

Working towards Meaning

The Restoration of Colin McCahon's Chapel Windows



Published in 2019 by Auckland Art Gallery Toi o Tāmaki on the occasion of
the exhibition *A Place to Paint: Colin McCahon in Auckland*
10 August 2019—27 January 2020

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Catalogue design: Imogen Greenfield

ISBN 978-0-86463-326-2

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Cover

Interior of the chapel looking east with windows
by Colin McCahon, candelabra and tabernacle
by Paul Dibble.
Photo: H Rogers-Jenkins, 1970

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Above

Convent of the Sisters of our Lady of the Missions, Upland Road, Remuera, 1965.
 Architect: James Hackshaw. The white circle in the upper row of windows is the host in panel 8 on the east wall.
 Photo: H Rogers-Jenkins, 1970

‘In this present time it is very difficult to paint for other people – to paint beyond your own ends and point directions as painters once did. Once the painter was making signs and symbols for people to live by: now he makes things to hang on walls at exhibitions.’¹

Working towards Meaning

Alexa Johnston

Seven years after he finished the painted glass in the Upland Road Convent Chapel of the Sisters of Our Lady of the Missions in Remuera, Auckland, Colin McCahon recalled working on the windows over the summer of 1965 and 1966:

I worked a six-day week (Sunday was out); I got to know a lot of new people including the architect, Jim Hackshaw, the builder, a very large man, and the Mother Superior who regarded the whole enterprise with amazing sympathy. The young novices who came whispering in and out to look at the work in progress were very fine people . . . The job was finished and the Chapel opened, and working towards meaning, in a real situation, came to an end.¹

Colin McCahon had a strong interest in religious thinking, writing and symbolism. Christian stories and characters appeared in his work over many years as he considered the wisdom, paradoxes, dilemmas, doubts, hopes, fears – and the beauty – of the Christian tradition. But he was aware that for many viewers the narratives he was exploring were opaque, archaic and even distasteful. Hence his almost wistful longing for a viewing audience for whom his concerns and his questions about faith were familiar and relevant.

With this commission, which was organised by architect James Hackshaw, he was able to make a work for people who did live by the symbols he was painting. Much thought went into his choice of the images to include and their ordering in the windows: 'Archbishop Liston and I had a "real go" about the painting and the right order for the panels. We argued for hours. He finally left, saying "Have it your way if you must". I stayed on and repainted all night to have it his way. He was right: I just had to think harder.'² McCahon later wrote:

The manner of my painting is contemporary; the Church is both contemporary and ancient. These panels are based on ancient symbols of faith. I trust that my interpretation of these very living symbols will not offend, but may, in due time, help renew the link, now almost broken, between the Artist and the Church.³

The link between Colin McCahon and the Roman Catholic Church would continue with several other commissions, all arranged by James Hackshaw for churches he designed.

This first small chapel, intended for quiet contemplation and prayer, and positioned at the very centre of the new convent buildings, emerged as a space where architecture and art worked together in subtle, memorable harmony. The chapel was square and tall, with all the light coming from the band of windows just below the roof. Glimpses of sky, clouds and trees were visible through the painted windows and shafts of sunlight slanted into the space. McCahon painted the windows in his studio at the Elam School of Fine Arts and they were installed in the wall above the altar. The windows on the other three walls had to be painted *in situ* by McCahon and his assistant Richard Killeen, balancing on scaffolding far above the floor – a dizzying experience. When the work was completed McCahon wrote an introduction for chapel visitors about the 13 windows in the main sequence and the symbols he had used (see pp 13–26). McCahon also introduced sculptor Paul Dibble, an Elam student, to James Hackshaw and as a result Dibble made the tabernacle and two tall bronze candelabra for the chapel.

After finishing the windows McCahon made a long shallow painting called *The Way of the Cross*, 1966, (pp 30–31) in which the 14 Stations of the Cross, the stages of Christ's final journey through Jerusalem to Golgotha, occur within an undulating Auckland landscape. He painted it for the mezzanine walkway across the back wall of the chapel and presented it to the convent as a gift.

The whispering young women whom McCahon noticed coming in and out of the chapel while he was painting were soon to take their final vows. Sister Maria Park came to the convent in 1967 with five other sisters, several of whom were training to be teachers. Sister Maria was already a teacher and attended university while she was at Upland Road. The convent buildings were new and she recalls the extraordinary beauty of the chapel and her delight in the transparency of the windows, which allowed the outside world in and seemed to reflect the spirit of the Second Vatican Council, called by Pope John XXIII in 1959. Vatican II was concerned with *aggiornamento* (bringing up to date), *convivenza* (living together) and opening up the Church to the world. Sister Maria loved the modernity of the windows and the way the architecture and art worked together to create a complete experience. And she particularly loved *The Way of the Cross*, which she would walk past in private prayer, describing it as 'remarkably personal and intimate'. The soaring beauty of the windows when the whole community gathered in the chapel was 'sublime'. Sister Maria Park recalls the experience of living with these works with gratitude



Above

Interior of the chapel looking east with windows by Colin McCahon, candelabra and tabernacle by Paul Dibble. Photo: H Rogers-Jenkins, 1970

and a strong sense of their importance for her and for the whole community. Maria: 'The chapel was central and it shot up above the rest of the building, so that the windows were visible from the pathways and I remember walking down the drive and seeing the white circle of the host shining out from the windows and I knew I was home.'¹⁴ The mother superior whom McCahon refers to was Mother Mary Vianney, a woman of energy and sensitivity who also responded to the power and beauty of the windows and the perfection of the space.

I first visited the chapel around 1979 as a new curator at Auckland Art Gallery. A colleague, Ron Brownson, suggested that we visit the convent and photograph the chapel and the windows from the inside. They were then 13 years old and strong ultraviolet light was causing the paint to shrink and detach from the glass. I remember one of the nuns who showed us around saying that whenever they

cleaned the chapel's beautiful parquet floor they would sweep up shreds of black paint that had fluttered down. There seemed to be nothing we could do but record the windows in their present state.

Ten years later, in 1989, Sister Maria Park wrote to the Gallery to say that the building was to be sold to a language school and the sisters were moving to Panmure. They would take *The Way of the Cross* with them for their prayer space, but that the gallery could have the windows if we would remove them and pay to have the windows re-glazed.

What to do? We knew that the windows were in a fragile state – even more paint had now been lost. How could they be safely stored and preserved from further damage – and how could they ever be shown by the Gallery? While we were considering this, one of the art gallery technicians, Marcus Rishworth, suggested that he could make large crates like drawers in which the glass panels could lie flat, their surfaces protected, until we could decide if restoration or display were possible. Looking back, I am convinced that without Marcus's offer and his skilful crate-making the panels would not have survived the next 30 years to be seen again today.

The windows above the side and rear walls were in particularly bad shape, and we decided we could preserve only the windows above the altar. These were the ones about which Colin McCahon had written explanatory notes on his use of symbols and his hopes for the longevity and significance of his work.

Longevity was always going to be a problem once the windows began to deteriorate. I had thought they were unlikely ever to be seen despite the care given to storing and preserving them, and so I was surprised and delighted when Sarah Hillary told me that conservator Annette McKone and a conservation intern, Elle Vallier, had begun working on relaxing the crumpled paint and assessing whether enough of it remained to make the windows comprehensible to a viewer. There seemed little point in showing the threadbare wreckage of what had been a superb work of art. But it quickly emerged that more paint was left than we had feared. Peter Deutschle was commissioned to make transparencies based on early photographs of the chapel windows which could be set behind the glass, thus restoring a sense of the original colours and imagery. At last it seemed that we had something well worth showing. And so in the same way that the original work was collaboration, this new exhibition has been made possible by the skilled work of many people.

Thinking with admiration about the work of a friend, the sculptor Molly Macalister, Colin McCahon wrote, 'perhaps she never knew what it was that she had created. Few artists if any ever know this.'¹⁵ Whether McCahon knew it or not, what he created, in

Right

Interior of the Chapel looking west with windows by Colin McCahon and Richard Killeen. The painting on the wall of the mezzanine gallery is *The Way of the Cross*, 1966 by Colin McCahon. Photo: H Rogers-Jenkins, 1970

A black and white photograph of a modern church interior. The space is characterized by a high, vaulted ceiling with exposed wooden beams. Large windows along the upper walls are decorated with religious text and symbols, including "UBI DOMINE", "BENEDICT", "GOD", "HIGH", "KTRIE", "ELEISON", and a large cross. A balcony with a railing is visible above the pews. The foreground shows rows of wooden pews and a small altar area with two candles.

A Note on the Sisters of Our Lady of the Missions, from Sister Maria Park

We are Religieuses de Notre Dame des Missions (RNDM): in English, Congregation of Our Lady of the Missions and commonly called Mission Sisters. Our foundress was Euphrasie Barbier, who was born and baptised in Caen, France, on 4 January 1829. She founded our congregation in Lyons in 1861 and set up our first New Zealand foundation in Napier in 1865. She died at Sturry, in Kent, England, on 18 January 1893. We are based in Auckland, Waikato, Taranaki, Hawke's Bay, Wellington, Christchurch and Samoa, and our international provinces are in Rome (our central administration), Australia, Bangladesh, Canada, France, India, Kenya, Latin America, Myanmar, the Philippines, Senegal, the United Kingdom and Vietnam.

In her many letters to RNDM congregations around the world, Euphasie Barbier emphasised caring for and assisting those on the margins of society, which was her particular calling. Today RNDM sisters work in the following areas:

Education

Our primary mission is the empowerment of women. In countries where access to basic education is limited, we have developed centres to promote literacy and provide health education for women.

Health care

Health care is sharing in the compassionate and merciful ministry of Christ. As well as medical centres, we have mobile clinics and give talks on preventive medicine. Patients also know that we hold them in our daily prayers.

Social development

Our priority is the pursuit of social justice and the well-being of oppressed and marginalised individuals and communities. We work particularly with women, children, youth, indigenous peoples, migrants and victims of human trafficking.

Pastoral care

Communion is 'to be with' those who are suffering: abandoned or maltreated children, young people left to themselves in the suburbs of huge cities, victims of drug addiction, prostitution, AIDS, women who are exploited, those on the fringes of society and foreigners without documentation. Add to this list being with people who are house-bound, the sick and elderly, the handicapped, those grieving the loss of a loved one, those hospitalised or in prison. This is the pastoral care ministry of RNDM sisters.

Endnotes

- 1 Colin McCahon, 'Colin McCahon: A Survey Exhibition', Auckland City Art Gallery, Auckland, 1972, p 26.
- 1 As above, pp 32–33.
- 2 As above, p 32.
- 3 Colin McCahon, 'Concerning the Thirteen Glass Panels over the Sanctuary, in the Chapel of the Sisters of Our Lady of the Missions, Remuera', unpublished document, 1966.
- 4 Sister Maria Park, in conversation with Alexa Johnston, 26 February, 2019.
- 5 Colin McCahon, *Molly Macalister: A Memorial Exhibition*, Auckland City Art Gallery, Auckland, 1982, p 13.

Concerning the Thirteen Glass Panels over the Sanctuary, in the Chapel of the Sisters of Our Lady of the Missions – Remuera

Colin McCahon

The physical art of painting, its mechanics and its labour need not interest the viewer. The work of the artist is done by the time the viewer views. What has been communicated is now of primary importance, indeed, this is the only importance a work of art has.

In these notes, I offer no final reading of my 'text' but an initial help for any who may find my meaning and intentions obscure.

As an introductory and possibly necessary reminder to the viewer – this is not stained glass – nor is it the conventional painted glass of some churches.

I have treated these thirteen panels as one unit, divisible into single panels for contemplation but resolving into one whole at the same time.

The manner of my painting is contemporary; the Church is both contemporary and ancient. These panels are based on ancient symbols of faith: I trust that my interpretation of these very living symbols will not offend, but may, in due time, help renew the link, now almost broken, between the Artist and the Church.

PANELS 1 & 13:

'I am Alpha and Omega, the beginning and the ending, saith the Lord, which is, and which was and which is to come, the Almighty . . . I am he that liveth, and was dead, and behold, I am alive for evermore.' (Revelation: 1–8 and 18)

In the first panel the sun is symbolic of Christ, this interpretation being based on the prophecy of Malachi: 4–2. 'But unto you that fear my name shall the sun of righteousness arise with healing in his wings.'

Used in panel 1 and elsewhere in the sequence, clouds make both a formal element in the paintings and are also used symbolically. 'Behold he cometh with clouds, and every eye shall see him.' (Revelation: 1–7)

In the whole sequence symbolic use is made of light divided from darkness.

Opposite left

Panel 1

Opposite right

Panel 13



PANEL 2:

Light is symbolic of Christ: (John: 8–12). 'Then spake Jesus again unto them, saying, I am the light of the world: he that followeth me shall now walk in darkness, but shall have the light of life.'

The candle symbolises the coming of Christ in communion – the candlestick, the church. The square or cube on which the candlestick stands is the emblem of the earth and of earthly existence. (The text for this panel is from the Nicene Creed.)



Right

Panel 2

PANEL 3:

XP: the two Greek letters, ('Chi' and 'Rho'), which most frequently appear in a monogram are the first two letters of the Greek word for Christ. The combination of these two letters readily gives the form of a cross.

As 'Rho' resembles 'P' and 'Chi' is similar to 'X' the monogram is sometimes read as the Latin word 'PAX', peace.



Right

Panel 3

PANEL 4:

Again, light is divided from darkness but the darkness, though dark is now streaked with light. This cross is symbolic of the resurrection. (Pink, the colour of dawn, is the symbolic colour of the Resurrection.)

IC, XC, NIKA. This ancient monogram symbolises 'Christ the Conqueror'. I and C are the first and last letters of the Greek word IHCUC (Jesus), X and C are the first and last letters of XPICTOC (Christ). NIKA is the Greek word for conqueror.



Right

Panel 4

PANEL 5:

Here a number of the symbols are gathered together to form one. The dove, symbolic of the Holy Ghost first appears in the story of the baptism of Christ. 'And John bore record, saying, I saw the Spirit descending from heaven like a dove, and it abode upon him.' (John 1–32)

The book in this particular context, and bearing these particular symbols: 'T' – Theos – God, and the cross of Christ, becomes symbolic of the Old and New Testaments. (This grouping is also symbolic of the Trinity.)

Below, on an indigo field with clouds symbol of the Unseen God, a circle, symbol of eternity and also of the perfection of God, contains a lily, the flower of the Virgin. (The lily is frequently associated with scenes of the Annunciation.)

In this panel in particular, but also in others use is made of an equilateral triangle as a symbol of the Trinity. (Here again as elsewhere this triangle also provides a formal link between the separate panels.)



Right

Panel 5

PANELS 6, 7, 8:

IHS: these letters are the first three of IHSUS, the name of Jesus in Greek. They have often been confused with the Latin phrase 'In hoc signo vinces'. ('In this sign will you conquer.') This monogram is also misinterpreted as being an abbreviation of the Latin phrase, 'Iesus Hominum Salvatore', ('Jesus Saviour of Men').

As a background to these three panels there is a suggestion of trees and landscape. The tree is an ancient symbol for knowledge: the cross was made from the wood of a tree.

In panel 8, the Host appears in gold and the darkness of panel 6 becomes light.



Right

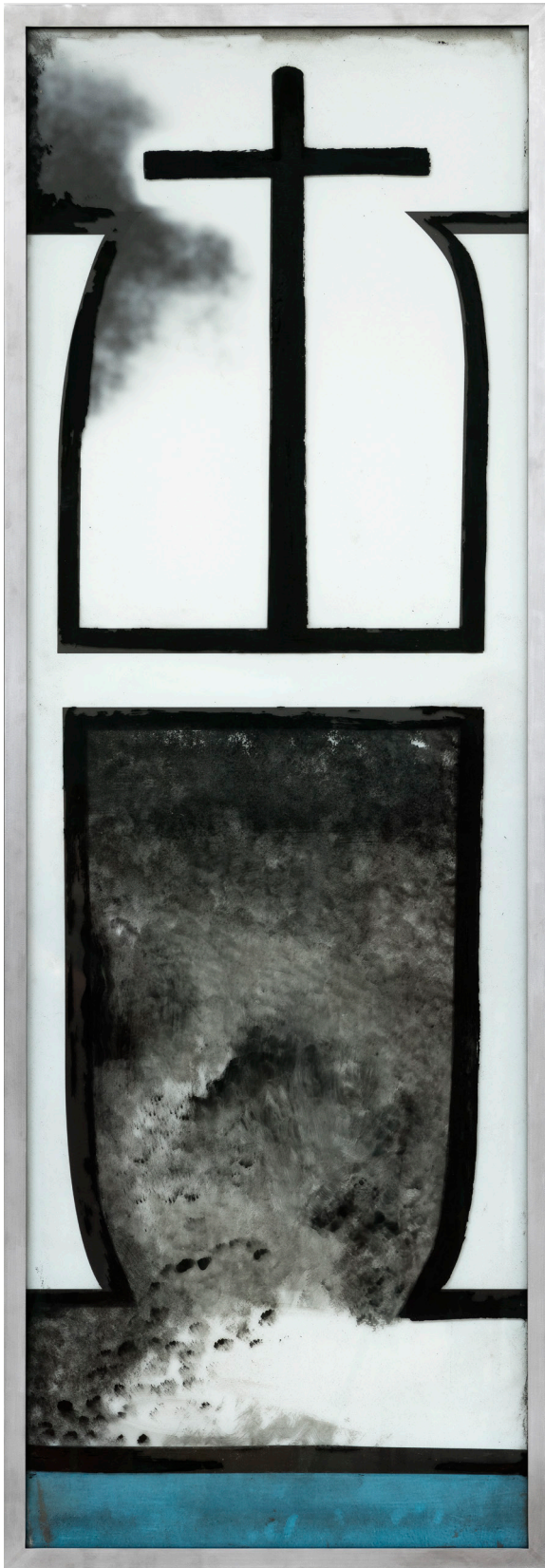
Panel 6

Opposite left

Panel 7

Opposite right

Panel 8



PANELS 9 & 10:

These two panels 'read' strictly in relation to the three preceding ones. The Chalice, Grapes and Wheat, also the written word 'Ihsus', in this relationship form a symbol of the Mass.

Opposite left

Panel 9

Opposite right

Panel 10



PANEL 11:

In this panel the Crown of Thorns, the Nails and the inscription INRI speak of the sacrifice of the cross. Through its symbolism, and also through the common horizon, (again dividing light from darkness), this panel is tied to the preceding panels. (The use of purple for the crown of thorns is symbolic both of sorrow and of royalty.)



Right

Panel 11

PANEL 12:

The words 'Glory be to the Father . . . a light shall shine . . .' are from the Second Mass for Christmas Day: a prayer of thanksgiving for increasing enlightenment.



Right

Panel 12

PANEL 13:

This has been covered (see panels 1 and 13).

Notes on the Colour used in these Panels:

BLACK is frequently used as a symbol of death, black suggests mourning and negation.

WHITE has always been accepted as symbolic of innocence of soul, of purity, of holiness in life. In these panels the clear glass takes the place of white. (Christ in the Transfiguration is clad in a garment 'as white as the light'. Matthew: 17–2)

Black and white together, as used here, symbolise humility and purity of life.

BLUE, the colour of the sky, symbolises heaven, is the colour of truth – always appearing in the sky after the clouds are dispelled, suggesting the unveiling of truth.

PURPLE has already been mentioned. The red-purple I have used is symbolic both of sovereign power and of blood. It is also associated with the coming of the Holy Ghost.

GOLD the Colour, is the emblem of Divinity. Gold, the precious metal, as used on the symbol of the Host in panel 8, is the symbol of pure light.

GRAY (used in the 'HIS' sequence), signifies mourning and humility. Gray symbolises the death of the body and the immortality of the spirit.

Concerning some aspects of the symbolism resulting from the use of transparent glass:

Glass being clear and translucent, symbolises the perfect purity of the Virgin. Through the use of clear glass a changing background of sky is given, emphasising certain aspects of the painting. A clear blue sky – heaven. (Blue is also the colour most frequently associated with the Virgin). Clearing clouds symbolise truth revealed. A gray sky, mourning, humility, immortality of the spirit. Dawn, the resurrection. Evening, gold, Divinity. At night with light in the Chapel and with surrounding darkness I hope the symbol of pure light will still shine. For this reason I have used gold.

Colin McCahon



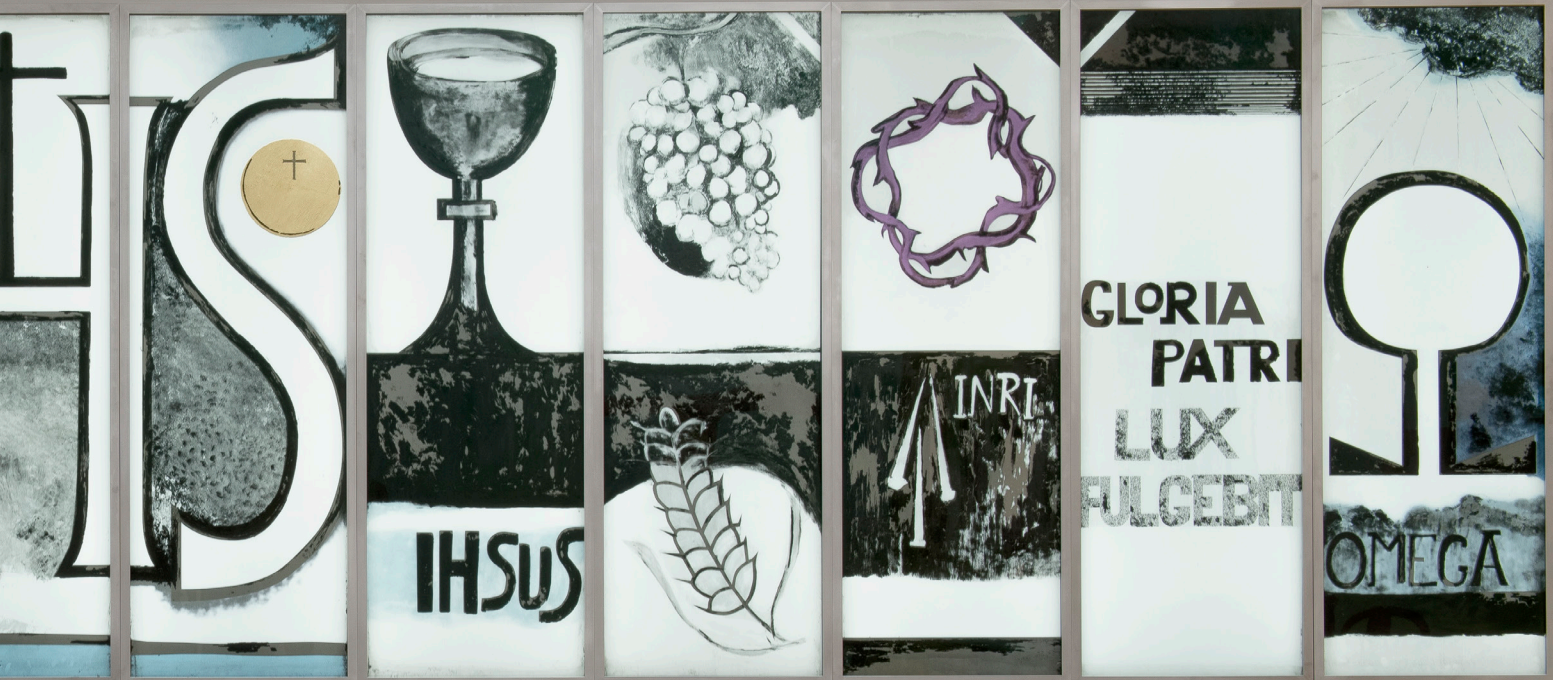
Colin McCahon

*East window: Convent Chapel of the Sisters of our
Lady of the Missions, Auckland Dec 1965–Nov 1966*
(installation view: Auckland Art Gallery, 2019)

sign-writer's paints on glass

Auckland Art Gallery Toi o Tāmaki

gift of the Chapel of the Sisters of Our Lady of the
Missions, Auckland, 1989





Above

Colin McCahon
The Way of the Cross, 1966
 synthetic polymer paint on three hardboard
 panels
 Auckland Art Gallery Toi o Tāmaki, on loan from
 the Thanksgiving Foundation





Above

McCahon teaching at Elam School of Fine Arts,
University of Auckland, 1967. Photo: S Pilkington

**‘The physical art of painting,
its mechanics and its labour
need not interest the viewer.
The work of the artist is done
by the time the viewer views.
What has been communicated
is now of primary importance,
indeed, this is the only impor-
tance a work of art has.’¹**

A Painter of Paintings

Sarah Hillary

For someone who is particularly concerned with materials and techniques, as I am, the statement to the left, written by Colin McCahon in 1966 about the painted windows from the Chapel of the Sisters of Our Lady of the Missions, is a good reminder of how we should experience art with an open mind and not let our preconceptions get in the way. He goes on to clarify that the windows are not stained glass or the conventional painted glass found in churches, but that '... the manner of my painting is contemporary; the Church is both contemporary and ancient.'² In other words, just as the Roman Catholic Church acknowledges the past but must remain relevant for people living in the present, so too should art.

At the time that McCahon completed the painted windows, his work was admired and celebrated by some but others found it challenging, particularly in his choice of materials. An uproar developed in 1962 when the Robert McDougall Art Gallery in Christchurch turned down the gift of a McCahon painting, and it was described as a figurative monstrosity by R H Stillwell, who also noted it was on hardboard, not canvas.³ In the same year, an anonymous writer to the editor of *The Press* declared that 'Colin McCahon has overdone it. His high-gloss "Gate Series" would make a delightful decoration in the right room, in an ultra-modern house, but they have about as much "great message and tragedy" as my wardrobe door, which is also painted in high-gloss.'⁴

Investigating the work of Colin McCahon seemed the obvious direction for research in my early years at the Auckland Art Gallery. As a significant New Zealand artist of the 20th century, McCahon had consistently challenged the traditional approach to materials and techniques throughout his career, while remaining a painter of paintings.

Although a lot had been written about his work, there was a lack of detail about his practice. McCahon had created an art that was distinctively of this place and his independent approach was reflected in his choice of materials, which included commercial paints rather than only artist-quality materials. The chapel windows were no exception and were painted with a household gloss paint – which was identified as an oil-modified alkyd.⁵

McCahon

conservation issues to be researched

An innovative project initiated by Conservators Sarah Hillary and Andrea Wise has been given \$15,000 funding by the Lottery Grants Board, Te Pahi Rota, in the latest grants round.

The aim of the project is to investigate and document materials and techniques used by the artist Colin McCahon. The research will be carried out on works selected from the Gallery's permanent collection.

Colin McCahon (1919-1987) is widely considered to be New Zealand's greatest artist and indeed can be considered to be one of the major figures in late twentieth century art. Not only did he challenge concepts of traditional imagery, he also chose materials and techniques that were innovative. Many contributed to the subtle textural qualities of his paintings.

Synthetic paints of the 60s and 70s, new materials for artists were embraced by McCahon. He experimented with their use and added elements such as sand and sawdust for textural purposes, often on non-traditional painting supports eg paper, hardboard and unstretched canvas.

This experimentation has resulted in some challenging conservation projects. In some extreme cases, it has also contributed to the deterioration of McCahon's work. To date, lack of information about the materials and techniques used, has made conservation of these works technically difficult.

"It's thrilling for both myself and my colleagues that the Heritage and Environment Committee has been able to support this really exciting and important conservation project," says Sarah Hillary, Senior Regional Conservator, Paintings. "To date only limited research has been done on this significant artist's work. As Colin McCahon worked at the Gallery for some years in the 1950s and as the Gallery has the most significant museum holdings of his works, it is fitting that the Gallery should be instrumental in developing expertise on this important aspect of his work."

The project will be carried out over the next two to three years by Sarah and her colleagues at the Gallery. A major report will be published at the end of this project and this will be of great value to conservators worldwide.

Sarah Hillary, Senior Regional Conservator, Paintings and Andrea Wise, Regional Conservator, Works on Paper examine some of McCahon's work in Gallery storage.



Left

Gallery News, February–April 1997, 'McCahon Conservation Issues to be Researched'.

Success in obtaining funding from the New Zealand Lottery Grants Board in 1996 allowed research into McCahon's use of modern materials. I also received tremendous help from various individuals who knew McCahon well, such as Gordon H Brown, McCahon's friend, writer and fellow artist. Gordon told me they began experimenting as a consequence of the shortages during the years of World War II and that a quota was only given to a select few:

The whole of the import thing was controlled by the art society, so it meant that they were the ones that got first choice. Although Colin was a member, because they thought his art was dubious [laughing], they put him to the bottom of the list.⁶

As a consequence of the restrictions many artists, including McCahon and Brown, were forced to improvise, making up their own paints or using commercial household products. As Jenny Zimmer records, a similar do-it-yourself approach was also prevalent in Australia in the 1950s, a magnification of the colonial 'do-it-yourself' ethic.⁷ Technical innovation was considered a challenge worthy of the artist and it signified an escape from older traditions. From the 1950s until the mid-1960s, Australian artists like Tony Tuckson (1921–1973) and George Johnson (born 1926) were making up their own varnishes and gessos, using household paints and applying them to sheets of masonite.⁸

The changes in approach were not limited to Australiasia. Pablo Picasso (1881–1973) had been painting with Ripolin, an oil-based housepaint, from as early as 1912, and David Alfaro Siqueiros (1896–1974) had been using the nitrocellulose automobile finish Duco since the 1930s. According to Harriet Standeven, the commercial product that has the longest history of artistic use is ‘ready-mixed household gloss paint’. Gloss paints ‘have many characteristics that appeal to artists: they are not only capable of producing a smooth, glossy finish free from brush marks but can also be poured directly from the can.’⁹ They were also inexpensive everyday materials. Siqueiros was the first to articulate his choice to use non-artist materials for socio-political reasons. As a communist, he believed that revolutionary art should be made from the products of modern industry. He taught his approach at the 1936 New York Experimental Workshop, which was attended by Jackson Pollock (1912–1956) and Morris Louis (1912–1962), among others.¹⁰

In 1998 I couriered a painting to an exhibition at the Tate Gallery and on my tour of the museum’s conservation department met conservation scientist Tom Learner, who had developed techniques for the identification of modern paints used by artists as part of his PhD.



Right

Tom Learner, Conservation Scientist,
Tate Britain, 1998. Photo: Sarah Hillary

The few previous studies that had examined the identification of synthetic paints had not considered the full range of materials that could be used in paint formulations.¹¹ He offered to analyse some McCahon samples for me, which meant that for the first time we could be confident about what paints had been used and their composition. Tom eventually joined the Getty Conservation Institute, and for many years we worked together on several studies about 20th-century New Zealand art and particularly McCahon, cumulating with the *Modern Paints Aotearoa* exhibition at the Auckland Art Gallery in 2014.¹²

One of the paintings we examined in our original study was *I and Thou*, 1954–55. In some areas the appearance is typical of a household enamel, which produces a flat and glossy surface; in others there is a sharp impasto which is more characteristic of oil paint. Because of the analytical work done by Learner, it was possible to confirm that both oil and an oil-modified alkyd (a synthetic enamel housepaint) had been used.¹³ This is the earliest known example of McCahon's use of alkyd and predates his visit to the United States in 1958, where he would have seen other examples of its use. When he returned to New Zealand his choice of medium took on a greater significance, and from then on it was more likely he would write the brand of household paint on the reverse of a painting; later it might also be recorded in catalogue entries. For example, *Northland*, painted that year, has 'Monocoat' written on the reverse. *Northland panels*, also painted in 1958, is described as being in Monocoat in the 1972 survey catalogue.¹⁴ Monocoat, manufactured by Giant, was a commercial alkyd flat paint made for ceilings.

Alkyd resins are a form of polyester which, in order to make them suitably flexible as a paint binder, are modified with oil.¹⁵ They became commercially available in America and Australia just prior to World War II. Finding out about the history of household paints in New Zealand is a bit of a challenge, as paint manufacturers' records can be commercially sensitive or have not been retained. I spoke with a number of very helpful paint chemists and eventually came across Peter Walters who has a particular interest in paint history.¹⁶ Peter told me that alkyd paints became available in New Zealand in the 1950s and, due to their superior qualities, eventually replaced the oleo-resinous and oil-lead-zinc paints that had previously dominated the market.

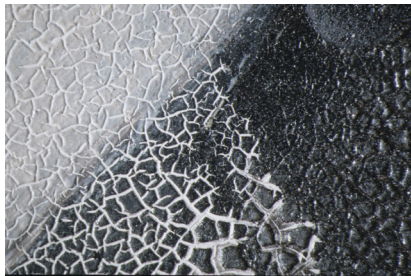


Left

Painting materials used by McCahon from the collection of William McCahon.

Through McCahon's son William, I was fortunate to meet artist Buster Black who said he was only using household enamels at the time he attended McCahon's painting classes in 1956. The paint levelled out as it dried and Buster would put anything he could find in his paints to create a texture, including 'tortured paint skins', sand and later broken-up glass, thus creating, from a static surface, one that he and McCahon referred to as 'jumping'.¹⁷ His black and textured landscapes were of particular interest to McCahon, who went on to add sand and sawdust to his own paintings.

During my initial investigations into the collection of paintings by McCahon at Auckland Art Gallery, I came across one from 1959 titled *Sketch* which had extensive traction cracking (where the upper layer of paint has contracted, revealing the layer below).



Left

Detail of *Sketch*, 1959 by McCahon showing traction cracking. Photo: John McIver

A number of years later some other works were gifted to the collection and had a similar or even worse problem. All the paintings were from the period 1959 to 1961, when McCahon was using the paving paint Solpah by Taubmans. A study carried out with the help of Tom Learner and his Getty Conservation Institute colleague Rachel Rivenc found that Solpah was an oleo-resinous paint containing rosin (a resin obtained from pines and other plants but particularly conifers), which has poor aging characteristics and a sensitivity to heat.¹⁸



Left

Solpah paving paint produced by Taubmans. From the collection of Richard Wolfe. Photo: John McIver

If the paintings were exposed to an uncontrolled environment for long periods, they could develop severe and irreversible traction cracking. In comparison, paintings composed of the same materials which had been housed in Auckland Art Gallery's air-conditioned environment for most of their existence had remained stable.¹⁹

By the time that McCahon completed the chapel windows in alkyd paint, he was no longer using solvent-based systems for most of his paintings. Around 1964, he had begun using PVA glue mixed with pigments or PVAc (polyvinyl acetate) interior housepaint.²⁰ In the United States artists such as Andy Warhol (1928–1987) and Helen Frankenthaler (1928–2011) had been experimenting with Liquitex acrylic emulsion since the 1950s, but in New Zealand it was very difficult to obtain artist-quality acrylic paints until the 1970s, and artists made do with the slightly inferior PVA formulations. Synthetic polymer emulsions required a different approach to that of oil and alkyd, as the paint could be applied direct to the support, was fast drying, flexible, could be washed out with water and there were minimal fumes. The canvas texture is visible through the thinner paint layer, more like stained fabric.

In 1972 McCahon referred to the do-it-yourself technique in a guide to participants of the University of Otago Summer School, which he conducted at Kurow by the Waitaki River. The present era is 'a paradise for beginners', he wrote, and 'Science has made this paradise possible.' It was not just that there was a desire to break away from the past, but that scientific innovation had made it readily possible and practical to do so.²¹

McCahon may have chosen alkyd for the chapel windows in 1965 because a paint developed for exterior conditions could be expected to be much more durable than an interior water-based PVA. His familiarity with the medium also allowed him to create many interesting paint effects with a dry and wet brush, with layering and rubbing back. Unfortunately, though, the constant exposure to light and heat from all sides at the top of the building was too great for the painting's long-term stability.

The treatment of the panels and solutions for restoration and display means that the east bank of the McCahon painted windows can be put back on display for the first time and in the year of the centenary of McCahon's birth.

Endnotes

- 1 Colin McCahon, 'Concerning the Thirteen Glass Panels over the Sanctuary, in the Chapel of the Sisters of Our Lady of the Missions, Remuera', unpublished document, 1966. See pp 13–26 in this publication.
- 2 As above.
- 3 *The Star*, 18 December 1962, quoted in Sarah Hillary and Kendrah Morgan, *Beneath the Surface: McCahon's Materials and Techniques 1954–1966*, Auckland Art Gallery, Auckland, 2000, p 4, available at <https://www.aucklandartgallery.com/page/beneath-the-surface-mccahons-materials-and-techniques-1954-66>.
- 4 *The Press*, 22 September 1962, quoted in Hillary and Morgan, *Beneath the Surface*, p 4.
- 5 Michael Doutre, Rachel Rivenc, Michael Schilling, Albina Avzalova and Sarah Hillary, 'Medium Analysis of a Paint Sample from Panel 13 of the East Windows', Getty Conservation Institute, 14 November 2017. Unpublished report.
- 6 Gordon Brown, interviewed by Sarah Hillary, 16 April 1998.
- 7 Jenny Zimmer, 'Memories of "Masonite" and "Dulux": A Study of Experimental Painting Techniques used by Australian Modernists of the 1950s and 1960s', in Sue-Ellen Wallace (ed), *The Articulate Surface: Dialogues on Painting between Conservators, Curators and Art Historians*, The Humanities Research Centre ANU and the National Gallery of Australia, Canberra, 1966, p 143.
- 8 As above.
- 9 Harriet AL Standeven, *House Paints, 1900–1960: History and Use*, Research in Conservation, Getty Conservation Institute, Los Angeles, 2011, pp 3–5.
- 10 As above.
- 11 Thomas JS Learner, *Analysis of Modern Paints, Research in Conservation*, Getty Conservation Institute, Los Angeles, 2005.
- 12 The exhibition examined the use of modern paints by New Zealand artists from the late 1950s and the 1960s. See <https://bit.ly/2WYoYp0>.
- 13 Tom Learner, 'Medium Analysis Report: Colin McCahon', Tate Gallery, 4 February 1999.
- 14 Colin McCahon, *Colin McCahon: A Survey Exhibition*, Auckland City Art Gallery, 1972, p 25. Northland 1958, private collection, and *The Northland Panels 1958*, National Gallery Te Papa Tongarewa.
- 15 Jo Crook, and Tom Learner, *The Impact of Modern Paints*, Tate Gallery Publishing, London, 2000, p 17.
- 16 Peter Walters is a member of the Surface Coatings Association New Zealand, <http://www.scanz.org.nz/>.
- 17 Buster Black, interviewed by Sarah Hillary, 30 April 1998.
- 18 Sarah Hillary, Tom Learner and Rachel Rivenc, 'Traction Reaction: Severe Deterioration of Household and Paving Paints Used by Colin McCahon', *Contemporary Collections, AICCM National Conference Preprints*, 2007, Brisbane.
- 19 As above.
- 20 Sarah Hillary, 'A Painter's Paradise: The Materials and Techniques of Colin McCahon', *Journal of New Zealand Art History*, vol 27, 2006, pp 70–88. Synthetic polymer resins such as PVAc and acrylic were developed in Germany during World War II as an alternative to oil paint, which was unavailable due to shortages of linseed oil.
- 21 As above.

Conservation of the Chapel Windows

Annette McKone

I first came across the chapel windows in 2015 when they were requested for viewing by a researcher of Colin McCahon's works. There had been interest shown in them previously, but on those occasions the Gallery refused viewing due to the incredibly fragile and deteriorated state of the windows, which severely inhibited movement and handling. This piqued my interest, and I turned to the conservation file to learn more. Acquired in 1989, the windows had been reviewed for conservation treatment twice by private conservators but, possibly because of the costs and logistics of carrying out a conservation treatment off site, with no exhibition purpose in mind, the proposals were not accepted and the windows somewhat forgotten.

I became the Gallery's first objects conservator in late 2009. With a new objects lab on site, I realised that the windows could become a project to work on 'in the background' behind the rest of my commitments, with the view of simply making one or two of the panels stable enough to allow public viewing, primarily for research. However, the project was to become much more.

The 13 panels, the complete set from the east wall of the Chapel of the Sisters of Our Lady of the Missions, were painted on the interior surface of the glass and joined together with a metal framework, integral to the architecture of the chapel clerestory.

In McCahon's words, 'this is not stained glass – nor is it the conventional painted glass of some churches'. Indeed, his application methods are varied and not all conventional. Some areas have been painted in a solid black. We also see many areas of a fine particulate pigment application, a scumbling pattern (with and without the apparent addition of white) loose dry brush strokes, meticulous scratching through of paint layer and freehand scribbling cutting through the paint layer.

In a description of the windows written by McCahon, he mentioned several colours used in the panels: pink in panel 4, an indigo field in panel 5, the gold host of panel 8, and purple in the crown of thorns in panel 11.¹ Unfortunately these colours have been lost, with only a greenish tinge remaining visible in the crown. However

there are quite evident remnants of blue on several panels, indicating this and black made up the predominant palette.

Apart from loss of colour, there are significant losses of paint which radically interfere with the reading of the work. Analysis of the paint confirmed McCahon's use of alkyd paint. Twenty-three years of exposure to high levels of light, ultraviolet radiation and extremes of temperature had caused these losses. In addition, the condition of the remaining paint, with severe flaking, curling, brittleness and lack of adhesion to the substrate, had greatly deteriorated. The particulate pigment is held only by the weakest of natural forces and was easily lifted from the surface by touch. The panels were also dirty, with evidence of mould, insect eggs and detritus, spider webs, residue from frame attachments and general dust and particulate matter on the surface.

With the windows in such a badly deteriorated state, we were unsure whether any treatment would be successful. But with the ability to treat them on site at no additional cost and with the 100th anniversary of the birthday of Colin McCahon looming, we decided to proceed and to attempt to stabilise all 13 panels.

From the onset it was agreed we would not be retouching or infilling any losses of paint. Although there are photographs of the windows to refer to, they do not provide the information needed to attempt such radical retouching. Conservation, as opposed to restoration, does not aim to make the object whole and new again, but to create stability, honour the artist's intent and aid coherent reading of the work. To this aim a secondary purpose of the project was to find a possible way of allowing the panels to be seen as much as possible as they were originally, in situ as windows: 'one unit, divisible into single panels . . . resolving into one whole'.²

Usually the first step in any conservation treatment is to clean or remove any dirt or foreign matter. But because the surfaces were so vulnerable, only limited cleaning was possible prior to stabilisation: this consisted of the physical removal of mould or reduction of mould stains, removal of insect evidence and a gentle swab of stable paint surfaces with de-ionised water. Where possible, areas under the loose paint flakes were also cleaned, to increase adhesion to the substrate.



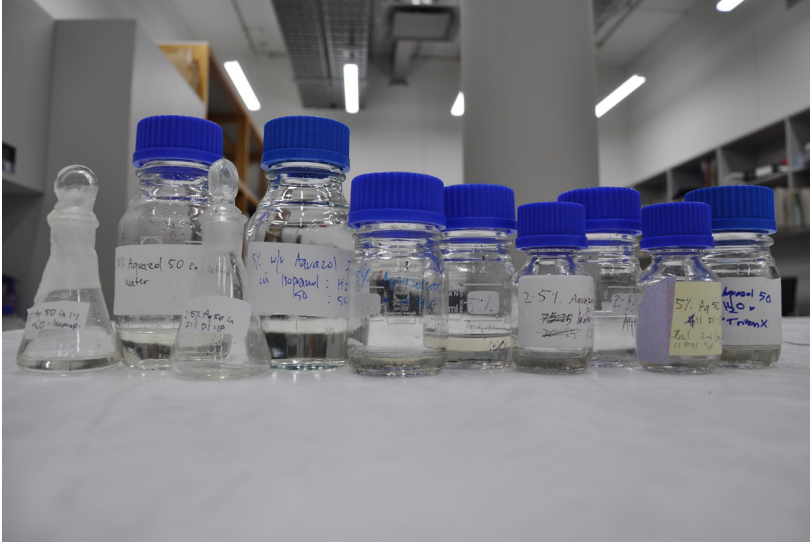
Above left

Panel 1 before treatment. Photo: John McIver



Above right

Panel 1 after treatment.



Left

A selection of the different adhesive solutions used in the treatment.
Photo: Elle Vallier

Solubility tests with two common solvents used in conservation, acetone and ethanol, showed varying degrees of solubility of the paint. Water did not affect the paint layer and later trials showed that isopropanol, which is classified as a polar solvent, did not affect it either.

To stabilise the paint it was necessary to find a suitable adhesive and to come up with a number of solutions due to the different paint application methods. We needed an adhesive which would not alter the appearance of the paint, would not interfere with its chemistry (eg, dissolve it) and which theoretically could be reversible. It also needed to have good adhesion properties to both paint and glass, have good aging properties, not be expected to fail, and be in a carrier (solvent) that would not affect the existing paint. A literature search indicated Aquazol as an appropriate adhesive and it was subsequently chosen: it has a strong adhesion to glass and its refractive index is the same as glass, which means it is less visible; its aging properties are good, and it is soluble in both water and a number of polar solvents, including isopropanol. Most importantly, it is available in a number of molecular weights, which meant we could adjust its strength and penetration size as needed for the different applications.³



Left

Example of flaking paint showing McCahon's technique of cutting through the paint. Photo: Elle Vallier

I began to treat panel 9, 'ISHUS', in 2016 and successfully developed a broad treatment approach of applying Aquazol in a water solution with a long fine brush under the flaking paint, and

manipulating the flakes with other brushes from the top. This was surprisingly effective in softening such brittle paint and relaxing it back into place. I also attempted to stabilise the powdery loose pigment by applying a very weak solution using a common household nebuliser (such as used for easing asthma) to distribute fine droplets of the adhesive over the top, but this met with varying degrees of success. However, it was apparent that the panels could indeed be stabilised and made accessible and that with some clever initiatives we could devise a display solution to enable their exhibition.

With my other collection commitments we needed someone to be dedicated to the panels' treatment and display solutions, and were fortunate that Elle Vallier, a recent graduate of the Grimwade Centre for Cultural Materials Conservation at the University of Melbourne, joined us as a Marylyn Mayo intern for three months, to spearhead the project.

Elle built on my initial treatment protocol and further developed nebulising treatment methods by experimenting with different concentrations and molecular weights of the adhesive. She found that a higher solution of Aquazol in a lower molecular weight was successful. She also developed a further application method. As well as the curling, flaking paint, which was thicker and often attached to still adhered paint areas, or the very fine particulate paint, there are a variety of areas where McCahon had disrupted the paint layer by cutting or scribbling through it, and other areas of stippled paint. Successful adhesion of these areas was achieved through 'dropping' in adhesive, allowing it to wick in and under the paint. This delivery method led to testing many formulations of the adhesive with isopropanol, which allowed for better wetting, spreading and penetration, as well as drying faster and leaving less adhesive film on the glass surface.

Elle successfully completed the treatment of the panels and carried out considerable background research and further analysis of the paint. As well as the identification of the black alkyd paint, the blue pigment in the only other obvious paint present was identified as Prussian blue. Further research into the other colours has been inconclusive, however.

As a final request of the internship, Elle began the process of discussions and decisions regarding the exhibition of the windows. We wanted to celebrate and contextualise Colin McCahon's painted panels so that they were shown as glass windows with the light shining through them, as had been intended.

To successfully exhibit the windows in the gallery context we had to come up with a method that would align with the window's original vision, and enable the reading and appreciation of the imagery and iconography of which so much has been lost.

Because retouching, or in-painting, of such large lost areas was inappropriate, we needed a way of replacing the lost 'parts'. The form, pattern or application of those parts was apparent in some areas but unclear in many others. Therefore it was not possible ethically to physically add anything to the work, even if we were able to clearly distinguish between McCahon's hand and the conservator's. It was also an important requirement for the public to see and appreciate the many fine painterly techniques that the artist employed.



Left

Elle using the nebuliser to stabilise the loose powdery pigment. Photo: Elle Vallier

Our solution has addressed both these issues. After initial discussion with the Gallery's designer, we have employed a dimmable LED panel behind the glass artwork. This enables a flow of light through the work, much like through a window. The LED panel incorporates a diffusing acrylic panel onto which is printed a digital mask of our impression of what has been lost. These masks are indicative only, but created through careful study of photographs, anecdotal and documented references. We are indebted to Peter Deutschle for his dedication and skills in creating these masks and giving the glass panels a new life. The panels also have a protective layer of glazing so that further loss to the paint is minimised.

Light is a deteriorating factor for many materials. It may seem incongruous that we have decided to exhibit works already so damaged by light using this display method. But this compromise enables a greater number of people to have the opportunity to appreciate and examine this unique example of Colin McCahon's oeuvre. The effects of light are accumulative and after their display the windows will be rested in dark storage.

The project has required a fair amount of lateral thinking and problem solving by a number of people. The conservation

treatment involved ethical decisions and practical compromises, and the design solution to display the works in the best possible way has been a great challenge. It is a project that has taken over four years and it is extremely gratifying to be able to have all 13 panels on display.

Endnotes

- 1 Colin McCahon, 'Concerning the Thirteen Glass Panels over the Sanctuary in the Chapel of the Sisters of Our Lady of the Missions – Remuera', unpublished document, 1966. See pp 13–26 in this publication.
- 2 As above.
- 3 Julie Arslanoglu, 'Aquazol as Used in Conservation Practice', *WAAC Newsletter*, vol 26, no 1, 2004, pp 10–15.