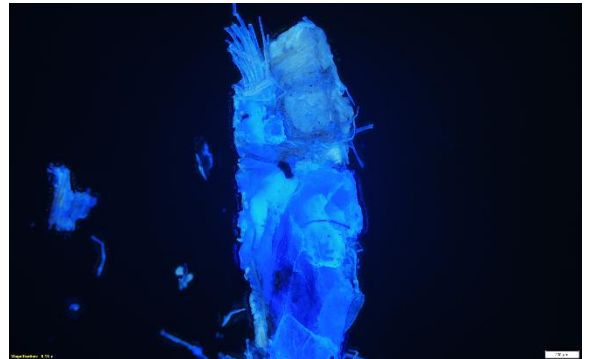
Sample FH4 Stacked Recto, 50 x 0.67x, UV light (without black balance)

Sample FH5

This is a sample from a painted piece of canvas that was dislodged from the extreme edges of the canvas during unframing. The recto is covered by the lining adhesive, and the verso is painted black. A cross-section was made of this sample to assess the layer structure of the paint on the verso of this painting.



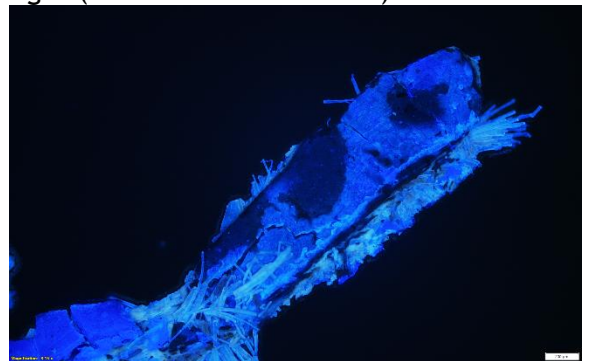
Sample FH5 Stacked Recto, 50 x 0.67x,  
ordinary light



Sample FH5 Stacked Recto, 50 x 0.67x, UV  
light (without black balance)



Sample FH5 Stacked Verso, 50 x 0.67x,  
ordinary light



Sample FH5 Stacked Verso, 50 x 0.67x, UV  
light (without black balance)

The sample was embedded and analysed with SEM-EDX.



Cross-Section FH5 Stacked 100 x 0.67x, VIS



Cross-Section FH5 Stacked 100 x 0.67x, UV  
(without black balance)

## XXIII.II Cloister at Montivilliers

The samples taken from *Cloister at Montivilliers* are all named CM after the painting and a number.

Three samples were taken from this painting:

CM1 18.8 cm from the extreme right hand edge and 0.5mm in from the extreme bottom edge.

CM2 1.1cm from extreme left hand edge and 1.75 mm in from the extreme top edge.

CM3 6.9 cm from the extreme bottom edge, on the extreme left edge.

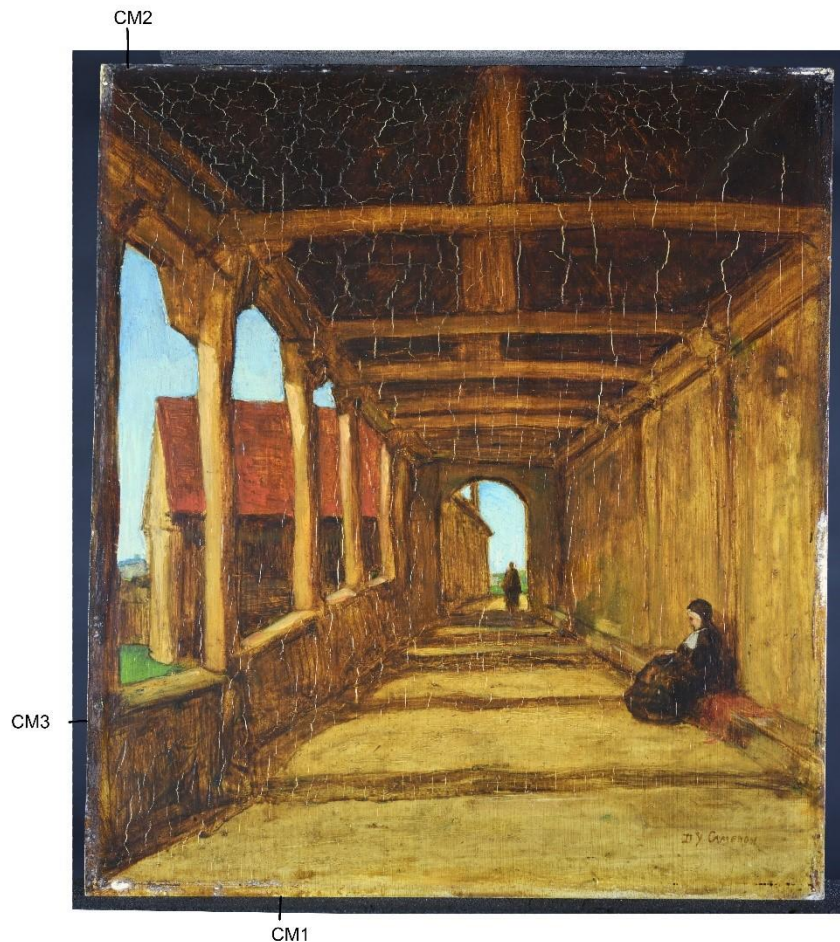
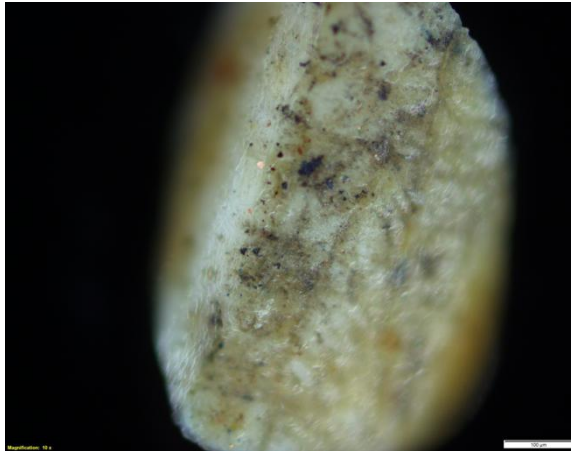


Diagram indicating sites from which each sample was taken.

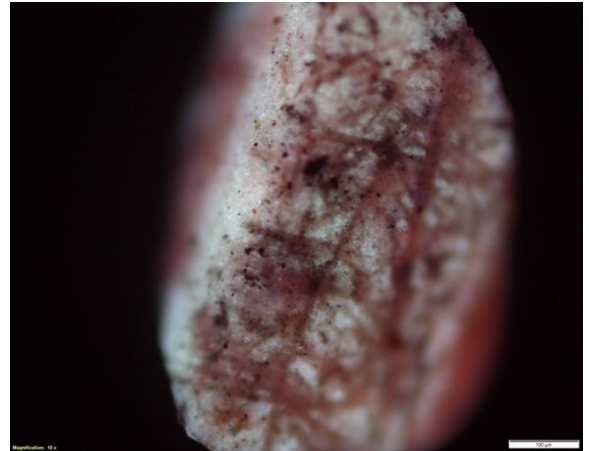


Sample CM1

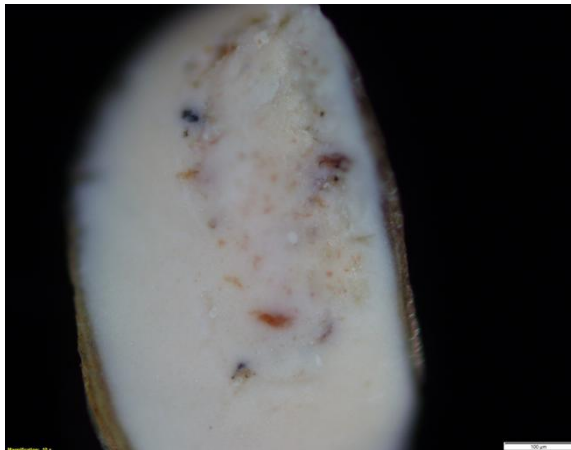
This sample was taken from the light yellow-brown path from an area where it was possible to include the ground in the sample.



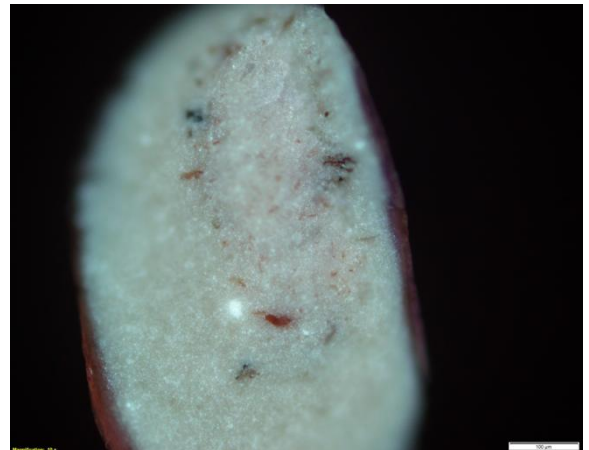
Sample CM1 Recto 100 x 0.67x, dark field



Sample CM1 Recto 100 x 0.67x UV light.



Sample CM1 Verso 100 x 0.67x dark field.



Sample CM1 Verso 100 x 0.67x UV light.

<i>Layer</i>	Appearance and pigments used	Other characteristics, e.g. in UV light
<b><i>Recto</i></b>	<p>Ground visible through thin paint layers.</p> <p>Coarse dark red particles, square to rectangular in shape are present.</p> <p>Lighter red particles, more rectangular in shape, are also present.</p> <p>Black particles are spread throughout the sample, either in coarse particles or as aggregates.</p> <p>Fine square green particles are visible.</p>	The brown paint appears red in ultraviolet light.
<b><i>Verso</i></b>	<p>An opaque white ground layer is present.</p> <p>A few black particles are present in the ground layer.</p> <p>Rectangular orange flecks are visible.</p>	The ground consists of fine, rounded particles.

This sample has been embedded as a cross-section and will be analysed with SEM-EDX.



Cross-Section CM1 200 x 0.67x, dark field



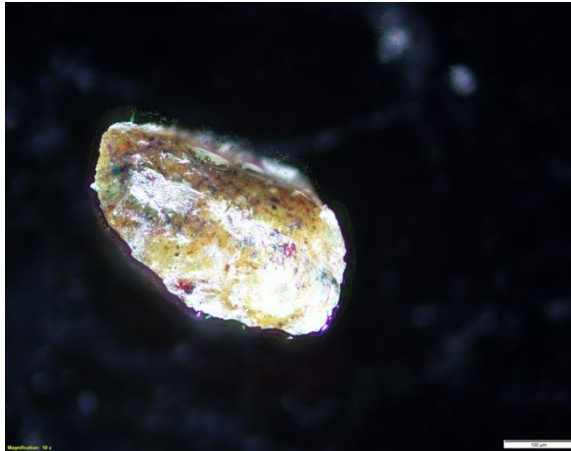
Cross-Section CM1 200 x 0.67x, UV light

### Sample CM2

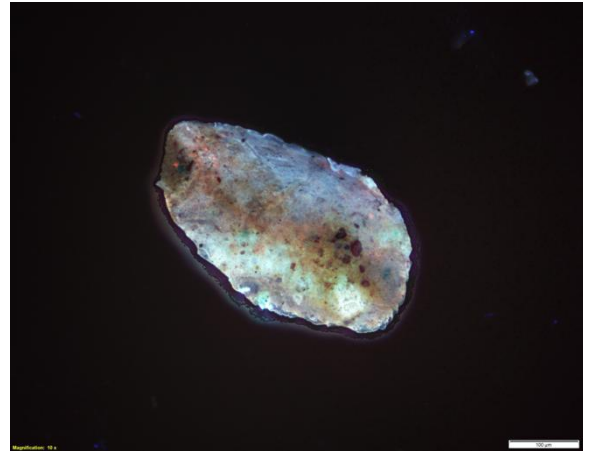
Taken from the top of the painting, from an area of dark ceiling. This sample is left unembedded. FTIR analysis was conducted. No clear indication of a different medium used in this area was found in the spectrum.

Sample CM3a

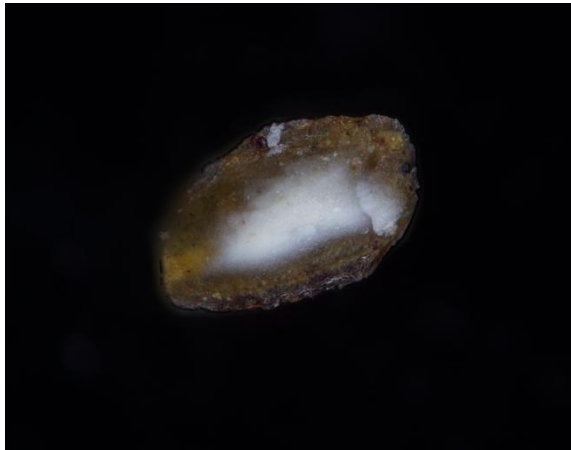
This sample was taken from the extreme left edge of the painting from an area of architecture with the middle brown tone.



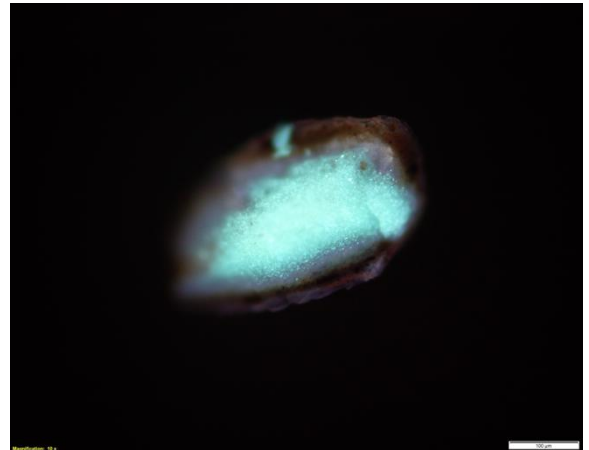
Sample CM3a Recto Stacked 100 x 0.67x dark field.



Sample CM3a Recto Stacked 100 x 0.67x UV light.



Sample CM3a Verso Stacked 100 x 0.67x dark field.



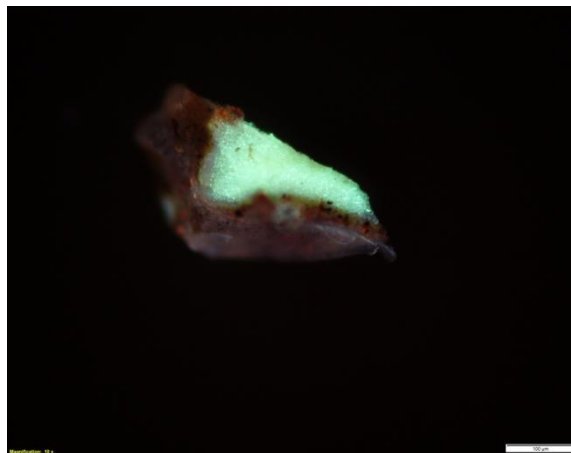
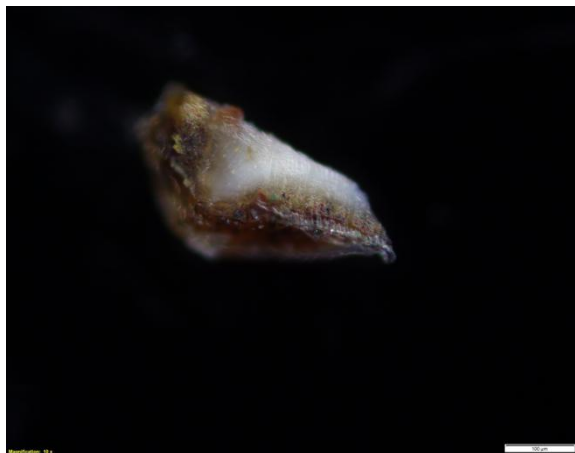
Sample CM3a Verso 100 x 0.67x UV light.



<b>Layer</b>	<b>Appearance and pigments used</b>	<b>Other characteristics, e.g. in UV light</b>
<b><i>Recto</i></b>	<p>Coarse dark red particles are spread throughout the sample.</p> <p>Lighter red particles, square in shape, are also present.</p> <p>Square green particles, quite coarse, are present. They have a slight blue tone.</p>	<p>A few of the red particles fluoresce bright red with an orange tone.</p> <p>The slight green fluorescence visible through the paint layer is probably from the ground.</p>
<b><i>Verso</i></b>	<p>A fragment of the ground layer is visible. It appears to have a fine texture.</p>	<p>The ground layer fluoresces a pale blue. Individual fine, rounded particles are visible within the ground layer.</p>

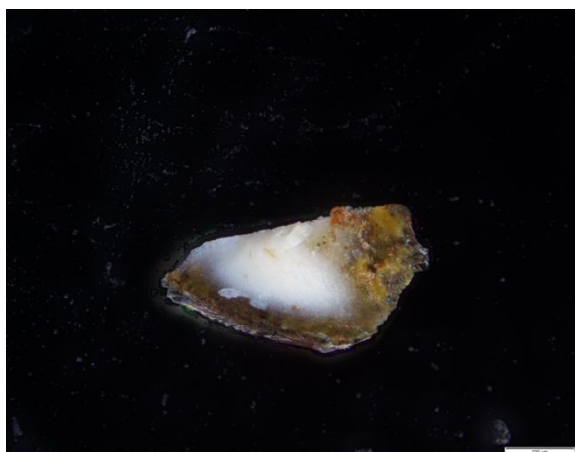
Sample CM3b

This sample was taken from the extreme left edge of the painting from an area of architecture with the middle brown tone.



Sample CM3b Recto 100 x 0.67x dark field.

Sample CM3b Recto 100 x 0.67x UV light.



Sample CM3b Verso Stacked 100 x 0.67x dark field.

Sample CM3b Verso Stacked 100 x 0.67x UV light.

<i>Layer</i>	<b>Appearance and pigments used</b>	<b>Other characteristics, e.g. in UV light</b>
<b><i>Recto</i></b>	<p>The opaque white ground is visible.</p> <p>Green, red and black particles are visible within the brown paint layer.</p> <p>The black particles are rounded and fine.</p> <p>Quite coarse green particles are present.</p>	<p>A bright blue-green fluorescence is visible in the ground layer.</p> <p>A few of the red particles fluoresce bright orange-red.</p>
<b><i>Verso</i></b>	<p>The opaque white ground is visible.</p>	<p>The ground layer fluoresces a bright blue-green.</p>

Square green particles with rounded edges are visible.

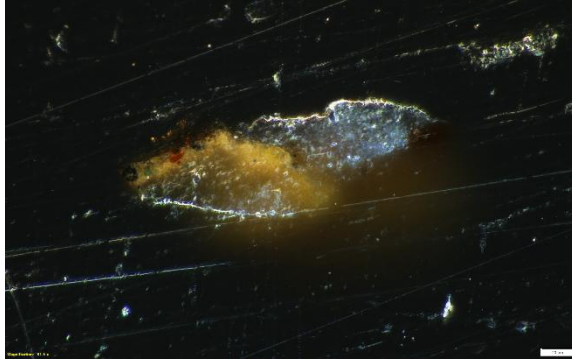
Rectangular red particles can be seen.  
The particles vary slightly in size and shape.

The black particles are fine and rounded.

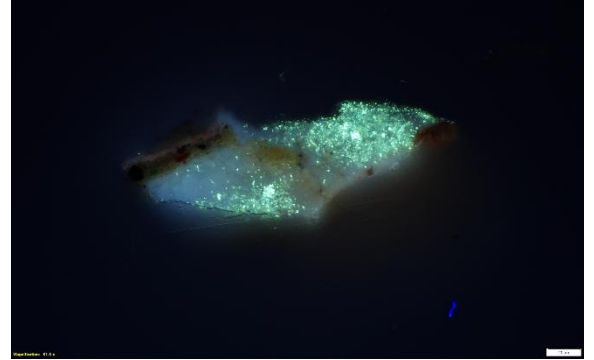
The ground appears to consist of fine, rounded particles.

One orange-red fluorescing particle can be seen.

This sample has been embedded and analysed with SEM-EDX



Cross-Section CM3a 500 x 0.67x, dark field.

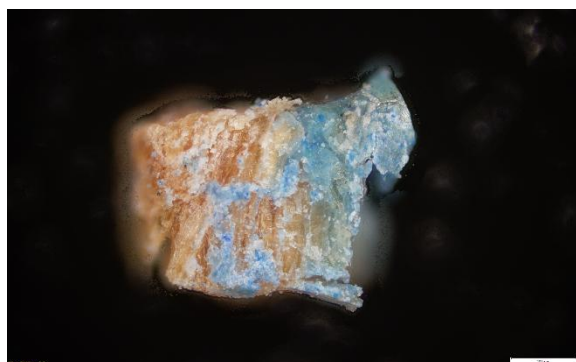


Cross-Section CM3a 500 x 0.67, UV light.

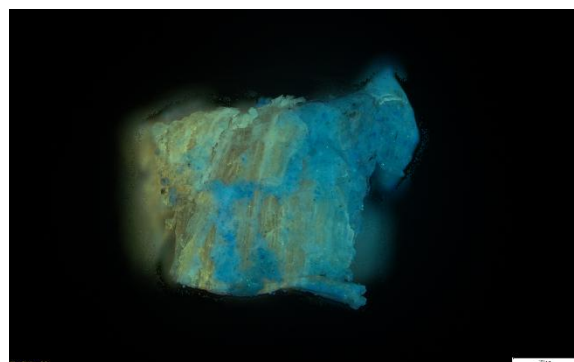
## XXIII.III Uplands in Lorne



The sample was taken from the upper left edge, indicated in the above photograph, from the light blue sky. The sample was analysed with SEM-EDX as a loose sample.

Sample UL1

Sample UL1, recto stacked, 100 x 0.67x, dark field.



Sample UL1, recto stacked, 100 x 0.67x, ultraviolet light.

<i>Layer</i>	Appearance and pigments used	Other characteristics, e.g. in UV light
<i>Recto</i>	<p>The light blue sky and some wood from the panel are visible. No ground layer can be seen.</p> <p>Blue pigment particles are visible. These range in size from fine to quite coarse. The pigment particles have a deeper blue hue than the paint in which they are embedded.</p>	<p>A slight yellowish fluorescence can be seen upon the wood of the panel. This may relate to a coating of the panel.</p>

## Appendix XXIV Diagrams of XRF Sites

### XXIV.I Uplands in Lorne





XXIV.II A French Harbour





XXIV.III Cloister at Montivilliers





XXIV.IV Uplands in Lorne





XXIV.V Morning in Lorne



XXIV.VI The Wilds of Assynt



## Archives and Special Collections

### National Library of Scotland Special Collections and Archives (NLS)

ACC6255

ACC6066

ACC6065

ACC5640

ACC7797 Correspondence and papers of James Connell and Sons.

1. Letters from D.Y. Cameron, 1890-1903
2. Letters from D.Y. Cameron, 1904-1905
3. Letters from D.Y. Cameron, 1906-1915
4. Letters from D.Y. Cameron, 1916-1923
5. Letters from D.Y. Cameron, 1924-1939
6. Items concerning Sir David Young Cameron: exhibition catalogue 1898 (printed); minutes of agreement with James Connell & Sons 1899; list of etchings; notes on 'The Old Revenge' (printed); three photographs, n.d.

ACC8950 Papers of and concerning Sir David Y Cameron, and his sister, Katharine Cameron Kay, specifically items:

- 3. Receipts of Cameron 1932-41, n.d.
- Ca 50 Sketches by Cameron mostly of landscapes, and some by Katharine Cameron
- 10. Sketch-book containing ca. 10 drawings by Cameron of Scottish Landscapes 1932
- 13. Diary of Cameron 1935 (contains some rough sketches)
- 14. Notebook of Cameron 1943
- 15. Diary of Cameron 1944
- 26. Manuscripts of articles, speeches and essays by Cameron 1933-45, n.d. on Art History, Religion and Art, Rembrandt, Michelangelo and including Cameron's last public address.
- 31. Inventory and valuation of Cameron's household at Dun Eaglais, Kippen, Stirlingshire 1925

ACC13488 Papers of George Renfrew Wilson relating to his unpublished biography of David Young Cameron.

University of Glasgow Special Collections and Archives

GB247 MS Wright A4, W46, Letters to Harold Wright 1944 and 1952

GB247 MS Wright W147 Order form for a portfolio of proof etchings by D.Y. Cameron, Alphonse Legros and others. October 1918

GB247 MS Wright C1 List of Sir David Young Cameron slides, n.d.

GB247 MS Wright C2 Rembrandt Lecture 23 November 1944

GB247 MS Wright C3 The etchings and dry points of Sir David Young Cameron, R.A., by Harold J.L. Wright. 1945. Annotated by Harold J.L. Wright.

GB247 Art Arch K4 Letter from D.Y. Cameron to Sir Gerald Kelly, 1923

GB247 MS Gen 515/23-29 Letters to Archibald Martin Henderson, 1916-1927

GB247 MS Laver C2 Letter from Sir David Young Cameron to James Laver, 1928

GB247 MS Whistler H567 Letter from H. Nazeby Harrington to Miss [Daria?] Haden, 1926

GB 247 MS MacColl C5-15, C17-24, C26, C108 Letters from from Sir David Young Cameron, R.A., to D.S. MacColl, 1912-1944

GB 247 MS MacColl S112 Letter from James Macle hose to D.S. MacColl, 1917

Sp Coll P.A.A. q45 'The etchings and drypoints of Sir D.Y. Cameron: being a lecture delivered to the Print Collectors' Club ... by Harold J.L. Wright'

Sp Coll Mu22-x.26 'Six Etchings of Glasgow; a Souvenir of the Exhibition of 1888'

Sp Coll RF343 'Pictures exhibited in the Royal Reception Rooms of the Art Galleries of the Glasgow International Exhibition, 1901'

Sp Coll Bf76-e.17 'Catalogue of a complete collection of original etchings by D.Y. Cameron / notes by Robert Walker'

Glasgow City Archives

T-PM 122/1/36 Letters worth keeping 1924-1928

T-PM 122/1/38 Letters worth keeping 1929-1932

T-PM 122/1/39

Roberson Archive - Hamilton Kerr Institute

Account ledgers: HKI MS 136-1993, 137-1993, 138-1993

Drawing materials ledger HKI MS 764-1993

Tate Britain Archives and Special Collections

TGA9122/1/8 Letters by Cameron to Croal Thomson 1911-1920

TGA9122/1/8/19

TGA9122/1/8/12

TGA9122/1/8/14

TGA9122/1/8/16

TGA9122/1/8/19

TGA9122/1/8/20

TGA9122/1/8/22

TGA9122/1/8/27

TGA9122/1/8/29

TGA9122/1/8/32

TGA9122/1/8/33

TGA9122/1/8/43



Letters Cameron to Alfred Yockney 1925-1927:

TGA724/65 1925

TGA724/66 1927

Letters Cameron to James Bolivar Manson 1925:

TGA806/1/142

TGA806/1/143

Arthur Tooth and Sons, London 1936

TGA20106/1/2/28

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