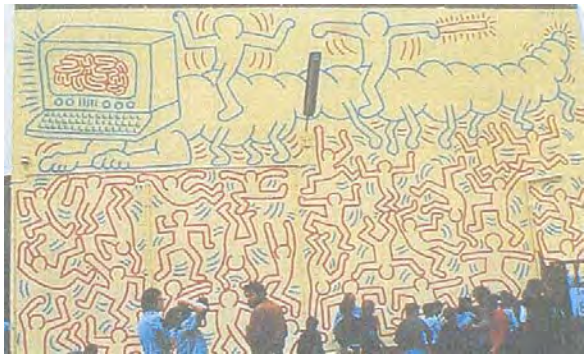
FORMER COLLINGWOOD TECHNICAL SCHOOL
35 Johnston Street, Collingwood

CONSERVATION MANAGEMENT PLAN
Volume 2: The Keith Haring Mural



1984

2010

ARCHITECTS + CONSERVATION CONSULTANTS

March 2011

RBA ARCHITECTS +
CONSERVATION CONSULTANTS PTY LTD
FITZROY STREET 4C/171
ST KILDA VIC AUSTRALIA 3182

613 9525 5666 TEL
613 9525 4906 FAX

rba@rbaarchitects.com.au EMAIL
www.rbaarchitects.com.au WEB

TABLE OF CONTENTS

ILLUSTRATIONS and FIGURES

Cover Illustrations

The Keith Haring Mural (1984)
The Keith Haring Mural (2010)

EXECUTIVE SUMMARY

Introduction

The executive summary provides an overview of the Conservation Management Plan (CMP) and the major issues concerning the Keith Haring Mural at the former Collingwood Technical School and its appropriate conservation.

The methodology adopted in the preparation of this CMP is outlined in the introduction, chapter one, and conforms to the processes defined in the *Burra Charter*.

Research

Historical research was undertaken to provide background material about Keith Haring, his time in Australia, the subject mural, and details about Haring's other murals. In addition, a summary of the extant fabric is provided, which was surveyed by the Centre for Cultural Materials and Conservation (CCMC) and builds on work undertaken by Andrew Thorn (refer to appendices C to F). This information is outlined in chapters two and three.

Significance

The review of the *cultural significance* of the Keith Haring Mural undertaken in chapter four has confirmed that it is at least of State significance for its historical, social and aesthetic values. It is probably of National significance, and possibly of International significance.

Policy and Management Issues

A series of issues are examined in chapter five as a preliminary to the ensuing Policy section. The issues relate to conservation and statutory requirements, future development & use, stakeholders & interested parties, professional considerations, as well as environmental risks and threats.

Policy

The policy has been developed according to the attributed level of the *cultural significance* of the Keith Haring Mural. All future actions and works proposed to the mural and the land covered by the extent of designation should be tested against the relevant, specific policies outlined in chapter six. Specific policies have been prepared for conservation, reconstruction/repainting, involving stakeholders, setting, future development, interpretation, maintenance and management.

Action Plan

This section provides a conservation works plan, maintenance plan, and management protocols.

The premier issue for the future of the Keith Haring Mural, which is in poor condition, is how to address its conservation. Because of the nature of the constituent materials (acrylic and alkyd paints) and its location in a harsh external environment, the mural will require regular monitoring, care and treatment. Although the condition of the mural presents some challenges, it is nonetheless incumbent upon the managers of the site to appropriately maintain it in accordance with its degree of significance.

In summary the recommended approach to the conservation of the mural is as follows:

- Undertake preliminary works to allow full and safe access to the mural (refer to 7.2.1)
- Initially conserve as per approach proposed by CCMC and Andrew Thorn, including improving presentation (refer to 7.2.2-7.2.3). This process should involve engagement with stakeholders, in particular the Keith Haring Foundation.
- Continue research.
- Reconstruct/repaint if appropriate technique/materials become available. This option should only be considered:

    1. after less intrusive conservation approaches have been exhausted or proven not to be effective; and

2. if it can be undertaken in a way that would preserve the original work underneath and not cause undue damage to it.

1 INTRODUCTION

1.1 Background

This conservation management plan (CMP) for the the former Collingwood Technical School has been commissioned by Arts Victoria within the Department of Premier and Cabinet, who has recently taken over management of the the site, which has been vacant for about five years. The intent of the CMP is to describe what is significant about the site and why. In addition, policies have been developed to provide guidance for the ongoing care of the place and in regard to any required future works, including changes, to ensure that these are undertaken in a manner sympathetic to the attributed heritage values.

The impetus for preparing this CMP has been the likely adaptation and part redevelopment of the site for use by one of more arts organisations and the need to consider a range of approaches to the ongoing conservation of the Keith Haring Mural.

This volume, no. 2, relates to the Keith Haring Mural and vol. 1, the buildings.

1.2 Location

The address of the site is 35 Johnston Street Collingwood, though it extends to Perry Street. It occupies over half the block bound by Bedford Street (west), Johnston Street (north), Wellington Street (east) and Perry Street (south). The mural is located on the east wall of the building which extends along Johnston Street (block F) and is highlighted below.

Figure 1 - Aerial view of the former Collingwood Technical School
location of Keith Haring Mural highlighted (arrow)
(Source: Nearmap)

1.3 Current Heritage Listings

The current heritage listings are summarised below and the full citations are provided in Appendix B.

1.3.1 Heritage Victoria

The Keith Haring Mural located on the east wall of the Johnston Street building is included on the Victorian Heritage Register (VHR) as H2055. There are statutory implications associated with this listing as a permit would be required from Heritage Victoria for works to the Mural or upon any of the land identified on the plan below.

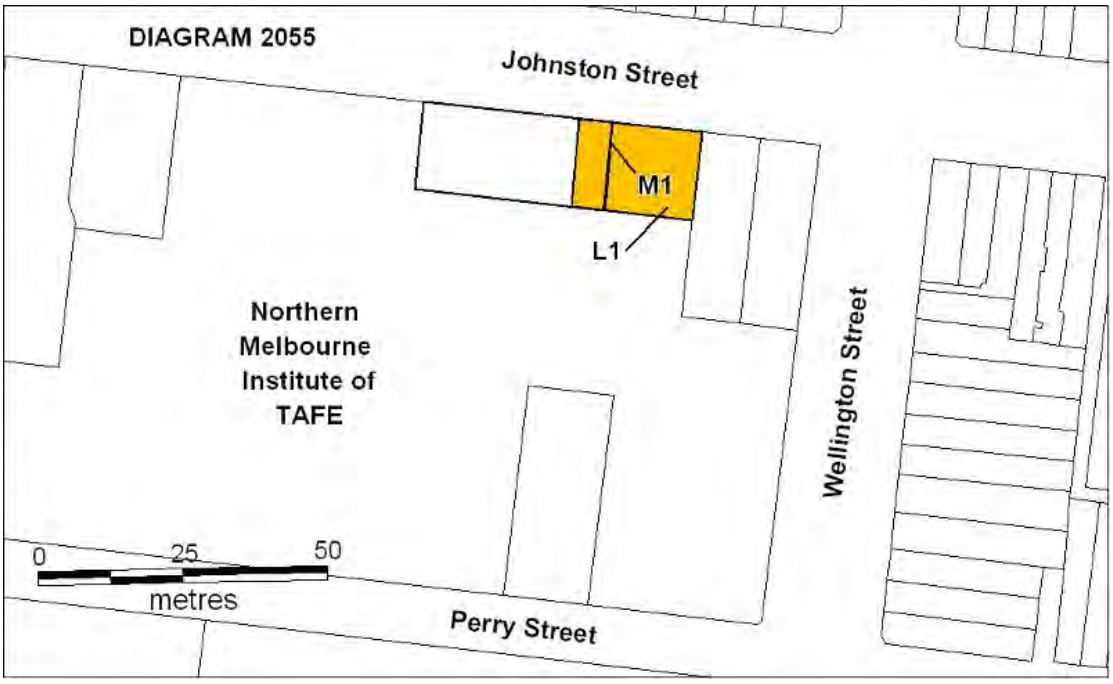


Figure 2 - Extent of registration for H2205
(Source: Heritage Victoria)

The extent of registration on the VHR is as follows:

1. All of the Mural known as the Keith Haring Mural as shown M1 on Diagram 2055 held by the Executive Director
2. All of the land shown as L1 Diagram 2055 held by the Executive Director being part of the land described in Certificates of Title Volume 0767 Folio 252 and Volume 3307 Folio 398

1.3.2 City of Yarra

The Keith Haring Mural (HO354) is included on the Schedule to the Heritage Overlay in the Yarra Planning Scheme.

There are statutory implications associated with the listing by the City of Yarra, however they are largely overridden by Heritage Victoria's extent of registration in this case.

Figure 3 - Heritage Overlay HO354
(Source: yarra6ho)

1.3.3 National Trust of Australia (Victoria)

The Keith Haring Mural (B6675) on is listed on the register as being significant at the National level.[1]

There are no statutory implications associated with the listing by the National Trust.

1.4 Objectives

In summary, the aim of volume 2 of this Conservation Management Plan is to:

- Provide background material about the Mural and the artist, Keith Haring.
- Formulate a dedicated conservation policy, which provides a concise framework for appropriate conservation according to a broad range of parameters, such as: building fabric, setting, use, future development, interpretation etc, and taking into account the existing legislative framework.
- Develop preliminary recommendations for the conservation of the culturally significant fabric of the Keith Haring Mural.

1.5 Methodology

The methodology adopted in formulating this Conservation Management Plan is in accordance with the Heritage Victoria standard brief for preparation of CMPs, as well as the processes and criteria outlined in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance, known as the *Burra Charter* (refer to appendix A). The process has included the following:

- Research the history of the mural.
- A survey and analysis of the current physical condition of the extant fabric (undertaken by CCMC).
- Consideration of the attributed *cultural significance* of the mural.
- An evaluation of the existing presentation of the mural as it pertains to the ability to interpret its *cultural significance*.

1.6 Terminology

The terminology used in this report, which is italicised, is of a specific nature. Refer to appendix A of volume one for other *Burra Charter* terms.

[1] The National Trust classify items at various levels (local, regional, state, national and international) whereas councils and shires protect places if they are determined to be of local significance and Heritage Victoria protects places deemed to be of State significance.

The terminology used in the reports by the paintings conservators in the appendices also includes some terms derived from the AICCM Code of Ethics and Code of Practice (refer to appendix A).

1.7 Personnel

This CMP has been prepared by RBA Architects and Conservation Consultants, in particular by Anthony Hemingway (architectural historian) in conjunction with Roger Beeston (director/principal architect).

In addition, Caroline Fry, Caroline Kyi and Catherine Nunn from the Centre for Cultural Materials Conservation (CCMC) at the University of Melbourne has undertaken an analysis and provided a report (refer to appendix C).

1.8 Acknowledgements

The authors are grateful for the assistance provided by the following individuals and organisations:

- Wendy Bigami
- The Keith Haring Foundation Inc
- Hannah Matthews
- National Trust of Australia [Victoria] – Public Art Committee
- Yarra City Council, Community Programs
- Other members of the informal 'Keith Haring Working Group', which is coordinated by the City of Yarra
- Other responders (refer to Appendix G).

2 HISTORY

2.2 Keith Haring

Keith Haring was born in Pennsylvania in 1958 and studied graphic design in Pittsburgh from 1976-78, before moving to New York where he studied at the School of Visual Arts.[2] About this time, Haring, who was openly gay, achieved public attention with his chalk drawings in the New York subway and the 'radiant baby' became his famous symbol. From 1980 Haring organised exhibitions, in which he participated, and had his first exclusive exhibition in 1981, which included works on found objects. He was involved in major international contemporary art shows in Germany (Documenta 7, 1981), New York (Whitney Biennial, 1983) and Brazil (São Paulo Biennial, 1983). It was not until 1985, he started painting on canvas.

During the mid-1980s, he was involved in the music scene and collaborated with Madonna, Grace Jones and Nick Rhodes (of Duran Duran). He did several album covers for major artists including Malcolm McLaren and David Bowie. In 1986, he opened a store - The Pop Shop - in SoHo, New York, which disseminated his iconic imagery through the sale of items such as t-shirts, toys, badges and posters (it remained open until 2005). Haring considered this an effective means of '... breaking down the barriers between high and low art.' About this time, he began employing more socio-political themes in his work relating to Apartheid, AIDS awareness, and crack cocaine. In 1987, he had major international exhibitions such as in Helsinki and Antwerp.

Haring himself was diagnosed with AIDS during 1988 and in the following year he established the Keith Haring Foundation. The purpose of this organisation was to continue supporting the various causes he was actively involved with, especially AIDS awareness and children's programs, and to manage his estate generally. Keith Haring died on 16 February 1990.

2.2 Keith Haring in Australia

Haring spent three weeks in Australia during 1984, from 18 February to 8 March, undertaking a series of mostly public works in Melbourne and Sydney.[3] The visit had its genesis two years earlier, when John Buckley, the inaugural director of the Australian Centre for Contemporary Art (ACCA), was in New York. Whilst travelling on the subway, Buckley was struck by Haring's work in the subway and organised financial support from the Visual Arts Board of the Australia Council to bring Haring to Australia. When Buckley met Haring in New York, it was relatively early in the artist's short career and by the time Haring came to Australia, his profile had increased dramatically, for instance he was featured on the cover of *Vanity Fair*.

Figure 4 - Nativity mural at the NGV (Feb 1984)
(Source: Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p563)

Figure 5 - Guardian Angel at Glamorgan (1984)
(Source: Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p564)

During this visit, Haring principally executed public projects, many of which were temporary. The first of these was painted over two days (21-22 February) on the inside of the water window at the National Gallery

[2] This section largely derives from Wikipedia, Keith Haring (8/9/2010); Keith Haring Foundation website (14/9/2010)
[3] This section largely derives from Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, pp560-7

of Victoria. This work, like many others, was painted without preparatory drawings and using a limited palette in this case - red, black and white. The mural was damaged by vandalism two weeks later.[4]

A week later (28 February to 1 March), Haring painted another large mural in the forecourt of the Art Gallery of NSW (AGNSW), which had a brief shelf life of about one month.[5] A caterpillar-like creature with a television head (like that at Collingwood) featured in the Sydney mural.

Other projects were mostly executed in Melbourne: at the Hardware Club, a human body painting for the Fashion Design Council of Australia's *X-hibitionists* fashion parade, as well the only other permanent work, a smaller mural at Glamorgan in South Yarra (Geelong Grammar preparatory school). Haring also engaged in some night time forays with other local artists. He also painted thirteen large ink drawings and four acrylic paintings to be used in an exhibition at ACCA in September 1985. These works were left in John Buckley's care.[6] Haring also left his 'Radiant Baby' signature at a other locations including a private residence in Napier Street, Fitzroy.[7]

2.3 The Collingwood Mural

John Buckley had approached the Collingwood Technical School prior to Haring's arrival. The school had no funds however it did have a large blank, external wall, and after inspecting it, Haring agreed to paint a mural *pro bono* as he was happy to 'defy the commercial imperatives of the art market.'[8] It is understood that the wall had already been stuccoed and that the yellow paint had been applied in advance.[9]

Haring painted the mural (the red and green components) on Tuesday 6 March 1984 and it was undertaken in two distinct phases. Firstly, the lower part with the cascading red outlined figures, was painted on foot and from a double step-ladder, and secondly the upper section, from a cherry picker. As was typical for Haring, he worked quickly and purposefully without preparation. He however had an extraordinary ability to comprehend space and developed a design without having to constantly step back and evaluate.[10] According to John Buckley, he may have completed the mural during the afternoon.[11]

Although he was not assisted with the work, he did engage in rap dancing throughout the day.[12] The school children enjoyed watching him working and 'he talked to them happily, eagerly answering their queries'.[13] Some small excerpts from the documentary (*Babies, Snakes and Barking Dogs: Keith Haring In Australia,* AFTRS 1984) captures his involvement with the teenage students at the school and the party atmosphere in which he enjoyed working.[14]

Of the Collingwood mural, Haring stated in a contemporary interview that

> The reason I'm painting a mural in Collingwood is because I was given a grant from the Australia Council two years ago to do so. It fits in with my desire to combine works for galleries with 'neighbourhood' commissions.
>
> Collingwood has a great community feeling about it. Though its supposed to be a poor area, it's nothing like the poverty I've seen in New York.[15]

4 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p562. Refer to footnote 15, it has been reported that the attack on the NGV mural may have related to a mistaken belief that he had misappropriated an aboriginal motif.
5 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p562
6 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p564
7 Information provided by Andrew Thorn and Hannah Matthews, October 2010
8 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p565
9 Information provided by Andrew Thorn, October 2010
10 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p565
11 Buckley, Interview, 23 May 2010
12 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p565
13 Bellamy, 'Collingwood Tech's wall of renown', *Melbourne Times*, 14 March 1984
14 Segment on Keith Haring, *Art Nation*, ABC Arts 10 May 2010, available at http://www.abc.net.au/arts/stories/s2893060.htm. It contains excerpts from *Babies, Snakes and Barking Dogs: Keith Haring In Australia,* AFTRS 1984. Also available is a two minute video including a section of the 1984 interview with Haring at the site, http://keithharingfoundationarchives.wordpress.com/category/current-event/
15 Bellamy, 'Collingwood Tech's wall of renown', *Melbourne Times*, 14 March 1984

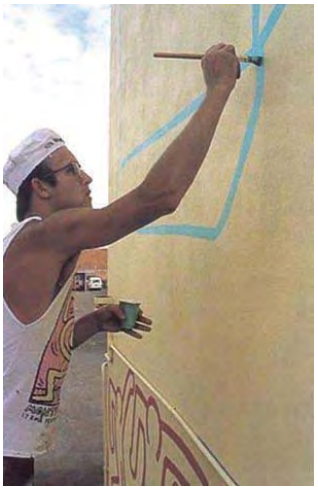


Figure 6 - Keith Haring at work (06.03.84)
(Source: *The Art Newspaper*, June 2010)

Figure 7 - Mural in progress (6 March 1984)
(Source: *The Art Newspaper*, June 2010)[16]

The Collingwood mural is one of his earliest and the first outside the USA (refer to following section).[17] It was also one of the the first times Haring used a cherry picker (he also used one for the temporary murals at the NGV and AGNSW), which allowed him to work on a scale he hitherto had not attempted and subsequently he used similar devices, such as cranes, in the execution of other murals.[18]

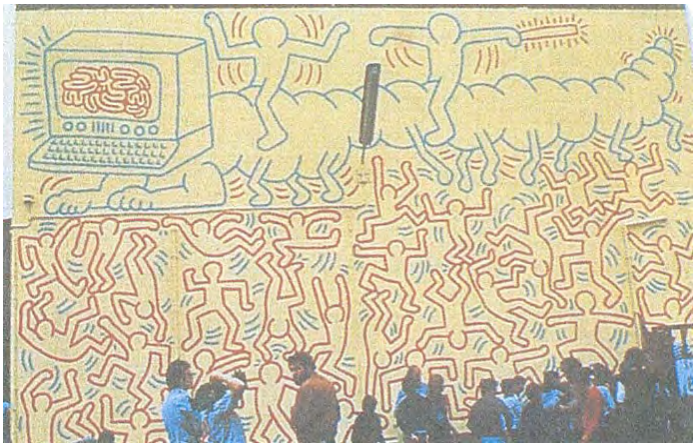


Figure 8 - Keith Haring Mural (c1984)

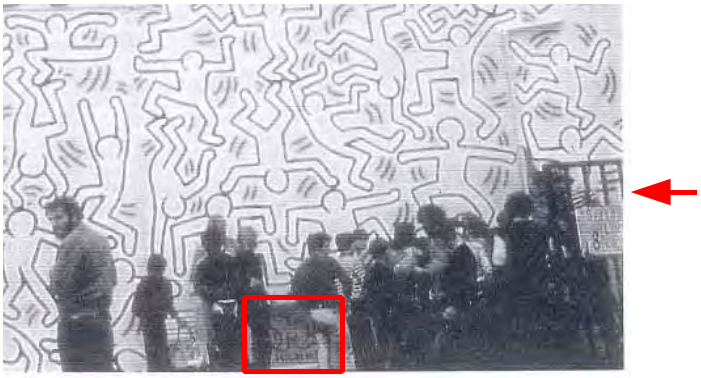


Figure 9 - Keith Haring Mural, detail (c1984)
NB grille on right hand side with sign (arrow)
Also original signed, doorway (box)

16 There is another photograph held by the State Library of Victoria of Haring in front of the completed mural, PIC LTAEF 88.
17 Gott & Sullivan, 'Keith Haring in Australia, 1984', *Art and Australia*, p566
18 Sharpe, 'Saving Keith Haring Down Under', *The Art Newspaper*, no 214

2.4 Other Murals

The following table provides a preliminary inventory of the murals painted by Keith Haring that are known to survive. The information principally derives from correspondence with the Keith Haring Foundation and further information on their website.

Over thirty murals survive around the world, predominantly in the northern hemisphere, mostly in the USA with a few in Europe. Three also survive in the southern hemisphere: two in Australia and one in Brazil. They are variously painted both externally and internally. In several cases, their purpose is self-evident as they relate to one of the causes with which Haring strongly associated: engagement with children, as well as drug and AIDS awareness. In a few instances, collaboration or community involvement was clearly part of the process of their production.

Nearly half of these known murals have been restored, or are about to be, and in some instances the restorations have involved extensive reconstruction/repainting.

Year	Title/Location	City/State, Country	Details
1983	Marquette University, Milwaukee	Wisconsin, USA	
1984	Collingwood Technical School	Melbourne, Australia	Deteriorated
	Glamorgan (now Toorak Campus, Geelong Grammar School)	Melbourne, Australia	
	Children's Village, Dobbs Ferry	New York, USA	Interior, restored
	FDR Drive/Ashpalt Green Park	USA	Private collection
	Walker Art Centre, Minneapolis	Minnesota, USA	Internal
1985	South of Market Childcare Centre	San Francisco, USA	Restored and in a private collection
	Grace House, Church of the Ascension	New York, USA	Restored
	?Rio de Janeiro (?1984)	Brazil	External, below roof eaves, restored
1986	Mount Sinai paediatrics ward	New York, USA	Restored
	Crack is Wack FDR Drive at 128th Street,	New York, USA	Exterior, restored
	Woodhull Hospital, Brooklyn	New York, USA	Interior, restored
	Jouets & Cie store	Paris, France	Private collection
	Exterior mural, Washington and Adams Streets	Phoenix, Arizona	External, collaborative project with school children
5c1986	Pop Shop ceiling	New York, USA	To be relocated to new restaurant at New York Historical Society
1987	Necker Children's Hospital	Paris, France	Exterior, to be restored
	Casino Knokke	Belgium	Private collection
	Museum of Contemporary Art	Antwerp, Belgium	Interior, restored
	Team BBDO European Headquarters	Dusseldorf, Germany	Internal mural
	Carmine Street public swimming pool	New York, USA	Exterior, restored

Year	Title/Location	City/State, Country	Details
	22nd and Ellsworth, Philadelphia	Pennsylvania, USA	External, collaborative with Philadelphia Citykids, restored
	Boys Club of New York	New York, USA	Restored and in a private collection
	Schneider Children's Hospital, New Hyde Park	New York, USA	Interior, also an outdoor sculpture
1989	*Together we can stop AIDS*, Barrio de Chino	Barcelona, Spain	Restored and moved to Museum of Contemporary Art, Barcelona
	Wells Community Academy	Chicago, USA	Designed by Haring and executed by students
	520 foot mural	Chicago, USA	Collaborative project with 300 high school students, in storage
	Rush Presbyterian, St Luke's Medical Centre	Chicago, USA	Internal, two murals
	Gay, Lesbian & Transgender Community Centre	New York, USA	Interior, restored
	Tuttomondo, San Antonio Church	Pisa, Italy	Exterior, to be restored
	Ernest Horn Elementary School, Iowa City	Iowa, USA	Internal
	Art Centre College of Design	San Francisco, USA	Internal

Several murals are also known to have been lost and include locations such as Berlin and Pisa.[19] There was also a large mural on Houston and Bowery Streets in New York, which had been removed but was temporarily reproduced in 2008.

Figure 10 - *Crack is Wack,* New York (1986)

Figure 11 – *Tuttomondo,* Pisa (1989)

[19] Information provided by Andrew Thorn, October 2010

3 PHYSICAL DESCRIPTION

3.1 Mural

The following is a summary description of the mural and its condition noted in the reports by CCMC and Andrew Thorn (refer to appendices).

The mural is about 11.5 metres wide, extending the width of the east wall of block F (which fronts Johnston Street), and is about 7.4 metres high. The upper part is dominated by a large caterpillar-like creature with a circa 1980s computer monitor for a head and upon which two figures are straddled. Below are cascades of moving figures – either dancing, falling or cavorting/writhing. Existing elements in, or attached to, the wall (such as electrical conduits, etc) have been incorporated into the design as the figures relate to them whilst later insertions obscure the original design.

The mural has been painted onto a cement based stucco on brick substrate, which was covered by a layer of white wash then completely over-painted in yellow. Only two other colours were employed: red (lower figures) and green (upper creature and figures), and both colours were also used for details (mainly motion lines) in different parts of the mural.

3.2 Condition of Principal Elements

Consistent with the anticipated modes of deterioration, the mural has decayed to varying degrees over the last 27 years, the specifics of this decay are described in the reports by CCMC and Andrew Thorn (refer to appendices C to F). In summary, they are as follows:

Stucco:

- varies in thickness between about 12 mm at the base and 25 mm at the top.
- is generally in good condition with some localised areas of delamination or detachment, mostly to the lower margin.
- some limited cracking which can increase the likelihood of moisture penetration.
- some mechanical damage, ranging from superficial abrasions to some gouging.

Yellow paint:

- commercial acrylic house paint containing yellow oxide and titanium dioxide.
- in extremely poor condition with extensive chalking.

Red paint:

- varies in condition.
- in some areas, it has lifted in a flakey manner referred to as mirco-cracking and/or micro-spalling.
- in other areas, it is relatively stable and not readily separated from the underlying yellow layer.

Green paint:

- also contains some titanium dioxide.
- comparatively stable and maintains relatively strong colour intensity.
- more recent deterioration in the form of chalking and micro-craters.

3.3 Other Deterioration and Losses

The small, recessed doorway at the lower edge of the mural, which included Haring's signature and the 'Radiant Baby' (kneeling baby) motif, has been removed. The painted doorway is evident in figure 9 and an ABC documentary.[20]

Some damage has occurred to the lower part, creating small gaps in the continuity of the mural.

[20] Segment on Keith Haring, *Art Nation*, ABC Arts 10 May 2010, available at http://www.abc.net.au/arts/stories/s2893060.htm. It contains excerpts from *Babies, Snakes and Barking Dogs: Keith Haring In Australia*, AFTRS 1984., in which Haring is shown signing the work (freeze at 1.58 to 1.59).

The immediate context has also changed in that there was a grate at the north end and more red piping behind it than is currently the case.

Figure 12 – Collingwood Mural, lower section – south end
NB paint losses

Figure 13 – Collingwood Mural, lower section – north end
NB replacement doorway on left hand side
(Compare with fig 9 for grille, etc)

4 SIGNIFICANCE

4.1 Introduction

Resolving the *cultural significance* is an essential pre-requisite to developing the conservation policy, and so to making decisions about the future of the Keith Haring Mural.

In many instances where a detailed, or recent, statement of significance has been prepared by Heritage Victoria, it would not be necessary to review the existing citation. It has however become apparent, in light of the information gathered during the preparation of this CMP, that there is some inaccuracies contained within the statement of significance prepared by Heritage Victoria, and for that matter, the one prepared by the National Trust. As such, some observations have been made below about these matters.

4.2 Concept of Cultural Significance

According to the Australia ICOMOS *Burra Charter*, which is the guiding document for professionals dealing with post-contact cultural heritage in Australia, *cultural significance* is defined as the:

> aesthetic, historic, scientific, social or spiritual value for past, present or future generations' and is based on the notion of place.[21]

Cultural significance is a broad concept and may relate to a variety of physical and non-physical (intangible) elements, or to an array of components over a broad area (cultural landscape). Furthermore, it is not a fixed notion; it should evolve over time as new developments emerge in regard to understanding or information.

4.3 Assessment of Cultural Significance

It should be noted that the authors adhere to the process of assessing significance as outlined in the *Burra Charter,* which involves the objective and careful determination of the values that contribute to distinguishing a particular object or place.

At a statutory (or an official) level, the Keith Haring Mural is currently recognised as being of State significance as it has been included on the Victorian Heritage Register. Alternately, although the National Trust of Australia [Victoria] have classified the mural as being of National significance, this classification has no statutory repercussions (refer appendix B for citations). It is also understood that a similar view is shared by Dr Ted Gott, a senior curator of International Art and the National Gallery of Victoria, and who has been part of the informal 'Keith Haring Mural Working Group' that was established in early 2010. In addition, many respondents to the draft CMP clearly regarded the mural as an important piece of Australian, if not international, cultural heritage (refer to section 5.5).

It is suggested by the authors that the mural is likely to be of National significance on the basis it is one of Haring's earliest outdoor murals and the largest remaining public work from his visit to Australia. This visit took place just as Haring was gaining international recognition and he has since become widely acknowledged as one of the most important artists of his generation.

An understanding of Haring and his work is evolving and further research may reveal that the mural is of international significance. Thus it can be said, the formal significance attribution of the subject mural is probably lagging and may change in the future (refer to section 7.4.1 for recommendations in relation to this issue).

4.4 Review of Statement of Significance

From the further research undertaken during the preparation of this CMP, some issues are raised in relation to the two aforementioned citations by Heritage Victoria and the National Trust of Australia [Victoria].

[21] Australia ICOMOS, *The Burra Charter*, p2

In regards to the Heritage Victoria citation, the following is noted.

- The Collingwood mural is not one of the few that exist across the world as over 30 murals are known to be extant (refer section 2.4). It however may be one of the few external murals that has not been repainted/restored.

- The Collingwood mural is not the only mural to survive from Haring's Australian visit in that a smaller work depicting a guardian angel survives on a wall at Glamorgan school (now Toorak Campus, Geelong Grammar School).

- There is no mention of the aesthetic significance of the mural.

- The citation should be reviewed in light of that recently prepared by Ted Gott, who states that the mural is of international significance.[22]

There are also several problems associated with the current National Trust citation as follows:

- There is considerable discussion about the future and the possible conservation approaches to the mural, which are not usually the subject matter of a statement of significance. It might be appropriate to broach this topic if it was discussed in terms of the significance of the painting.

- The mural at Collingwood is not the only surviving Haring work in Melbourne as a smaller mural survives at Glamorgan school in Toorak.

- It is understood the students at the technical school did not participate in the execution of the work. House painters prepared the wall, that is applied the base yellow coat, and Haring painted the red and green elements. The students did however eagerly look on and Haring readily engaged in conversation with them. He also enjoyed some rap dancing sessions with them.

- The Keith Haring Foundation are not unclear in the matter of conservation of the mural as they actively promote reconstruction/repainting of his murals and indicate this approach is based on Haring's own position on the issue.

[22] Information provided by Andrew Thorn, October 2010. This citation has not however been viewed by the authors.

5 POLICY AND MANAGEMENT ISSUES

5.1 Introduction

This section of the CMP provides a discussion of some of the background issues which have affected the development of the following Conservation Policy (section 6) and Action Plan (section 7).

The issues considered are:

- conservation requirements;
- statutory requirements;
- future development & use;
- stakeholders & interested parties;
- professional considerations,
- risks and threats.

5.2 Conservation Requirements

The Keith Haring Mural is included on the Victorian Heritage Register, that is, it has been assessed as being of *cultural significance* to the State. As such, there is a legal requirement to ensure the appropriate *conservation* of the mural according to Section 160 of the *Heritage Act* 1995, which states that:

> The owner of a registered place or registered object must not –
> (a) allow that place or object to fall into disrepair;
> or
> (b) fail to maintain that place or object to the extent that its conservation is threatened.

In order to achieve the appropriate *conservation* of the mural, its further deterioration should be minimised (halting its deterioration may not be possible because of the type of paint used in combination with the external environment), remedial actions undertaken, and a program for its appropriate maintenance be implemented.

5.3 Statutory Requirements

5.3.1 Heritage Victoria

The Keith Haring Mural is included on the VHR and so any proposed changes to it, or within the extent of registration, are likely to require a permit from Heritage Victoria. Currently there is a permit policy as follows.

> Any work undertaken for the conservation of the Mural must be undertaken by a professional conservator. The report by Andrew Thorn completed in 2001 (*The Keith Haring Mural, Johnston Street, Collingwood. Conservation Treatment Report)* may be helpful.

The implications of this policy are that a permit will be required to undertake conservation works to the mural and that a professional conservator will need to be engaged to complete/oversee the works.

It might be advantageous to approach Heritage Victoria about developing a more detailed permit policy and group of specific permit exemptions for the site that could assist in streamlining the permit process in the future.

It should be noted that the land covered by the registration (refer 1.3.1) extends to the east boundary of the former Collingwood Technical School directly in front of the mural (about 15 metres) and about five metres behind into Building F (that is about the depth of the eastern stairwell). As such, any changes at this end of Building F have the potential to affect the mural, and advice should be sought from Heritage Victoria about the need for a permit.

5.3.2 Occupational Health & Safety

Compliance with Occupational Health and Safety (OH&S) requirements is an essential part of the management of a site with public access. As a site managed by an agency of the Victorian Government, there are protocols in place to achieve a high standard of compliance in regards to OH&S issues.

In regards to the mural, the area needs to be clear of obstructions for conservators, who need to be able to have full and safe access to it by means of a scissor lift or the like. Currently, this is not possible due to the presence of a electrical cable which attaches to the upper edge of the southern end of the wall.

5.4 Future Development

The broader site in which the mural is located, the former Collingwood Technical School, is likely to undergo substantial change in the near future as new uses are introduced to the currently redundant and unused site. It is proposed that Circus Oz will employ the eastern part of the site and in the future there are likely to be other users accommodated to the western part of the site.

With any change at the former Collingwood Technical School, there is potential for conflict between the appropriate conservation of the mural, and its presentation, and the operational requirements of the users of the site more broadly. As the mural is attributed with a higher level of significance than the site as a whole, the obligations related to the mural necessarily take precedence in such circumstances.

5.5 Stakeholders & Interested Parties

5.5.1 General

During the preparation of the CMP, it has become evident that the voices of various stakeholders and interested parties needed to be taken into account when considering the ongoing management of the mural. The key stakeholders can be identified as the Keith Haring Foundation in New York and the City of Yarra. The mural also has special significance to other groups such as the local Collingwood community, the local arts community, and the local Gay and Lesbian community.

A draft version of the CMP was issued in September 2010, and over thirty responses were received concerning the issue of the future management of the Keith Haring Mural (refer to appendix G for summary details). The respondents included representatives from the aforementioned groups as well as custodians of other Haring murals and people who had worked with him.

Although a range of opinions were expressed, they can be broadly included into two groups. One advocated dramatically improving the appearance of the mural by reconstruction/repainting (various terms were used including: conservation, preservation, restoration, repainting and over-painting). This position might be best articulated by the following

> I would endorse the repainting of the mural, on the basis of principles and processes established by the Haring estate, in order to re-boot it as a vibrant and highly visible part of Melbourne's mural and street art history.[23]

Another, polar opposite view was expressed and advocated taking further treatment as recommended by Andrew Thorn. This group believed that reconstructing/repainting would be deleterious, as indicated:

> We are very concerned that the idea of overpainting the mural is still being considered. We see such an approach as destroying the integrity of an original and nationally significant artwork.[24]

[23] Chris McAuliffe, Director, The Ian Potter Museum of Art
[24] National Trust of Australia [Victoria]

5.5.2 Keith Haring Foundation

It has become apparent that the Keith Haring Foundation (KHF) in New York should be considered as a key stakeholder in the discussion regarding the mural's future on the basis that the organisation was established by Keith Haring himself in the year before his death to undertake the following:[25]

- to preserve and exhibit his artwork.
- to provide continued assistance to the non-profit organizations that he helped in his lifetime.
- to be a source of accurate information about his life and work.

It is standard protocol when considering change to a major work by an artist, that they are consulted as it is their intellectual property being affected. If the artist has died, this authority falls to the managers of their estate. In this case, the KHF is the appropriate entity with whom to consult and, as has been indicated in various responses received, this organisation is widely respected.

5.5.3 Philosophical Basis for Taking an Inclusive Approach

Three key principles outlined in the *Burra Charter* are particularly relevant to the need to adopt an inclusive approach in the development of the policy in this instance. They are as follows

Article 5. Values
Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.

Article 12. Participation
Conservation, interpretation and management of a place should provide for the participation of people for whom the place has special associations and meanings, or who have social, spiritual or other cultural responsibilities for the place.

Article 13. Co-existence of Cultural Values
Co-existence of cultural values should be recognised, respected and encouraged, especially in cases where they conflict.

5.6 Terminology and Professional Considerations

A range of terms have been used in various reports and responses received (conservation, restoration, reconstruction, repainting and over-painting), and the discrepancy in terminology, without a consistent set of definitions, has caused some problems in interpreting their intent. Some of the aforementioned terms have specific meaning for heritage professionals and materials conservators alike, though there are also some differences as highlighted below.

Three terms (*conservation, restoration and reconstruction)* have a specific *Burra Charter* meaning as follows:

> *Conservation* means all the processes of looking after a place so as to retain its cultural significance.
>
> *Restoration* means returning the existing fabric a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.
>
> *Reconstruction* means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.

Further explanation of these terms is provided in the *Illustrated Burra Charter.* In regards to *conservation*, it can include *maintenance, preservation, restoration, reconstruction* and *adaptation.* As such, the definition of *restoration* in the *Burra Charter* does not have negative connotations as it is integrally related to *conservation.* Subsequently, the authors have adopted the *Burra Charter* term, *reconstruction,* to connote the notion of repainting the mural.

[25] Keith Haring Foundation website (http://www.haring.com/faq_haring/index.html)

The principles and processes outlined in the *Burra Charter* are widely adopted by heritage professionals in Australia. In addition, cultural materials conservators are bound by the Code of Ethics and Code of Practice (Code) prepared by the Australian Institute of Conservation of Cultural Material (AICCM).

In the *AICCM Code,* the term conservation and restoration are used, but not reconstruction, as follows:

> CONSERVATION The conservation profession is responsible for the care of cultural material. Conservation activities may include preservation, restoration, examination, documentation, research, advice, treatment, preventive conservation, training and education.
>
> RESTORATION The treatment of cultural property through minimal intervention to enhance its interpretation. Restoration may involve the reassembly of displaced components, removal of extraneous matter, or re-integration using new materials.

Thus there is potential conflict between two aforementioned industry guiding documents. Ostensibly, the term restoration in the AICCM Code incorporates an element of reconstruction (re-integration using new materials) however it is understood that the degree of integration would usually be limited. On the other hand, *reconstruction* according to the *Burra Charter* might allow for substantial introduction of replacement material when the original appearance is well documented.

5.7 Risks and Threats

The threat of environmental risks to significant fabric are often poorly appreciated. It is however incumbent upon the managers to ensure that the potential risk is minimised and that readily avoidable incidents don't affect the Keith Haring Mural.

Fire is a potential risk, including from electrical hazards, so it is crucial that appropriate preventative mechanisms are in place. There were pre-existing electrical conduits on the wall but an additional conduit has been added and the original light fitting has been altered. Recently, an electrical cable has been introduced from the street to the upper left edge of the mural, which not only interrupts the mural visually but it severely limits access to the work for according to OH&S protocols, it is not safe to work within 5 metres of the cable.

Appropriate levels of security, and other measures to restrict vandalism (including graffiti) are also necessary. To date, there has only been minor graffiti to the mural suggesting that it is well appreciated by the community in general and well-managed (or just plain good luck). The lower part of the mural has been damaged in the past however there are now four bollards in front of the mural. Although they do serve an important purpose of limiting the potential for vehicular damage to the mural, they do at least need to be removable to allow access for conservators. A broader consideration however of an appropriate approach to limiting vehicular damage needs to be undertaken.

6 CONSERVATION POLICY

6.1 Introduction

The Conservation Policy has been developed based on an understanding of what is significant about the Keith Haring Mural. Currently it has statutory protection at the State level but is regarded by many members of the art community as having of higher level of significance – national, if not international (refer to section 4.3). The policy is intended as a framework by which the mural should be managed in order to conserve its *cultural significance*. In some instances, guidelines are prepared as they relate to possible future actions that are not addressed in the following Action Plan (section 7).

The approach taken for formulating the policy is based on the Heritage Victoria model, which has been developed to be employed for places of post-contact *cultural significance* in Victoria, and the processes outlined within the Australia ICOMOS Charter for Places of Cultural Significance, known as the *Burra Charter* (reproduced in vol 1, appendix A). The latter has been adopted by most heritage professionals and conservation bodies in Australia. The italicised terms in the Policy relate to the definitions outlined in Article 1 of the *Burra Charter*.

6.2 Conservation

Policy Appropriately maintain the Keith Haring Mural, which because of its location in a harsh external environment, will require regular intervention to conserve it, and hence retain its *cultural significance*.

Rationale It is understood that the mural was beginning to deteriorate by the early 1990s, less than 10 years after it was painted in 1984. This observation is consistent with the known behaviour and lifespan of the materials used, being a combination of acrylic (yellow and green) and alkyd (red) paints, especially when exposed to the elements as in this circumstance. By the time the first condition survey was undertaken in 1996 by the conservator Andrew Thorn, it was observed that the underlying yellow paint and red lines had considerably deteriorated, whereas the green lines were largely intact. Thorn determined the mechanisms of deterioration related largely to the titanium dioxide in the paint breaking down in the presence of UV light and water (refer to Appendix F, Thorn's 1997 report).

Subsequently, Thorn developed a four part treatment regime to arrest the deterioration, involving consolidation with isobutyl methacrylate and a coating of Siloxane, Tinuvin 292 and Tinuvin 1130. He recommended that a similar treatment should be repeated about every five years or so. This was an experimental approach, which has been asserted by Thorn (Refer to Appendices D and E, Thorns 2010 and 2007 reports) and the Centre for Cultural Materials Conservation or CCMC, (refer to Appendix C, for CCMC report) to have been effective in halting rapid deterioration of the mural though the treatment itself also had a limited lifespan.

With the changing ownership and lack of use of the site, the treatment regime was not reapplied at regular intervals as recommended by Thorn. From recent condition surveys by CCMC and Thorn (appendices C and D), it has been observed that the red lines have continued to deteriorate and that the green lines are now also beginning to fail. Overall, the mural appears pale or washed out because there is chalking or disruption of the surface, which diffuses the light (refer to Appendix C - CCMC report, Table I, pp19-22 for summary of condition, previous treatments to the four main components – render and the three paint colours used).

The poor appearance of the mural has been a cause of growing community concern and a suitable approach to the mural's conservation has been hotly contested (in public forums, blogs, etc). A range of opinions have been expressed from a cautious, conservation approach to complete reconstruction/repainting. The former group (Thorn, CCMC and National Trust) are against the latter approach on the premise that the original painting would be lost/irreparably damaged by the process of reconstruction. Apparently, a new layer of acrylic paint would merge with the existing and not be able to separated (as distinct from oil paints which tend to form

discrete layers). In addition, according to CCMC, '... the inevitable movement and deterioration of the overpaint layer, due to its expansion and contraction in response to fluctuations in relative humidity and temperature, will cause the paint to detach, taking with it the original layer' (Appendix C, p59).

In recent years the mural has been neglected and it is likely that if no further action is taken that in about five years the deterioration will become so terminal that it may be irreparable.

In order for the mural to be retained for some years to come, it will be necessary to instigate a program of regular monitoring and probably treatment to minimise its deterioration. Because of the concerns from experts about the likelihood of exacerbating the deterioration of this fragile work by introducing another full layer of paint over the existing, it is recommended that less interventionist (or cautious) approaches are explored first as advocated in Article 3 of the *Burra Charter* as follows:

> Conservation is based on a respect for the existing fabric, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible.

How long the mural can be expected to survive in a reasonable state, so that it can be interpreted, is somewhat unknown. If a regular inspection and treatment regime is enforced it should last another 25 to 50 years, however after that time frame the expected lifespan is somewhat unknown. The longevity may be increased with further research into the materials and future developments in protective coatings etc.

6.3 Reconstruction/Repainting

Policy

Reconstruction/repainting of the mural would preferably only be considered after, other, less intrusive conservation approaches have been exhausted, or proven not to be effective, in presenting the mural in a way that is generally found to be acceptable by the key stakeholders.

Reconstruction/repainting should only be contemplated if it can been undertaken in a way that would preserve the original work underneath or would not cause undue damage to it.

Rationale

It is understood from the respected conservators CCMC and Andrew Thorn that with the current technology, it would not be possible to safely introduce a new layer of paint over the existing without seriously damaging the mural due to the type of paint (acrylic and alkyd) and how it has deteriorated in this harsh environment. Discussion of this issue has been addressed in their reports (refer to appendices C to F). Thorn has suggested that if this option was adopted then it would require renewal every 10-15 years and would be more time consuming and costly than undertaking the regular treatment regime he developed (Thorn, 2010, p10).

The Keith Haring Foundation (KHF) have however indicated that they favour reconstructing/repainting the mural, which is confirmed in a letter of 14 October 2010 from the foundation's Executive Director

> Preserving the hand of the artist unquestionably important and preserving the mural in its current condition is an option to prevent its further decline. However, Keith did not consider his outdoor murals in the same category as his paintings, drawings or sculpture. His murals were not objects intended for connoisseurs and collectors who could 'appreciate the artist's hand' but large outdoor works executed at a scale that allowed for public viewing and which contained prophetic messages captured in energetic forms and bold colour. Keith's murals were larger than life and intended to contribute to the lives of the urban communities in which they were welcomed. Generally painted in lower socio-economic areas, Keith wanted his murals to enhance the lives of those who lived with them. As the recipients of such a genuine and generous gift, the Collingwood mural should have been better understood and cared for since its inception. Other communities have undertaken this care

through the restoration of their own Haring murals, choosing to return the murals as Keith originally intended and gifted them.[26]

Although reconstruction/repainting is not advocated by the aforementioned conservators, in part because it would contravene their code of practice and code of ethics as prepared by AICCM (refer to appendix A), it seems this approach is encouraged by the KHF as outlined above. The term restoration has been used, which does not necessarily imply reconstruction/repainting however this term has been used by the KHF in regards to two murals in New York – 'Crack is Wack' and the Carmine Street Pool mural – which are known to have been reconstructed/repainted. It should be noted that the KHF are widely respected as managers of Haring's estate and artistic legacy. This approach seemed generally to have been favoured by a majority of the respondents, though the issue of inconsistent terminology means that this supposition can not be confirmed (refer to appendix G for summary details).

If reconstruction/repainting was proposed, the issue of who should undertake the reconstruction would need to be carefully considered. It is recommended that an artist should be engaged who understood the natural flow of the Haring's line work, which is more apparent in its current state than it had been originally. It has been suggested a contemporary street artist could replicate Haring's brushwork, such as Sync (or Syn) or Phibs, both of whom are Melbourne-based. Alternately, an international artist could be commissioned, who had undertaken a reconstruction of Haring's work elsewhere. For instance, a smaller Haring mural in Brazil (1985) was recently reconstructed by Kenny Scharf., who is a Brooklyn-based artist and was a friend of Haring (he was also one of the respondents, refer to Appendix G).

Comparison with traditional aboriginal Rock Art has been raised as precedents in the case for reconstruction/repainting of the Keith Haring Mural. In the *Illustrated Burra Charter* (example no 106, p59, and discussed in the preservation section), the specific instance of regular repainting/renewing of some traditional rock art is described as an acceptable outcome when undertaken by appropriate people (under the direction of the traditional owners) for it is 'part of a living tradition' and related to its significance. In this case, the KHF have indicated a similar purpose for Haring's murals. Therefore, the case could be presented to Heritage Victoria (the relevant statutory authority) that it might be appropriate to reconstruct/repaint the mural if it could be achieved without undue damage to the underlying work, and if it was done under the auspices of the Keith Haring Foundation, who effectively retain legal/artistic rights to the work.

Another consideration is the potential impact on the valuation of the mural by reconstruction/repainting. Although no formal valuation assessment has been requested to date, informal discussions have indicated that the Collingwood mural is likely to be worth several million dollars and the reconstruction/repainting may significantly reduce that value.

Guidelines Reconsider this option if a suitable product becomes available to allow for creating a safe interstitial layer. It would need to be adequately tested to determine whether it would be effective in these environmental conditions.

An approach to the broad reconstruction/repainting has been outlined by CCMC (Appendix C, section 5.8, option one), however it should be noted that they do not condone this option.

Further evaluation of the reconstruction/restoration approaches taken to Haring's murals internationally may prove to be informative. Thorn has indicated Ted Gott of the NGV has undertaken some research on this matter.

6.4 Involving Stakeholders

Policy Work with the Keith Haring Foundation in New York, and other key stakeholders, to come to a generally acceptable outcome that will allow for the conservation and presentation of the mural in a 'as close to original state' as possible, without risking the constituent fabric.

[26] Emphasis provided by authors

Rationale Through the process of undertaking the CMP, the opinion of the Keith Haring Foundation (KHF), which was set up by Keith Haring prior to his death to oversee his estate and artistic legacy, has been sought. The KHF is widely held in high esteem by the international arts community (refer to responses in Appendix G) and they have indicated that they assume that they would be involved in the care of the mural as follows:

> The Collingwood mural is a unique and joyous landmark, and the KHF fully supports its restoration and preservation. We look forward to working closely with those into whose care its rejuvenation will be entrusted.

The KHF have worked with groups around the world to restore (the term commonly used by the KHF) several outdoor murals providing technical advice, and in some cases, funding assistance. The approach taken to the restorations are not known in detail, but in several cases it involved repainting (refer to section 2.4). It is not known if there were any legislative frameworks to be considered and details of the result/impact on the longevity of the original work has not been documented.

6.5 Setting

Policy The immediate setting of the mural should be maintained in a manner commensurate with that in which Keith Haring painted the mural and free from unnecessary obstruction.

Rationale The setting of a *place* is related to its *cultural significance,* often in an integral way. The mural is located at the east end of Block F and the immediate setting is hard-edged and urban. When Haring painted the mural, he responded to the location of conduits and a light fitting on the wall. At the north end, there had been a low grille and more piping than is currently in place (refer section 2.3 for images). Signage had been attached to the front of the grille rather than on a free-standing steel pole, as is currently the case.

Other changes have included the introduction of a power cable and protective measures. An intrusive power cable has been installed across the upper part of the mural, which limits access to the upper part of the mural. Until recently, there had only been one bollard in front of the mural to protect it from vehicular damage. Three additional bollards have been installed and all four have been painted bright yellow. Razor wire has also been installed across the top of the adjacent perimeter wall.

6.6 Future Development

Policy Any future development in the vicinity of the Keith Haring Mural should be carefully considered so as not to compromise the *cultural significance* of the mural and its public accessibility or visibility.

Rationale Future development near the mural might involve additions to the adjoining Building F, or new buildings in the vicinity, to accommodate the particular operational requirements of Circus Oz, who are to be the new tenants at the eastern end of the former Collingwood Technical School.

Future works related to the mural itself might involve providing it with some protection from the elements as its external location and exposure to a harsh environment are causing more rapid deterioration than if it was located internally. The scale and location of the mural however are limiting factors. For instance, enclosing the mural in a glass box has been suggested in order to provide a more stable environment and so slow the process of deterioration however there would be implications in regards to public access/visibility and potential impact on access to the broader site for large vehicles as the main entry point is adjacent to the mural.

The approach to its conservation is in part predicated on its level of attributed significance, currently being of State significance, but if its significance were to be raised (National, or even

International, as suggested by Andrew Thorn and Ted Gott), it would be appropriate to review the approach to its conservation in light of what factors had caused its significance to be raised.

Guidelines Carefully consider the implication of change and its potential impact on the *cultural significance* of the mural.

A program of urgent and essential conservation works to the constituent fabric, which are identified in the following chapter, should be undertaken as a matter of course, and especially in light of proposed refurbishment/redevelopment of the broader site. In addition, it would be preferable that the opportunity is taken to undertake the recommended conservation works outlined in chapter 7.

If an archival record was being prepared, it would preferably include a written report and photographs. The package should be presented on, and in, archival quality materials. Digital copies of documents should also be maintained in a widely accessible format.

6.7 Interpretation

Policy The Keith Haring Mural should be publicly accessible at least some of the time and be presented in a manner which facilitates the ready appreciation and *interpretation* of its *cultural significance*.

Rationale Access facilitates interpretation and improvements to access should be provided as part of the redevelopment of the former Collingwood Technical School site. An increased understanding of the *cultural significance* of the mural by future users of the site and the general public will serve to encourage a broader awareness, thus leading to a greater likelihood in the long term of the conservation of its *cultural significance*.

The mural was commissioned for a largely public space, and although it is partly visible from Johnston Street, it is not possible to view this artwork closely as had been the case whilst the former Collingwood Technical School was operative.

The manner in which fabric is presented facilitates an understanding of its *cultural significance*. The fact that the mural has deteriorated reduces the ability to interpret it as the detail is no longer clear at a distance, primarily due to the greater deterioration of the red linework, although the mural can still be understood at close quarters.

Interpretation can take a wide variety of forms such as information plaques, site presentation, and other interventions. When developing an interpretation strategy, the *Ename Charter (The ICOMOS for the Interpretation and Presentation of Cultural Heritage Sites)* would be a useful reference document.

6.8 Maintenance, Monitoring and Available Resources

Policy Adequate resources should be secured to appropriately maintain the Keith Haring Mural. Because of the nature of the constituent materials and its external location, this will involve regular inspections, monitoring and probably maintenance works.

Rationale It is important that funds are set aside for on-going maintenance of the mural so that it does not continue to deteriorate at an accelerated rate. Because it is exposed to the elements and due to the nature of the materials (that is, poor longevity of acrylic paint, especially in an external environment), the mural is likely to require regular care or treatment.

Due to the former Collingwood Technical School site's uncertain future in recent times, the regular treatment regime that was instigated in 1996-7 by Andrew Thorn has not been maintained. The protective coating was intended to be reapplied every five or so years to be

effective. As such, two subsequent treatments have not been applied and this fragile work has continued to deteriorate.

Measures have been taken to halt an earlier rising damp problem. The risks associated with water damage are generally preventable if the rainwater disposal system is adequately maintained and sumps are regularly cleared.

6.9 Management

Policy

This CMP should be adopted by Arts Victoria as a guiding document for the management of the site and the Keith Haring Mural. The recommendations should be implemented as soon as possible and subject to review every five to ten years.

Rationale

It is important that this CMP be formally accepted and regularly reviewed if it is to be effectively implemented. This will ensure that all works, whether they be maintenance or conservation, are undertaken with due regard to the *cultural significance* of the mural.

Reviewing a CMP on a regular basis ensures that new information can be properly assessed and if necessary incorporated into subsequent revisions of the CMP. Furthermore, new technologies and understandings of appropriate conservation methods may come to light and may have an impact on the management of the mural. This is particularly pertinent to the mural as ongoing research into acrylic artworks will undoubtedly assist with resolving approaches to its appropriate conservation.

7 ACTION PLAN

7.1 Introduction

The purpose of this section of CMP is to recommend how and when actions should be taken to implement the conservation policies. It is divided into three principal sections:

- conservation works plan
- maintenance plan
- management protocols

7.2 Conservation Works Plan

7.2.1 Step 1 – Preliminary Works (Immediate)

Before a program of conservation works can be implemented on the mural, several preliminary issues need to be addressed. These works should be implemented as soon as possible.

Action	Discussion
Remove/relocate electrical cable to the north-west corner of the wall	Although the cable is connected at the east end of the south elevation of Block F, this work will need to be undertaken carefully so that the mural is not damaged in the process.
Replace existing fixed bollards with a removable type or consider alternatives.	Although protection from vehicular damage to the mural is required, four fixed bollards have been installed in front of the mural, which do not allow for ready access to the mural for conservators. In addition, the yellow bollards do detract somewhat from the mural and so another, more sympathetic approach should be investigated.
Obtain permits, if necessary	Currently there is a permit exemption for conservation works being undertaken by a professional conservator. Any program of works should be discussed with Heritage Victoria to confirm the need for a permit, or not.
Consider seeking funding assistance for outstanding conservation works.	As the mural is included on the VHR, funding assistance can be sought from the State government through Heritage Victoria and from the federal government through the Department of the Environment, Water, Heritage and the Arts. These departments regularly make funding available for conservation works.

7.2.2 Step 2 - Urgent Conservation Works (within 12 months)

As recommended in the policy, urgent conservation works should also be undertaken as soon as possible, within a year. A generally similar approach has been recommended by two reputable conservators - CCMC and Andrew Thorn (refer to appendices C and D). A more detailed methodology was requested of CCMC, which is summarised below

Action	Discussion
Stage One – Investigation (Refer to section 5.8, option two, pp42-45).	The key steps would be: • prepare detailed documentation of the work in its current state. • obtain and analyse samples of the materials and undertake environmental testing of the conditions, etc. • undertake research to develop an appropriate. treatment regime and do some test applications. • determine efficacy of proposal in consultation with stakeholders.
Stage Two – Works (Refer to table 7, pp46-48).	The key steps would be: • stablise the mural generally, • clean where necessary, • undertake selective retouching of the red paint, • apply a protective coating.

7.2.3 Step 3 - Recommended Conservation Works (within 2 years)

The following recommended conservation works are not essential for the ongoing conservation of the mural however they would improve the ability to interpret the mural. They could be undertaken at a later date than the urgent conservation works outlined above, however it is likely to be more economical for them to be undertaken at the same time as the urgent works. These works generally relate to the removal of non-original elements and the reinstatement of original elements, such as services.

Action	Discussion
Improve presentation of the base of mural by reintegrating losses and surfaces that appear altered using materials that are compatible and reversible.	This would improve the visual cohesiveness of the mural. Thorn undertook some work in 1997 to address some losses to the lower portion of the mural by attaching loose/detached areas and filling in losses. Although the render has been successfully reattached to a large extent, the choice of paint (Cadmium yellow) proved to have limited longevity.
Consider options for reinstating the original design on the small door and Haring's signature, albeit indicating it is a reproduction.	The door had been removed by 1996 when Thorn undertook his first condition survey.
Remove the non-original sections of electrical conduit (northern half).	This should be done carefully so as not to damage the underlying painting.
Reinstate grille and piping at the north end of the mural.	Reinstating these items would reflect the setting which Haring responded to in the design of the mural. If this was done, the current signage could be relocated to the grille.
Consider reinstating a light fitting similar to the original.	Originally a fluorescent type of light fitting was installed.

Develop an interpretation strategy.	Currently there is no interpretive material at the site and an interpretation strategy should be part of the program for redeveloping the site. Interpretation can take a wide variety of forms such as information plaques, site presentation, and other interventions.

7.2.4 Other Issues

The following issues should also be addressed. The urgency of the time frame for these issues decreases in descending order.

Action	Discussion
Ensure the mural is appropriately insured.	Recent estimates for the mural are in the order of $1M.
Ensure the mural is appropriately safeguarded.	A high perimeter fence currently limits access to the site. The greatest risk to the mural probably does not relate to security as over the years, it has only been subject to minimal amounts of graffiti. Damage related to the elements or vehicles, and the like, have been been a much greater problem.
Removal of razor wire to the adjacent boundary wall.	The razor wire has recently been installed. Although it may be required in the short term, whilst the site is unoccupied, to limit access, it should preferably be removed when the opportunity arises.
Ensure that the Keith Haring Mural is publicly visible and/or accessible, at least part of the time, regardless of the future use of the site.	The current circumstances allow for the mural to be reasonably well viewed from the street however greater opportunity to view it could be provided. Keith Haring's international reputation is widely acknowledged and will probably continue to rise so that access should be provided to both local and international visitors.
Investigate ways by which the mural could at least be partly protected from the elements.	Planting - There is a large eucalypt in the north-east corner of the site, which may be providing some protection from the eastern sunlight. Thorn has apparently recommended introducing more trees to the east boundary near the Tote Hotel. Canopy - It would necessarily be large and possibly intrusive however could provide some protection from the rain and sunlight. Glazed box - This option would have implications for access however may have to be considered if the mural deteriorates to such an extent that it can not be conserved without such an intervention.

7.3 Maintenance Plan

Action	Discussion
Regular inspections of the mural should be undertaken about every two years and a report should be prepared. The condition of the following elements should be assessed: • painting, • substrate	Thorn recommended inspections at least once every two years in 1997. Measures have been taken to prevent rising damp, however these should be regularly monitored.

• immediate surrounds.	

7.4 Management Protocols

The key management protocols relate to:

- preservation in general
- consultants
- stakeholders
- permits
- documentation
- adoption and review

7.4.1 Preservation in general

Action	Discussion
Put funds aside for regular maintenance.	Regardless of what approach is taken – cleaning and retouching or reconstruction – regular action, and hence funds, will be required.
Legal status	Some mechanism should be put in place to ensure the appropriate ongoing preservation of the mural, regardless of the ownership of the site. Consideration should be given to introducing a covenant to the title (or a similarly binding instrument) so that regular monitoring and treatments are undertaken.
Update Citation	Discuss with the Heritage Victoria about updating the Statement of Significance for the mural in light of recent research.
Level of significance	Consider nominating the mural to the National Heritage List. A citation prepared by Ted Gott of the NGV attributes the mural with international significance.

7.4.2 Engaging Consultants

Action	Discussion
Engage appropriately qualified conservators to undertake work on the mural.	Due to their previous involvement with the mural, either Andrew Thorn or CCMC could be engaged to undertake the work. Other qualified conservators include Artlab, who are based in Adelaide.

7.4.3 Involvement with Stakeholders

Action	Discussion
Work with the KHF to achieve a mutually acceptable conservation outcome, utilising their knowledge in regard to similar works to Haring's other murals.	Because of their involvement with the conservation/renewal of several Haring murals in various countries, and the moral right to engage with the estate of an artist, it would be appropriate to negotiate a way forward with this organisation.
Involvement with the Mural Working Group	The views of the Mural Working Group, which include representatives from the Yarra Council, NGV, etc should be taken into consideration in regards to the future of the mural.

7.4.4 Permits

Action	Discussion
Discuss any proposal with a permits officer at Heritage Victoria to determine the need, or not, to apply for a permit.	Currently there is a permit exemption for conservation works being undertaken by a professional conservator. Any program of works should be discussed with Heritage Victoria to confirm this.
City of Yarra	Most proposals related to the mural will not require a permit from Yarra City Council. If major change is being contemplated at the site that involved the mural, contact should be made with the City of Yarra to confirm if there are any local considerations.

7.4.5 Documentation

Action	Discussion
All works should be documented.	With a fragile artwork such as the Keith Haring Mural, it is necessary to adequately document all works to develop a data base from which future conservation can be based. This record would preferably be made widely available, so that information is disseminated to assist with conservation of other Haring murals internationally.
Maintain a repository of documents relating to the cultural significance of the mural at the site.	A copy of the CMP and other relevant documents should remain on site. A copy of the CMP should also be lodged with Heritage Victoria, City of Yarra and preferably the State Library of Victoria.

7.4.6 Adoption and Review

Action	Discussion
Ensure the recommendations of the CMP are adopted and implemented.	The condition of the mural is deteriorating and its crucial that the recommendations are implemented.
Commission a regular review of this CMP, preferably within 10 years.	It is important to update a CMP, especially in light of conservation treatments that are undertaken to the mural.
Seek acknowledgement of the CMP, or at least volume 2, by Heritage Victoria.	The CMP could be referred to in a revised permit policy.

BIBLIOGRAPHY

8.1 Secondary Sources

Bellamy, Louise	'Collingwood Tech's wall of renown', *Melbourne Times*, 14 March 1984 [Copy held at the Collingwood Library, CFC (2) 661]
Buckley, John	Interview, ABC Radio National on 23 May 2010 (available as podcast at http://www.abc.net.au/rn/artworks/stories/2010/2905146.htm)
Gott, Ted & Lisa Sullivan	'Keith Haring in Australia, 1984', *Art and Australia*, Winter 2002 [vol 39, no 4) pp560-7
Sharpe, *Emily*	'Saving Keith Haring Down Under', *The Art Newspaper*, no 214

8.2 Websites

Arts Nation - ABC	http://www.abc.net.au/arts/
Keith Haring Foundation	http://www.haring.com/
State Library of Victoria - Picture Collection	www.slv.vic.gov.au
Wikipedia	http://en.wikipedia.org

APPENDIX A – AICCM CODE OF ETHICS AND CODE OF PRACTICE

CODE OF ETHICS AND CODE OF PRACTICE
Australian Institute for Conservation of Cultural Material

PURPOSE

The purpose of the AICCM Code of Ethics and AICCM Code of Practice is;

1. To provide members with guidelines for professional practice which emphasise at all times the protection and conservation of cultural material.
2. To create enforceable standards of conduct for accredited conservators in order to promote confidence and add value to the process of accreditation.
3. To promote the standing, accountability and standards of the profession and its work in the community.

The AICCM Member (both accredited and non-accredited) shall observe and adhere to the following AICCM Code of Practice and definitions together with the AICCM Code of Ethics. This Code of Ethics and Code of Practice is equally applicable to AICCM Members employed in private and public capacities.

Wherever the words 'partnership' or 'corporation' are used in these Codes they are defined as partnerships or corporations offering conservation services, either solely or in combination with other services, and having partners or directors who are AICCM members.

Where AICCM members practise as partnerships or corporations it is their responsibility to ensure that the partnership or corporation complies with these Codes; any transgression of these Codes by the partner or director shall be deemed to be a transgression by the partnership or corporation. Any transgression of these Codes by any partnership or corporation shall be deemed to be a transgression by the AICCM member or members who are partners or directors in the partnership or corporation.

DEFINITIONS

CONSERVATION The conservation profession is responsible for the care of cultural material. Conservation activities may include preservation, restoration, examination, documentation, research, advice, treatment, preventive conservation, training and education.

PRESERVATION The protection of cultural property through activities that minimise chemical and physical deterioration and damage, and that prevent loss of information. The primary goal of preservation is to prolong the existence of cultural material.

RESTORATION The treatment of cultural property through minimal intervention to enhance its interpretation. Restoration may involve the reassembly of displaced components, removal of extraneous matter, or re-integration using new materials.

EXAMINATION The investigation of the structure, materials, and condition of cultural material including the identification of the extent and causes of alteration and deterioration.

DOCUMENTATION The recording in a permanent form (text and graphic) of information derived from conservation activities.

TREATMENT Direct intervention to preserve the object by retarding or preventing its deterioration. This is aimed at prolonging its existence.

PREVENTIVE CONSERVATION Action taken to retard or prevent deterioration of or damage to cultural material by control of its environment. This is done through the formulation and implementation of policies and procedures for the following: appropriate environmental conditions; handling and maintenance procedures for storage, exhibition, packing, transport and use; integrated pest management; emergency preparedness and response; and reformatting/duplication.

CULTURAL MATERIAL Objects, collections, artworks, specimens, structures, or sites.

EMPLOYER/ CLIENT This includes but is not limited to employer, client, owner, custodian, funding agency or authorised agent.

NOTE A number of legal terms have been used throughout this Code of Ethics and Code of Practice. These have not been defined. Any ambiguity should be referred to the Purpose of this Code of Ethics and Code of Practice.

AICCM CODE OF ETHICS FOR THE PRACTICE OF CONSERVATION OF CULTURAL MATERIAL IN AUSTRALIA

Principles of ethical behaviour for all those involved in the conservation of cultural material:

1. All actions of AICCM Members must be governed by an informed respect for cultural property, its unique character and significance and the people or person who created it.
2. In the conservation of cultural material, all actions of AICCM Members must be governed by an unswerving respect for the physical, historic, aesthetic and cultural integrity of the object.
3. AICCM Members shall strive to attain the highest standards in all aspects of conservation, including examination, research, documentation, conservation advice, treatment, training and education.
4. AICCM Members shall recognise their skills and limitations when devising and implementing conservation measures and treatments.
5. AICCM Members have the responsibility of contributing to the evolution and growth of conservation practice by continuing to develop knowledge and skills, and by sharing information and experience.
6. AICCM Members shall respect the integrity of fellow AICCM Members.
7. AICCM Members have the obligation to promote understanding of and adherence to this Code of Ethics.

CODE OF PRACTICE
Australian Institute for Conservation of Cultural Material

PROFESSIONAL CONDUCT

1. **Conduct**: Adherence to the *Code of Ethics* and *Code of Practice* is a matter of personal and professional responsibility. The AICCM Member should always be guided by the intent of this document, recognising that specific circumstances may legitimately affect professional decisions.

2. **Disclosure:** In professional relationships, the AICCM Member should share complete and accurate information relating to the efficacy and value of materials and conservation procedures. This information should be shared with other AICCM Members, the employer/ client as appropriate. In seeking and disclosing such information, and that relating to analysis and research, the AICCM Member should recognise the importance of published information that has undergone formal peer review.

3. **Laws and Regulations:** The AICCM Member should be cognisant of laws and regulations that may have a bearing on professional activity. Among these laws and regulations are those concerning the rights of artists and their estates, occupational health and safety, equal employment opportunity, sacred and religious material, excavated objects, endangered species, human remains, and stolen property.

4. **Approach.** It is recognised that the significance of cultural material may have a bearing on conservation decisions. Accordingly, without breaching the provisions of the AICCM Code of Ethics or Code of Practice, the AICCM Member shall ensure that cultural material in her/his care receives levels of conservation appropriate to its significance and available resources.

5. **Cultural issues.** The AICCM member should be informed and respectful of the cultural and spiritual significance of cultural material and should, where possible, consult with all relevant stakeholders before making treatment or other decisions relating to such cultural material.

   The AICCM member should recognise the unique status of Aboriginal and Torres Strait Islander peoples as first peoples, and as key stakeholders in the conservation of their cultural heritage material. When undertaking conservation of Aboriginal and Torres Strait islander cultural property, the AICCM member should recognise that the objects and the information relevant to them are of equal importance, and that conservation practice must adapt to cultural requirements, particularly in respect of secret/sacred items.

6. **Natural Environment:** The AICCM Member shall recognise the potential for conservation activities to cause environmental damage. Accordingly, without endangering the welfare of cultural property, she/he should endeavour to undertake conservation treatments, or use materials, which have the lowest potential to pollute; unnecessarily waste resources; or otherwise damage the natural environment.

7. **Practice**. Regardless of the nature of employment, the AICCM Member should follow appropriate standards for safety, security, contracts, and fees.

   7.1. **Health and Safety.** The AICCM Member should be aware of issues concerning the safety of materials and procedures and should make this information available to others as appropriate. The AICCM Member should ensure that their workplace complies with current state and federal occupational health and safety legislation and if employing staff or contractors ensure that they comply with these standards.

   7.2. **Security:** The AICCM Member should ensure that working and storage conditions are designed to protect cultural property and artworks.

   7.3. **Contracts.** The AICCM Member may enter into contractual agreements with individuals, institutions, businesses, or government agencies provided that such agreements do not conflict with principles of the *Code of Ethics* and *Code of Practice.*

   7.4. **Fees:** Fees charged by the AICCM Member should be commensurate with services rendered. The division of a fee is acceptable only when based on the division of service or responsibility. The AICCM Member shall provide each client with an estimate of fees and costs

involved in each particular project before undertaking each such project and gain approval by the employer/ client before undertaking each such project. The AICCM Member shall promptly notify the employer/client if it becomes necessary to vary any estimate already provided and approved.

8. **Competition:** The AICCM Member should promote the profession and compete fairly with other AICCM Members by promoting the principle of selection of AICCM Members by clients upon the basis of merit, and not on the basis of fees alone. This provision does not preclude an AICCM Member from knowingly competing with other AICCM Members.

9. **Timeliness:** The AICCM Member shall undertake to complete projects in a timely manner. Within reason work should only be accepted when the AICCM Member has the time and capacity to complete it within an agreed time frame.

10. **Behaviour:** The AICCM Member shall not engage in any misleading, deceptive or unconscionable conduct in order to procure work or advancement. Without limiting the effect of the previous sentence the AICCM Member shall not misrepresent the condition of cultural material in order to obtain work.

11. **Communication:** Communication between the AICCM Member and the client, owner, custodian, or authorised agent of the cultural property is essential to ensure an agreement that reflects shared decisions and realistic expectations.

12. **Accreditation:** AICCM Members who have not been duly accredited under the *AICCM Constitution* as "Professional Members" shall not represent that they are "Accredited" or "Professional Members" of the AICCM.

13. **Advertising:**

    13.1. **Use of AICCM Name** Advertising and other representations by the AICCM Member concerning the use of the AICCM name or the AICCM Member's membership status and accreditation should follow the guidelines in the *AICCM Constitution*.

    13.2. **Abilities.** Advertising should not be misleading as to the abilities or qualifications of the AICCM Member or their firm.

    13.3. **Misleading advertising** An AICCM Member shall not allow her/his name to be associated with a misleading advertisement nor with a statement which makes an inaccurate comparison between one product and another.

14. **Consent:** The AICCM Member should act only with the consent of the employer/ client. The employer, client, owner, custodian, or authorised agent should be informed of any circumstances that necessitate significant deviations from the original agreement. When practicable, notification should be made in writing before such changes are made.

15. **Confidentiality:** Except as provided in the *Code of Ethics* and *Code of Practice,* the AICCM Member should consider relationships with a an employer/ client as confidential. Information derived from examination, scientific investigation, or treatment of the cultural property should not be published or otherwise made public without documented permission.

16. **Supervision and Delegation:** The AICCM Member is responsible for work delegated by them to other AICCM Members, employees , students, interns, volunteers, subordinates, or agents and assignees. Work should be delegated or subcontracted only when the AICCM Member can supervise the work directly, can ensure proper supervision or has sufficient knowledge of the practitioner to be confident of the quality of the work. When appropriate, the employer/ client should be informed if such delegation is to occur.

17. **Professional development:** The AICCM Member shall afford to those under her/his direction every reasonable opportunity to advance her/his knowledge and experience. The AICCM Member shall continue to undertake her/his own professional development where possible.

18. **Promulgation of knowledge:** Within the limits of knowledge, ability, time, facilities, and their professional expertise, the AICCM Member is encouraged to attempt to publish research findings, innovative information or techniques and other new information which may be of use to the profession as a whole, subject to maintaining at all times the duty of confidentiality owed to clients, owners, custodians or authorised agents. This is especially critical where public money has been provided for the research.

19. **Education:** Within the limits of knowledge, ability, time, facilities, and their professional expertise, the AICCM Member is encouraged to become involved in the education of conservation personnel. The objectives and obligations of the parties shall be agreed upon mutually.

20. **Consultation:** Since no individual can be expert in every aspect of conservation, it may be appropriate to consult with colleagues or to refer the client, owner, custodian, or authorised agent to a professional who is more experienced or better equipped to accomplish the required work. Requests for a second opinion must be respected.

21. **Recommendations, references and testimony:** An AICCM Member may be required: to testify in legal, regulatory, or administrative proceedings; to provide a recommendation; or to provide a reference for another conservator. Any reference to the work of others must be based on facts and personal knowledge rather than on hearsay. The AICCM Member should not provide recommendations without direct knowledge of a colleague's competence and experience.

22. **Conflict of Interest:** The AICCM Member should avoid situations in which there is a potential for a conflict of interest that may affect the quality of work, lead to the dissemination of false information, or give the appearance of impropriety. Whenever appropriate, the AICCM member shall provide members of the public or internal institutional staff with the *AICCM List of private conservators*.

23. **Right of Refusal.** Where any conduct ordered or requested by an employer/ client would cause an AICCM Member to breach the *AICCM Code of Ethics* or *Code of Practice*, the AICCM Member shall raise this issue with the employer/ client and refer them to the relevant provisions of either Code. If no suitable alternative is agreed between the AICCM Member and the employer/ client the AICCM Member shall report the issue to the AICCM National Council to be dealt with as that Council deems appropriate.

24. **Related Professional Activities:** The AICCM Member should be especially mindful of the considerable potential for conflict of interest in activities such as authentication, appraisal, art dealing or research.

25. **Credit for work:** The AICCM Member shall ensure that due credit is given to each subordinate and colleague for work, research and reports which has been performed by her/him. The AICCM member shall not intentionally omit reference to the relevant published or unpublished work of others for the purpose of inferring personal discovery of new information

26. **Research:**

    26.1. An AICCM Member should not knowingly publish or promulgate another AICCM Member's report or research without her/his consent; or publish or promulgate them with significant words or parts omitted or changed; or publish or promulgate them in a form which makes them inaccurate or liable to breach the *AICCM Code of Ethics* or *Code of Practice.*

    26.2. The AICCM member shall not intentionally and without authorisation take or sequester or materially damage any research-related property of another, including without limitation the apparatus, reagents, artefact materials, writings, data, hardware, software, or any other substance or device used or produced in the conduct of research.

26.3. An AICCM Member whose research-related property is taken or damaged; or whose report or research is published or promulgated without her/his consent; or is published or promulgated with significant words or parts omitted or changed; or is published or promulgated in a form which makes it inaccurate or liable to breach the *AICCM Code of Ethics* or *Code of Practice* should first take steps to have the situation corrected. If this cannot be achieved and the AICCM Member believes a breach of the *AICCM Code of Ethics* or *Code of Practice* may have taken place the AICCM Member should refer the matter to the AICCM National Council to be dealt with as that Council deems appropriate.

27. **Misconduct:** Allegations of unethical conduct should be reported in writing to the AICCM National Council. All correspondence regarding alleged unethical conduct shall be held in the strictest confidence. Violations of the *Code of Ethics* and *Code of Practice* that constitute unethical conduct may result in disciplinary action.

EXAMINATION AND SCIENTIFIC INVESTIGATION

28. **Justification:** Careful examination of cultural property forms the basis for all future action by the AICCM Member. Before undertaking any examination or tests that may cause change to cultural property, the AICCM Member should establish the necessity for such procedures.

29. **Sampling and Testing:** To determine treatment procedures appropriate testing should be carried out. Prior consent must be obtained from the client, owner, custodian, or authorised agent before any material is removed from a cultural property. Only the minimum required should be removed, and a record of removal must be made. When appropriate, the material removed should be retained.

30. **Interpretation:** Declarations of age, origin, or authenticity should be made only when based on sound evidence interpreted in the light of professional experience.

31. **Investigation:** The AICCM Member should follow accepted scientific standards and research protocols. The AICCM Member should use, issue or publish only such treatment proposals, reports or statements that are thorough, accurate records of soundly based observation and/or experiment and logical deductions there from. Testing on unique or rare original materials/objects should be avoided where possible. Methods or materials should not be used on original materials where there is no body of evidence in existence to justify their use.

PREVENTIVE CONSERVATION

32. **Preventive Conservation:** The AICCM Member should recognise the critical importance of preventive conservation as the most effective means of promoting the long-term preservation of cultural property. The AICCM Member should provide guidelines for continuing use and care, recommend appropriate environmental conditions for storage and exhibition, and encourage proper procedures for handling, packing and transport to a level of detail as appropriate.

TREATMENT

33. **Appropriate treatment:** Evidence of provenance and of the history of the cultural material should be preserved. The AICCM Member should only recommend or undertake treatment that is judged suitable to the preservation of the aesthetic, conceptual and physical characteristics of the cultural property , after thorough examination of all the evidence. When non-intervention best serves to promote the preservation of the cultural property, it is appropriate to recommend that no treatment be performed.

34. **Materials and Methods**: The AICCM Member is responsible for selecting materials and methods appropriate to the objectives of each specific treatment and consistent with currently accepted practice. The advantages of the materials and methods chosen must be balanced against their potential adverse effects on future examination, scientific investigation, treatment, function and ageing.

35. **Integration of Losses:** Any integration of losses should be documented in treatment records and reports and should be detectable by common examination methods. Such integration should be removable; not detrimental to the cultural property; and should not modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material.

36. **Treatment options:** Where possible the AICCM Member should not allow the choice of treatment method or materials to be influenced by any commercial or time considerations.

DOCUMENTATION

37. **Documentation:** The AICCM Member has an obligation to produce and provide the employer/ client accurate, complete and archival records of examination, sampling, scientific investigation and treatment. Where appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the cultural material, or whether an individual object or collection is to be documented. The purposes of such documentation are:
    - 37.1. To provide an accurate description of the appearance, materials, methods of manufacture and provenance of cultural property.
    - 37.2. To establish the condition of cultural property.
    - 37.3. To aid in the care of cultural property by providing information helpful to future treatment and by adding to the profession's body of knowledge.
    - 37.4. To enhance the interpretation of the cultural material by the client, owner, custodian, or authorised agent and society as a whole.
    - 37.5. To aid the AICCM Member by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.
    - 37.6. To acknowledge all contributors to the examination, sampling, scientific investigation, research and treatment performed.

38. **Documentation of Examination:** Before any intervention, the AICCM Member should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and provenance

39. **Treatment Plan:** Following examination and before treatment, the AICCM Member should prepare a plan describing the course of treatment. This plan should also include the justification for and the objectives of treatment, alternative approaches, if feasible, and the potential risks. When appropriate, this plan should be submitted as a proposal to the client, owner, custodian, or authorised agent.

40. **Documentation of Treatment:** During treatment, the AICCM Member should produce documentation that includes a record or description of techniques or procedures involved, materials used and their composition, the nature and extent of all alterations, and any additional information revealed or otherwise ascertained. A report prepared from these records should summarise this information and provide, as necessary, recommendations for subsequent care.

41. **Preservation of Documentation:** Documentation is an invaluable part of the history of cultural property and should be produced and kept in as permanent a manner as practicable. Copies of reports of examination and treatment must be given to the client, owner, custodian, or authorised agent, who should be advised of the importance of keeping these materials with the cultural property. Documentation is also an important part of the profession's body of knowledge. The AICCM Member should strive to preserve these records and allow other professionals appropriate access to them, when access does not contravene agreements regarding confidentiality.

EMERGENCY SITUATIONS

42. **Disaster Planning:** Where appropriate the AICCM Member should undertake disaster planning according to currently accepted practice. Handling and treatment protocols for secret or sacred materials should be defined with stake-holders as part of disaster planning.

43. **Emergency Situations:** Emergency situations can pose serious risks of damage to or loss of cultural property that may warrant immediate intervention on the part of the AICCM Member. In an emergency that threatens cultural property, the AICCM Member should take all reasonable action to preserve the cultural property, recognising that strict adherence to the *Code of Ethics* and *Code of Practice* may not be possible.

AMENDMENTS

44. **Amendments:** The Code of Ethics and Code of Practice may be amended by resolution by a two-thirds majority of members voting at a general meeting of the AICCM.

Last amended AICCM AGM 11 October 2002

APPENDIX B - CITATIONS

1. Victorian Heritage Register

Keith Haring
35 Johnston Street, Collingwood
H2055

Statement of Significance:

What is significant?
The Keith Haring Mural consists of a large panel, 7.4 x 11.5 metres on a cement rendered wall at the eastern end of the Collingwood Technical School. The New York artist Keith Haring visited Melbourne in March 1984, during this time he created a number of works, the most lasting of which is the Mural on the side of Collingwood Technical School.

Keith Haring (1958-1990) was an important member of the New York art scene of the early 1980s, this movement incorporated Hip Hop, graffiti, and gay culture. Haring was an openly gay artist at a time when this was still gaining acceptance, he was also a sufferer of AIDS and a campaigner for the acceptance of those with AIDS. Drawing on graffiti and hip hop culture Haring created art that had far reaching influence. His visit to Melbourne, early in his short career, was to influence a number of young artists. His strong graphic style and its application in many forms, album covers, murals, tee shirts, permanent works of art was also influential, as was his interest in 'public art'. The Collingwood mural draws directly on popular culture for its themes and form. The Collingwood mural is one of the few Haring murals that still exist of the number he executed across the world and the only extant work from his visit to Australia.

The Mural was one of a number of projects Haring undertook during his visit. More temporary was a mural on the glass water windows at the National Gallery of Victoria on St Kilda road. John Buckley the inaugural director of the Australian Centre for Contemporary Art, and sponsor of Haring's visit to Melbourne, approached Collingwood Technical College, who had a convenient wall for Haring to create a more permanent work.

The mural is a large work of art, on a cement rendered wall, with a yellow background and red, blue and green figures. The upper half of the mural depicts a hybrid man/computer monster, ridden by two human figures, this was a comment on technology and television. The lower half of the mural consists of vibrant dancing figures, reflecting an interest in the contemporary rap/hip hop movement of the period. Its themes and treatment are typical of Haring's work at the time.

How is it significant?
The Keith Haring Mural is of historic and social significance to the State of Victoria.

Why is it significant?
The Mural has historical and social significance as the work of a major artist. Keith Haring is considered one of the most significant artists of his generation. As a role model for gay artists and Aids activism his influence was international.

The Keith Haring Mural is of social significance as a landmark piece of public art in Melbourne. Its prominent inner city location is indicative of the changing physical and social landscape of a former working class suburb.

The Mural is also of social significance for its influence on young artists for its inner city setting and use of popular culture themes and imagery.

2. City of Yarra

HO 354
Keith Haring Mural

There is no statement of significance for the mural prepared by the Council.

3. National Trust of Australia (Victoria)

Mural – Keith Haring
Johnston Street Northern Metro College of TAFE Collingwood

File Number B6675
Level National

Statement of Significance:

The Collingwood mural is one of only a small number of surviving works by Haring and his only surviving Melbourne work. The artist's highly personal naive style appealed to and greatly influenced a generation of artists. This work was created at a time when the artist was enjoying international success and the involvement of student assistants relates to the artist's philosophy. Crucial to the fate of the mural and, given its exposure to the elements, is whether the artist himself would have accepted the deterioration of the mural or have condoned some form of restoration. Haring's own feelings appear to have been ambivalent in the matter. In favour of restoring the mural ie. repainting - is the fact that the simplistic three colour design devoid of subtle harmonies would not present serious problems in restoring it to its original condition. Opinion appears to be divided regarding the moral considerations in the matter and even the Estate of Keith Haring is unclear in this matter. Work has already been done to prevent further erosion of the mural's wall. Not only did Haring leave an impressive legacy of his work which included murals, painted steel constructions, multiples etc, but his social awareness exemplified in his art workshops for children, his campaign for Aids Awareness and the establishment before his death of the Keith Haring Foundation as a charitable organisation, encourage the wish to preserve the Collingwood mural in the best possible way.

APPENDIX C – CCMC REPORT

Review of conservation issues presented by the *Keith Haring Mural* and Proposed Conservation Program for the *Keith Haring Mural*

December 2010

Prepared for

RBA Architects and Conservation Consultants

by

The Centre for Cultural Materials Conservation (CCMC)

Catherine Nunn - cnunn@unimelb.edu.au

Caroline Fry - cmfry@unimelb.edu.au

Caroline Kyi - (Consultant Wall Painting Conservator)

Table of Contents

Executive Summary

- The *Keith Haring Mural* is a significant artwork, classified by the National Trust Victoria and Heritage Victoria. The condition and future of the mural is the subject of much discussion between key stakeholders, and has become a 'cause-celebre' within the art and local community.
- In keeping with the conventions of the Burra Charter (1999) and the AICCM Code of Ethics and Code of Practice (2002), CCMC recommends a high priority for the conservation of the *Keith Haring Mural* and to take the 'least interventive' approach to its preservation.
- In the absence of a definitive and specific statement from Haring about how his artworks might be conserved, CCMC draws on the Haring mural itself and established conservation conventions as the primary sources of information governing the best approach to preservation.
- The 'least interventive' approach is to stabilise the original materials, to apply treatments to prevent further deterioration and to restrict or remove environmental agents of deterioration.
- The *Keith Haring Mural* was painted with modern 'synthetic' (acrylic) materials, which behave differently from traditional paint media. This fact impacts on every aspect of the proposed treatment rationale, and requires a new research driven approach to conservation treatment.
- The inherent deterioration mechanisms within the acrylic paint and pigment system of *Keith Haring Mural* is a key factor in the assessment of the treatment approach, and demands an innovative approach to the treatment, sensitive to both local and international concerns and key stakeholders.
- **CCMC does not support over-painting or repainting the *Keith Haring Mural* due to the absence of appropriate new coating/paint systems, which could be effectively removed or reversed, in accordance with the Burra Charter.**
- CCMC supports the theory, methodology and treatment developed by Thorn in 1996, and his understanding of how the environment impacts on the deterioration of the mural's paint materials.
- New research by CCMC builds on Thorn's treatment approach. Due to the vulnerable condition of the yellow layer, CCMC strongly recommends further investigation to identify the cause(s) of the continuing degradation, so that an updated treatment program is developed.
- Consolidation and treatment of the chalking yellow layer will improve the colour rendition of this layer, returning it to a condition closer to 'artist's intention'.

- Any new materials used on the mural must be fully researched and tested for compatibility. This will avoid the introduction of materials that may exacerbate existing problems in the mural.
- Future site-use will impact on conservation planning and treatment options. Once site-use has been established, presentation issues can be addressed and will be governed by conditions of proposed setting. (e.g. enclosed space, controlled lighting etc.)
- **Light exposure (especially UV light) must be controlled** as light drives degradation reactions.
- CCMC recommends that on-going monitoring of the mural is an essential part of any future treatment regime. This will include further quantitative assessments such as colorimetric measurements, which will provide benchmark data to permit evaluation of the treatment approach.
- The new permanent bollards and the non-original wiring should be removed. These items detract from the visual coherence and immediate surrounds of the mural. (Burra Charter Article 15).
- Removal of non-original fixtures, such as PVC piping and cabling is recommended, provided this can be done without further damaging the mural.
- A budget line and on-going funding is required for both research and future maintenance of the mural.
- Given the active deterioration of the mural, a timeframe for decision-making and treatment must be established urgently.

List of Appendices

Appendix A:
Registration Report: Hermes ID: 12532, Heritage Register Number: H2055, Name *Keith Haring Mural*)

Appendix B:
Line drawing showing major cracking related to insertions.

Appendix C:
Line drawing showing insertions.

Appendix D
Correspondence between Tom Dixon (National Gallery of Victoria) and David Stark (Estate of Keith Haring).

Appendix E:
Frequently Asked Questions
CCMC responds to various concerns raised by stakeholders.

List of Tables

List of Illustrations

1. Background

1.1 Scope of the report

The heritage significance and conservation issues presented by the *Keith Haring Mural* in Collingwood are under review at a time when there is much public interest in the mural, and a pressing need to come to a resolution for an ongoing conservation strategy compatible with future usage of the site.

This report is based on the findings made by CCMC conservators during a recent examination of the work.

The objective of this report, as defined in the Project Specification, Conservation Management Plan (CMP), 35 Johnson Sreet Collingwood, June 2010, Cultural Infrastructure, Arts Victoria, Department of Premier and Cabinet, is to:

- provide a description of the cultural significance of the mural having regard to but not being limited by the Heritage Victoria citation,
- document the location and immediate surrounds of the mural,
- assess the current condition of the mural,
- determine deterioration processes of the original materials,
- review the rationale, methodology and efficacy of the previous conservation treatments,
- identify treatment requirements for stabilsation of the mural,
- provide a Conservation Policy and Management Plan for the mural, which articulates conservation obligations, future needs and constraints for the mural, according to guidelines established by Heritage Victoria and Burra Charter (1999) for submission within the Conservation Management Plan provided by RBA Architects.

Access to the mural and site was limited due to various encumberances such as the presence of a permanent bollard at the base of the work and overhead wiring associated with the installation of a security system. The bollard impeded access to the face of the mural with a scissor lift. Likewise powerlines directly above the mural require a 3 metre clearance zone to comply with health and safety regulations, which similarly restricted scaffold or scissor lift access to the top section of the mural. Hence inspection of the upper half of the mural was done from ground level.

1.2 The *Keith Haring Mural* - background

The mural known as the *Keith Haring Mural* was painted in 1984 by the New York based artist Keith Haring (1958-1990). The work is painted on a rendered brick wall located on the exterior eastern face of the former Collingwood Technical School (hereafter known as Collingwood Tech.) (Figure 1). Haring was invited to Australia by John Buckley, the (then) Director of the Australian Centre for Contemporary Art (ACCA). While in Australia, Haring painted temporary artworks at the National Gallery of Victoria, the Art Gallery of New South Wales, and various street locations around Melbourne. At that time, Haring was commissioned to paint what is now known as the *Keith Haring Mural* at Collingwood Tech. While the temporary murals painted for the respective galleries were subsequently removed or over-painted, Haring notes in his authorised autobiography that the mural at the Collingwood Technical School had 'become a permanent site!' (Gruen 1991, 113).

The large wall site and location at Collingwood Tech. was selected specifically to allow Haring to engage with 'urban youth' and community which was a longstanding interest of the artist (Art Nation 2010). The performative and collaborative approach of Haring brought a direct connection with the participatory qualities of street art culture of New York to Melbourne.

The mural is painted in a basic palette of red and green set against a yellow background. It is approximately 7.4 x 11.5 m. The rendered brick wall was prepared by housepainters who painted the preliminary layer with yellow commercial house (paint identified as acrylic) (Thorn 1997, 6). The yellow paint was applied with rollers and with hand finishing around various applied elements. The next day Haring completed the composition using red and green paint, using a ladder and scissor lift to gain access to the upper level,

The colours used by Haring on this mural have important symbolic meanings. At the 'Yarra Talking Art Forum' held in 2010, Ted Gott, the current curator of International Art at the National Gallery Victoria, put forward that for Haring the colour yellow represented 'life giving sun', and the red paint alluded to the 'beauty and vitality of life', 'blood', and also the modern urban connection with 'traffic lights' (Yarra Talking Art Forum). The composition appears to be divided into an upper and lower register, however further examination reveals that the artwork has been conceived as a whole to incorporate various existing (some now lost) building fixtures, such as pipes and wiring, which physically divide the work into various zones.

The upper register of the painting is dominated by the stylised outline (predominantly green) of an arthropod-like monster with a 1980s-style computer for a head. This figure extends almost the width of the mural and is straddled by two human figures (red) depicted as highly stylised body outlines. This scheme is continued in the mid and lower levels of the mural as a cascade of human outlines (red) move/fall through the rest of the painted space. A sense of dynamism and vitality possessed by these outlines is clearly conveyed by their postures and the 'motion marks' (green) emphasising the movement of their bodies.

The forms depicted in the painting allude to many of the preoccupations of the artist, and visually represents societal concerns of the time Gott (Art Nation 2010) described the 'computer head' as suggesting a 'lack of justice' and 'fears for the coming tech. [sic] revolution' of which the artist felt threatened. The dancing figures, adopting poses from New York dance culture, allude to the 'joy of life', and importance of social responsibility in community. The dancing figures are depicted as interconnected, such that each 'figure' is essential to the overall structure of the composition/community.

1.3 Site and environment

The site of the mural is the former Collingwood Technical School, (previously Northern Metropolitan College of TAFE) located approximately 2km from the Melbourne CBD. The site is contained within the complex of former TAFE buildings, which has been announced as the new home for Circus Oz (Department of Premier and Cabinet, Cultural Infrastructure, Project Specification, CMP June 2010).

The mural is located on a highly exposed eastern facing exterior wall of 35 Johnston Street, in close proximity to a major traffic route. The location of the site imparted constraints on how the artist executed the mural and impacts on the current condition of the mural.

The mural is site-specific, having been conceived as a public art project responding to its outdoor setting inside the boundaries of an inner urban school. Its high visibility 'bill board' format engages the viewer at street level, and also communicates to passing traffic with a simple graphic style. The public location and international profile of the artist has contributed to the mural gaining broad recognition to diverse stakeholders, including street artists, art historians, musicians, commuters and local Collingwood residents.

In 1984, at the time of painting, the rendered wall had several pre-existing fixtures to support building services such as lighting, plumbing, manhole door and fire services. Haring incorporated some of these fixtures into the mural to reduce visual disruption and to maintain the continuity of the scheme. The fixtures (both extant and lost) are therefore intrinsic to the work. Other than the loss of these (removable) fixtures and the lost manhole cover, which depicted a 'radiant baby' and Haring signature, the physical setting of the mural is largely intact.

Vacation of the site (c. 1996) and the subsequent period of non-occupancy, have affected public perception of the mural and its surrounds. The site now appears derelict. The immediate surrounds of the mural have been poorly maintained. Rubbish and debris have accumulated at the base of the mural. This is visually disturbing, potentially damaging and further detracts from presentation of the mural.

The mural is located near the main vehicle entrance to the site. Current access is restricted to maintenance and security behind a locked gate. Closure of the site has reduced potential adverse impacts associated with open access to pedestrian and vehicular traffic.

The setting for the mural is integral for any conservation proposal or future usage. The current condition of the mural and any future conservation work is inseparable from the previous and proposed function of the site. The proposed development must respond to the Burra Charter (1999) (3.2.5) such that the both the setting and mural are preserved, compatible with and not negatively impacted by any new usage or new structures.

At the time of writing, the proposed plans for the site are vague and not yet formulated. The final design for the location will be critical for full assessment of any impact and for complete determination of the conservation management policy for the mural (Burra Charter 3.2.7).

2. Assessment of significance

2.1 Overall significance

The *Keith Haring Mural* is classified with the National Trust Australia (Victoria) reference B 6675 and registered with Heritage Victoria on the basis of its *historic* and *social* and significance (Burra Charter Article 2.3). The registration includes the face of the building (Block F) to which the mural has been applied and part of the land (the drive- way entrance) immediately to the east (Appendix A). Therefore any works proposed within the registered area require a permit from Heritage Victoria.

The *Keith Haring Mural* is of *aesthetic* and *historical* significance principally due to its rarity as a largely intact original scheme, painted by a prominent international artist. Consideration of aesthetic significance of the mural as a public artwork associated a particular locale, (Burra Charter 2.2) overlaps with the international artistic recognition of the painting as one of the few remaining extant examples of Keith Haring's outdoor *oeuvre* (Heritage Victoria Register (H2055) 2004:4).

2.2 Artistic and historical significance

The mural has *artistic* and *historical* significance as the work of well-known late 20th century American artist. Haring's status as an artist of international reputation is confirmed by his artwork being collected by major institutions such as The Whitney Museum of American Art, the Museum of Modern Art, New York and The Art Institute of Chicago (Haring Foundation website). Painted by Haring in the early years of his career, the subject and graphic style of the mural draws on elements of the graffiti and street art dominant in the New York art scene during the early 1980s (Haring Foundation website). The 'mural is one of the few Haring murals that still exist of the number he executed across the world and the only extant work from his visit to Australia' (Heritage Victoria Register (H2055) 2004:4).

2.3 Community and social significance

The mural is classified as 'landmark piece of public art in Melbourne' (Heritage Victoria Register (H2055) 2004:4). Its physical location attests to it being conceived as a public artwork. Its visibility and accessibility is still apparent and affirms its origins as a community-based piece. For sectors of the artistic community the painting is influential and provides a primary source of information on the painting style and techniques employed by Haring (Heritage Victoria Register H2055).

The status and future of the mural has become the focus of passionate debate between community groups, artists and various stakeholders (Art Nation 2010). These opinions have been articulated in letters to heritage bodies and a public forum organised by the City of Yarra discussed the future of the mural in April 2010.[1] The

[1] The forum took place at 6pm Thursday April 29 at the Collingwood Neighborhood Justice Centre, 241 Wellington St Collingwood. Chair: Megan Evans, Panel: Hannah Mathews – Freelance Curator, Ted Gott – Senior Curator International Art, National Gallery of Victoria, Andrew Thorn – Conservation Specialist, Lachlan McDowall - Centre for Cultural Partnerships University of Melbourne, Geoff Barbour – Councilor, City of Yarra.

'unmarked' condition of the mural attests to its social value since local street artists and 'taggers' have *not* defaced the mural, unlike other exposed wall surfaces in the vicinity. This response suggests that the mural has developed a communal social significance and value within the street art culture, such that the mural is considered 'off limits'.

2.4 Scientific and research significance

New information about Haring's techniques is revealed by the current condition. Losses to the red paint-layer have exposed the working hand of the artist, where his mark making can be seen clearly (Figure 2, Figure 3, Figure 4, Figure 5). The mural also provides a case study that identifies and exemplifies the limitations and deterioration issues associated with the use of proprietary house paint and modern 'synthetic polymer' paints in the painting of external artworks.

3. Condition report

This section reviews the current condition of the mural determined by CCMC. A summary of the condition, materials, and previous treatment by Thorn and CCMC's proposed future treatment is summarised in the table on page 19-22 (Table 1).

3. 1 The support

3.1.1 Render

The mural is painted on a rendered brick support. The thickness and condition of the wall on the reverse side of the mural was not determined during this investigation but CCMC observes that it concurs with Thorn's report. Thorn noted that the render layer 'varies in thickness from 20-25 mm at the bottom tapering to 12-15 mm at the top' (Thorn 1997, 3). The render layer appears to be sand aggregate cement. It is grey in colour, and has a sanded texture providing the 'tooth' for the upper layers. The render is covered by thin white priming layer, which was applied sometime prior to painting of the yellow background layer.

Overall, the render layer appears well adhered to the brick base with only localised areas of delaminating/detachment. The exception being along the lower area, discussed in Section 3.4.

Mapping of the insertions into the render suggests a relationship between major horizontal cracks and pipe fastenings/ insertions. At these points, delaminating of the render is sometimes observed via palpation/ tapping.

Additional insertions into the render should be avoided, to reduce potential for increased delamination.

3.1.2 Cracks

Cracks are observed across the entire mural surface but are more predominant in the lower half. Larger cracks and delaminating have been noted on the attached line drawing (Appendix B). The cracks observed are not indicative of any major failure of the render, however, they provide access for moisture entry, enhancing moisture driven deterioration in both paint and render.

3.1.3 Losses

Losses to the render both pre and post date the painting of the mural. Losses range from abrasions to gouges exposing the render. Losses are concentrated in the lower level of the mural. Significant loss to the render-layer due to moisture damage is found at the very base of the mural (Figure 6 and Figure 7). These are discussed in Section 3.4.

3.2 The paint layers

3.2.1 Yellow

The yellow layer covers the entire render and has been applied with a roller and with hand painting around edges of fixtures evidenced by smaller brushstrokes in these areas. The pigments identified in this layer are yellow oxide and titanium dioxide (Thorn 1997, 5). Thorn proposed that the yellow layer is consistent with acrylic emulsion commercial house paint namely pigments bound in a 'methyl-methacrylate and butyl acrylate co-polymer' (Thorn 1997, 6).

The overall condition of the yellow paint layer is poor (Figure 8). The acrylic binder is failing, resulting in a loss of cohesion between pigment particles that presents as chalking. The chalking is evident as contact with the paint layer produces active powdering of the paint surface. The chalking effect also causes an overall colour shift to a paler yellow and increased porosity of the paint layer. There are some areas where the yellow layer retains in some of its original colour. For example where red paint has been applied over the yellow base, this stratigraphy has resulted in the preservation of the underlying yellow colour (Figure 9, Figure 10). Likewise, at the lower north end of the mural, the yellow colour appears more intense, possibly due to shielding of the surface from sunlight by the adjacent wall (Figure 11).

3.2.2 Red

The pigments identified by Thorn in this red paint-layer are listed as:

> 'organic red (identity unknown but forming a fine stain in the sample
>
> yellow ochre
>
> haematite (1 particle possibly associated with the yellow ochre)
>
> titanium dioxide
>
> gypsum
>
> chalk (none of these in abundance)' (Thorn 1997, 5)

Thorn proposes that the deterioration 'embrittlement and cracking' seen in the red paint suggest an alkyd resin binder (Thorn 1997, 5). However, there has been no formal analysis to confirm this statement.

The deterioration in the red layer is different from that observed in the yellow layer (Figure 12). In some areas, the red paint has lifted in 'cupped' flakes to expose the underlying yellow layer (Figure 13). Thorn called this complex form of deterioration micro-cracking (Thorn 1996) and/or 'micro- spalling' respectively (Thorn 2010). In other areas the red layer remains comparatively intact. In 1996 Thorn applied an acrylic emulsion adhesive to the red paint to consolidate the paint layer (AC2235 Rohm and Hass) (Thorn 1997, 11). Despite the variable appearance of the red paint layer across the mural, both CCMC and Thorn (2010) found that the red paint layer

was well adhered since Thorn's intervention in 1996 and is not readily separated from the underlying layer. However, Thorn noted that there had been 'some diminution of the red in thickness since 1996' (Thorn 2010, 5). It appears that the overall stability of the red layer may be due to efficacy of previous consolidation layer applied by Thorn (Thorn 1997).

3.2.3 Green

The green paint layer is comprised of 'yellow oxide green dyestuff (not thalocyanine)[sic.], titanium dioxide (not in abundance)' (Thorn 1997, 6). Again, Thorn does not identify the binder formulation. The green colour is comparatively stable and maintains better visual integrity than the other colours (Figure 14). Thorn notes in the 2007 report that some change has been observed in this layer since 1996, with 'deterioration in the form of micro-craters with loss from high points' (Thorn 1997, 5). In 2010, Thorn notes that chalking was observed in all three colours (Thorn 2010:4). This finding concurs with observations made by CCMC for the current report.

3.3 Insertions and accretions

There are numerous insertions across the mural surface that pre and post date the painting of the work. Most of the insertions relate to building services, i.e. lighting, fire service, manhole access and ventilation. The removal of original insertions interrupts the reading of the painting, leaving 'lacunae' in the composition (Figure 15).

The white horizontal PVC based pipe/cabling in the mid section at the north end of the painting is non-original. The pipe interrupts the reading of this side of the composition as it bisects several cascading figures.

The most deleterious insertions are the original ferrous-based pipe work and fastenings, which attach the plastic-based conduit (Appendix C). The presence of these fastenings can be linked to horizontal cracking and delamination in the render. Run off from ferrous-based corrosion products (rust) have also caused localised brown staining of the paint (Figure 16, Figure 17, Figure 18). It is unclear whether this staining is permanent without further investigation and testing.

Accretions, such as splash stains, are identified on the surface and relate for former use of site (Figure 19). These are concentrated at the lower half of the mural, consistent with the ease of access.

3.4 Areas of loss and deterioration

Loss and deterioration are most pronounced at the base and at the north end of the mural.

At the base and extending approximately 20-30 cm into the scheme all the deterioration symptoms discussed above in Section 3.1, 3.2 and 3.3 are found (Figure 20, Figure 21, Figure 22). These damages are the result of moisture ingress, the causes and symptoms of which were treated by Thorn 1996.

Previous interventions aimed at stabilising the detachment and loss of render (through filling, capping and repairing losses) appear to have been largely successful. This suggests that the source and mechanism of deterioration—moisture and its capillary rise through a porous material—has been arrested by previous treatments applied by Thorn via improvement in drainage at the base of the mural. The longstanding (but treated) moisture problem has also caused a greying discolouration of the lower section (Figure 24, Figure 25). This discolouration also detracts from presentation of the mural.

While previous conservation measures are considered effective, issues of aesthetic/presentation remain outstanding. Unfilled losses to both render and paint layer detract from the appearance of the mural. Infills and in-painting have changed colour and no longer visually integrate into the original scheme (Thorn 2010, 9-10) (Figure 23).

Thorn's use of cadmium yellow light pigment to match the surrounding paint was successful only in the short term, as this colour now appears grey and mismatched. It was selected by Thorn based on the understanding that cadmium yellow pigments were highly stable pigments. However, later research has noted that cadmium yellow light fades significantly in areas of high moisture. This fading effect can be seen in the grey patches of 'fill material' along the lower area. The mismatched material can be removed in any future treatment, as Thorn concurred with best practice at the time, and used materials which can be readily identified and reversed.

At the lower north-end of the mural a micro-climate appears to exist which has resulted in anomalous behaviour of the mural in this area. Partially protected by the presence of the wall yet directly exposed to moisture and biological growth, this area of the mural appears damp. The yellow colour, although less faded, has a grey damp appearance (Figure 26). Testing with a moisture meter may confirm this observation. That said, the treated areas of loss in this area, including cracking and detachment, appear stable. There is an accumulation of leaf litter, rubbish and vegetation in this area, which further detracts from its presentation and may contribute to moisture build up.

Table 1: ***Summary of the condition, materials, and previous treatment by Thorn and proposed future treatment of the mural***

Material	Application and Chemistry	Condition	Treatments/ Repairs by Thorn	Future Pretreatment Analysis/ Research (CCMC)	Future Proposed treatment
Render	Appears to be sand aggregate cement.	Largely sound. Some losses, largely well adhered, some losses near the base and some cracking – provides access for moisture ingress.	1. Sealed top edges at render /brick interface with polyurethane mastic (Thorn 2007, p. 2) (unidentified) to provide waterproofing. 2. Consolidated with ethyl silicate[2] and left for 5-6 weeks before reattachment undertaken involving reapplication of ethyl silicate. 3. Large voids unfilled with siliceous grout[3]. 4. Pre-wetting with ethanol and water, then acrylic emulsion (AC 2335[4]) injected into detached areas through fine cracks or drill holes. 5. Toning of fills and some unfilled losses with Cadmium Yellow Light pigment and (binder not specified but likely to be Elvacite 2045).	Gain permit for in-situ testing and sampling. Inspect and sample to identify residues of earlier treatment. Review moisture ingress and moisture content of render. Monitor over time. Determine new treatment approach, if required, that is compatible with past treatment materials.	Remove old, discoloured retouching. Reapply retouching and infills to these areas, to integrate areas into image. Repeat appropriate treatment to detached render, if necessary. Reapply waterproofing if required.

[2] Ethyl silicate is a surface coating and stone consolidating polycarbonate to establish a sound surface, applied as a precursor to reattachment of the render with AC2335. Unknown manufacturer.

[3] Siliceous grout is composed of: ethyl silicate formed into a stable gel with hydrophilic fumed silica, quartz flour, graded sands and colourants (Thorn 1997, 13).

[4] AC 2335 (Rohm and Haas) is an acrylic emulsion of methyl methacrylate and butyl acrylate (Thorn 1997, 11).

Material	Application and Chemistry	Condition	Treatments/ Repairs by Thorn	Future Pretreatment Analysis/ Research (CCMC)	Future Proposed treatment
Red Paint (probably an alkyd resin oil based paint) (not tested)	Colourants: *organic red (unknown)* *yellow ochre* *haematite* *titanium dioxide* *gypsum (calcium sulphate)* chalk (none of the three whites in abundance, these are possibly from the render) (Thorn 1997, 5)	Varying condition but deteriorating - cupped flakes (CCMC), micro-cracking or micro-spalling (Thorn). Remains well adhered since Thorn treatment, according to Thorn and CCMC.	1. Siloxane[5] – hydrophobic layer applied by brush over entire surface at 8% w/v in petroleum spirits. 2. AC 2335 an acrylic emulsion for consolidation and adhesion of red paint. Allied locally with brush and heat set with hot air gun. Pre-wetting with water, hot air gun used to heat set the adhesive. Gentle pressure applied with hand pressure through silicon release film. 3. Elvacite resin with Tinuvin additives applied as per treatment of yellow paint (see below) to entire surface during treatment of yellow paint. Application with spray. Applied in two applications to ensure uniform coverage and appropriate gloss level.	Gain permit for in-situ testing and sampling. Analysis to determine residues of previous treatments. Identification of original binders/ pigments. Research appropriate materials for consolidation and retouching. Test treatment panels *in situ* to assess level of future retouching, in consultation with stakeholders. Colorimetry. Moisture treatment. Detailed photo documentation before and after treatment.	Consolidation where necessary. Selective retouching to reintegrate red elements of design to enable visual continuity. Apply consolidating and saturating protective layer.

[5] Siloxane is generic term used for a silane compound, used to strengthen friable stone and reduce water absorbency (Horie 2010, 277). Thorn does not specify the name/brand of product used.

Material	Application and Chemistry	Condition	Treatments/ Repairs by Thorn	Future Pretreatment Analysis/ Research (CCMC)	Future Proposed treatment
Yellow Paint (acrylic paint)	Mostly rolled. Hand painted about fixtures. Commercial acrylic binder (untested). Yellow oxide and titanium dioxide pigments, and some quartz (Thorn 1997, 5).	Poor. Acrylic binder is failing. Loss of cohesion between pigment particles and adhesion that presents as chalking (white powdery film). Yellow oxide pigment appears 'faded' but is still present, as is titanium dioxide.	1. Siloxane[6] – hydrophobic layer applied by brush over entire surface at 8% w/v in petroleum spirits. 2. Elvacite 2045[7] (a consolidant) – 5% w/vol in white spirit (acrylic resin binder/consolidating resin). With additives: a. Tinuvin 292[8] was added to Elvacite (removes free radicals) - 3% w/v solids was added to prolong the life of the applied acrylic consolidant (Elvacite). b. Tinuvin 1130[9] (UV protection) - 3% solids was added to prolong the life of the whole system (original paint and Elvacite consolidant). Applied with spray gun. Applied in two applications to ensure uniform coverage and appropriate gloss level.	Gain permit for in-situ testing and sampling. Analysis to determine residues of previous treatments. Identification of original binders/ pigments. Test treatment panels in situ to establish colour and gloss levels, in consultation with stakeholders. Colorimetry. Moisture testing and treatment. Detailed photo documentation before and after treatment.	Apply consolidating and saturating protective layer.

[6] Siloxane is generic term used for a silane compound, used to strengthen friable stone and reduce water absorbency (Horie 2010, 277). Thorn does not specify the name/brand of product used.

[7] Elvacite 2045 (Ciba Geigy) is an isobuyl methacrylate resin.

[8] Tinuvin 292 is a hindered amine light stabilizer, applied to coatings to scavenge free radicals to extend the lives of coatings (Ciba Product information: Product Name: Ciba™ TINUVIN 292).

[9] Tinuvin 1130 is a liquid UV absorber of the hydroxyphenylbenzotriazole class specifically developed for coatings (Ciba Product Selection Guide <http://www.techno-eg.com/prod/chem/general/IndustrialCoating328.pdf>).

Material	Application and Chemistry	Condition	Treatments/ Repairs by Thorn	Future Pretreatment Analysis/ Research (CCMC)	Future Proposed treatment
Green paint Probably a commercial acrylic binder (untested)	Colourants: yellow oxide green dyestuff (not thalocyanine [sic]) titanium dioxide (not in abundance) (Thorn 1997, p 6)	Comparatively better visual integrity than other colours, some chalking, and minor deterioration. Up to 1996 no evident loss to green. In 2007, Thorn notes some mild deterioration since 1996.	Treated as per yellow. The better state of preservation of the green may be attributed to the lower content of titanium dioxide in this layer, but this has not been tested.	Gain permit for in-situ testing and sampling. Analysis to determine pigment /binder content may identify the cause of this layer being in a better state of preservation. Other treatment/analysis as per yellow.	As per yellow.

4. Assessment of previous treatments

In the 1996 Thorn developed a complex treatment regime to target deterioration problems found across the mural. He identified the main deterioration process as a photo catalytic (light induced) reaction in which water and oxygen are converted into free radicals in presence of titanium dioxide as a catalyst. The free radicals formed from this reaction go on to react with the binder in the paint layer, altering the properties of paint (Thorn 1997) (Thorn 2000).

Removal of water from the system above will inhibit the breakdown reaction. Thorn proposed that this could be achieved with application of waterproofing layer of Siloxane.

A central premise of Thorn's treatment approach was the systematic reapplication of waterproofing coating layer (Siloxane) at 5 yearly intervals. It is problematic to fully assess the efficacy of Thorn's overall treatment regime beyond 2001, as neither the 2001 nor the 2006 applications were undertaken.

4.1 Summary of Thorn's testing

Thorn's testing of paint fragments was limited due to the lack of permission to remove samples from the mural surface. The resulting lack of evidence meant that Thorn was unable to proceed with full paint identification testing, such as that which would provide the exact identification of binder in red paint, some pigment identification, and this has meant that some information had to be deduced.

Table 2: *Tests conducted by Thorn*

Test	Equipment	Results
Polarizing light microscopy (PLM)	Not identified.	• Pigment identification – titanium dioxide, reds/yellow ochres etc.
Moisture detection	Protimeter. Deep wall penetration into render enables detection rising damp (drill hole into render/ through cracks).	• Determines water and salt content of render. • Identified water ingress into render. • Identified location of moisture/rising damp confined to base of wall.
Data logger	Equipment not identified Placed on surface through duration 1996 treatment (less than month).	• Captures continuous recording temperature and humidity of air and surface. • Close correspondence between same found. • Provides evidence for selection of Tg of applied coating.
Surface temperature probe	Not identified.	• Similar evidence for above.

4. 2 Assessment of Thorn's treatments

The following section assesses the relationship between the current condition and Thorn's previous treatments.

1. Micro-spalling of red paint areas

The detachment of the red paint from the underlying acrylic causing micro-spalling may be due to an inherent incompatibly between the two different binder types (supposedly alkyd resin (?) over acrylic emulsion paint). The incompatibility can be overcome by application of consolidating adhesive. The locally applied consolidating resin AC 2235 (acrylic resin) has been effective in arresting the micro-spalling and this problem appears to be overcome. The AC223 resin was applied directly to the areas exhibiting micro-spalling at the paint interface between the red and yellow paint and heat set to provide full adhesion at the point of failure. This treatment remains effective, and may be repeated if necessary. Interventions applied to consolidate and adhere the red paint layer are considered to be largely effective. (Localised AC225 (methyl methacrylate/butyl acrylate resin) to the red paint and overall coatings of siloxane and Elvacite 2045 (isobutyl methacrylate resin coating) (Thorn 1997, 11)).

2. Chalking of yellow paint layer

This layer is unstable and continues to deteriorate despite applied treatments. It appears that the previously applied treatment of siloxane waterproofing and acrylic emulsion Elvacite 2045 (as the resin binder used with Tinuvin additives) have been exhausted (Thorn 1997, 14).

3. Rising Moisture

Thorn (2010) reports that treatment of rising damp and moisture induced detachment of render at the base of the painting, via improvement in drainage, has been effective and the render at the base of the mural appears relatively stable, despite apparent disfiguring losses in this area.

The areas which were infilled and inpainted have discoloured and now appear unsightly (see above 3.4). The discoloured areas can be removed and retreated in future.

CCMC suggests that the aesthetic presentation of this area could be improved to maintain the visual continuity of the scheme. This might involve reintegration of render and infilling of larger paint losses. This level of intervention is dictated by conventions determined by application of the AICCM Code of Practice, namely Section 35, whereby:

"Any integration of losses should be documented in treatment records and reports and should be detectable by common examination methods. Such integration should be removable; not detrimental to cultural property; and should not modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material."

It is uncertain whether the 1996 consolidation and waterproofing (siloxane) treatment are still effective, as the on going treatment regime of 5 yearly reapplications has not been maintained since 1996 (Thorn 2010, 2).

4. Graffiti and other human impact

No additional graffiti or damage from human impact recorded by CCMC in 2010.

4.3 Proposed mechanisms of deterioration

The original materials (in particular the pigment titanium dioxide) used to paint the *Keith Haring Mural* and the exterior environmental conditions (e.g. water and oxygen) combine to provide the reactants, catalyst and conditions that ultimately result in the breakdown of the acrylic and alkyd binders present in the paint layers, resulting in degradation of the mural (Thorn 2000).

The breakdown of the paint layer is the result of a series of complex free-radical associated reactions that can be summarised into two main processes:

a. Conversion of water and oxygen to damaging free radicals in the presence of titanium dioxide.

b. Free radical induced changes to the binder

4.1.1 Conversion of water and oxygen to damaging free radicals in the presence of titanium dioxide

Titanium dioxide has the potential to act as a catalyst in presence of UV light to convert moisture and oxygen into hydroxide (OH·) and peroxide (OH_2·) radicals.

The anatase form of titanium dioxide can absorb energy (wavelengths of light) from sunlight. It must then transfer this absorbed energy. The energy is transferred to the water and oxygen molecules leading to the formation of free-radicals. Radicals are molecules containing unpaired electrons, which are highly reactive. The free radicals react with paint polymers such as acrylics and alkyds causing various chemical reactions and deterioration.

Overall transformation in the photo catalytic generation of free radicals in the presence of UV light (hv) and TiO_2

$$H_2O + O_2 \xrightarrow{TiO_2 / hv} OH\cdot + OH_2\cdot$$

Titanium dioxide pigment is present in the original paint films and is assumed to be in greatest quantity in the yellow acrylic layer. Water and oxygen are readily available from the environment as is the energy required for the reaction in the form of sunlight.

4.1.2 Free radical induced changes to the binder

Binders such as acrylics and alkyds are polymeric materials. Polymers are large molecules assembled from smaller repetitive units known as monomers. In the

formation of a polymer these units organise themselves into chains. Once these chains are formed various degrees of chemical interaction can occur between chains influencing the structural arrangement within a polymeric material.

Common polymer structures include, chain, branched and cross-linked forms. The degree to which these various arrangements exist within a given polymeric mass and the properties they impart is dependent on the chemical characteristics of the monomer units (the type and presence of functional groups) and those of the chain produced (the number of double bonds). Manipulation of the chemistry of the monomer or the polymer unit can be used to develop polymeric materials appropriate for specific applications. In conservation, polymers are selected on the basis of properties derived from their chemistry.

One of the most important polymer properties for conservators is the glass transition temperature (T_g). This is the temperature at which a polymer shifts from a glass-like to rubber-like mass. In general as polymers are heated they become increasingly rubbery and their structure more chemically and physically receptive to reactants. It is in this state that they are also more inclined to undergo adverse reactions. In the *Keith Haring Mural*, the acrylic polymer is subject to radiant heating in form of solar energy potentially causing softening of the paint film.

In the presence of free-radicals the following degradation reactions can occur:

Chain scission – Breakdown of the polymer structure due to free radical attack of the polymer backbone or cleavage of side chains.

Cross-linking – A decrease in solubility and an increase in rigidity of the polymer structure due to the formation of bonds between chains to create a fixed three dimensional network.

When chain scission is the predominant mechanism of degradation, the paint layer becomes powdery. Pigment particles are released from the film as the binding properties of the polymer fail. When cross-linking occurs is the film becomes brittle and inflexible resulting primarily in the separation of sections of the paint layer in the form of flakes. These symptoms of deterioration are visible in the yellow and red paint layer of the *Keith Haring Mural* respectively and are indicative of the adverse alteration of the original polymeric materials used due to environmental exposure.

4.4 Treatment rationale

Thorn identified the chemical pathway for the photo catalytic induced deterioration of binders in the mural. This knowledge provided the basis for Thorn's development of the treatment program. Thorn applied an overall water proofing layer Siloxane to the mural to remove the water, thus removing one of the catalysts for the above titanium dioxide reaction.

Consolidation of the red paint was achieved with local application of acrylic emulsion resin AC235 applied directly to the red/ yellow paint interface and heat set to adhere delamination and loss of adhesion between the two paint layers.

Elvacite acrylic resin was applied with Tinuvin 292 and Tinuvin 1130 (hindered amine light stabilisers) added to the consolidating acrylic resin mix. The use of these stabilisers was aimed to inhibit and/or block UV induced reactions in the newly applied consolidating resin, thus increasing its longevity in the light exposed environment. Tinuvin 292 has been used in easel painting conservation to scavenge free radicals and to prevent light induced deterioration of polymeric layers. Thorn adapted this knowledge to the unique outdoor circumstances found in the Haring mural aiming at stabilising and arresting deterioration processes. Tinuvin 1130, used in the commercial coating industry, was added to coating to block UV radiation.

The table below summarises treatments used by Thorn aimed at blocking UV and reducing production of free radicals in applied consolidating resin (and the impact of adverse environmental conditions on the paint layer (Table 3).

Table 3: *A summary of the materials used by Thorn and rationale for their usage in the Keith Haring Mural (adapted from Thorn 1997)*

Material	Wider conservation use and application	Current application in *Keith Haring Mural*
Polyurethane mastic (unidentified)	Waterproofing sealant.	Sealed top edges at render /brick interface to provide waterproofing.
Ethyl Silicate (unknown manufacturer)	A surface coating and stone consolidating polycarbonate to establish a sound surface.	Used as a consolidant for the render and left for 5-6 weeks before reattachment undertaken involving reapplication of ethyl silicate. Applied as a precursor to reattachment of the render with AC2335
Siliceous Grout [10]	Grout material.	Used to fill large voids in render.
AC 2335	Methyl methacrylate and butyl acrylate acrylic emulsion.	AC 2335 - an acrylic emulsion for consolidation and adhesion of red paint. Allied locally with brush and heat set with hot air gun. Pre-wet with water, hot air gun used to heat set the adhesive. Gentle pressure applied with hand pressure through silicon release film. Was also injected into detached areas of render through fine cracks or drill holes.
Siloxane	Used as a stone consolidate and water-proofing in architectural conservation.	A hydrophobic (water proofing) treatment and consolidant for the entire surface. Siloxane (8% w/v) in white spirits was applied as a preliminary water repelling coating applied with a brush over the whole surface (Thorn 1997, 14). CCMC assumes that this coating includes all colours of the mural (yellow, red, green).
Elvacite 2045	An isobutyl methacrylate (acrylic) resin. Used as a conservation adhesive and consolidant. 5% w/vol. in white spirits. Tg: 55ºC	Elvacite 2045[11] (a consolidant) – 5% w/vol in white spirit (acrylic resin binder/consolidating resin). Applied with spray gun. Applied in two applications to ensure uniform coverage and appropriate gloss level. Also presumed as the medium used for toning of fills and some unfilled losses with Cadmium Yellow Light pigment (binder not specified but likely to be Elvacite 2045).
Tinuvin 1130	A liquid UV light absorber. Added to coatings layer to block UV.	Tinuvin 1130[12] (UV protection) - 3% solids was added to prolong the life of the whole system (original paint and Elvacite consolidant).
Tinuvin 292	A liquid hindered amine light stabiliser added to varnishes as an antioxidant /free radical scavenger to minimise oxidisation of the polymer.	Tinuvin 292[13] was added to Elvacite (a free radical scavenger to remove free radicals from the applied coating) at 3% w/v solids, added to prolong the life of the applied acrylic consolidant (Elvacite).

[10] Siliceous grout is composed of: ethyl silicate formed into a stable gel with hydrophilic fumed silica, quartz flour, graded sands and colourants (Thorn 1997, 13).

[11] Elvacite 2045 (Ciba Geigy) is an isobuyl methacrylate resin.

[12] Tinuvin 1130 is a liquid UV absorber of the hydroxyphenylbenzotriazole class specifically developed for coatings (Ciba Product Selection Guide <http://www.techno-eg.com/prod/chem/general/IndustrialCoating328.pdf>).

[13] Tinuvin 292 is a hindered amine light stabilizer, applied to coatings to scavenge free radicals to extend the lives of coatings (Ciba Product information: Product Name: Ciba™ TINUVIN 292).

5. Conservation Policy and Management Plan

5.1 Conservation priorities

The *Keith Haring Mural* was conceived and executed as an outdoor public artwork where the setting is absolutely integral to the artist's intention. As the mural exists within a place of cultural significance[14] and is itself a significant piece of public art (as described in Section 2) various guidelines inform the development of a Conservation Policy and Management Plan for the mural and immediate site.

While it has undergone some deterioration due to exposure, the mural in its current condition still conveys, to a large extent, the original intention and technique of the artist. According to the Burra Charter and conservation professional guidelines, these key, significant aspects of the mural must be retained in any future treatment of the mural and development of the site.

The CCMC conservation review of the *Keith Haring Mural* is informed by application of guidelines established by both the Burra Charter (1999), which outlines standards for assessment of the 'significance of places of cultural values' and the AICCM Code of Ethics and Code of Practice (2000) in relation to the conservation of the mural as a piece of art/cultural material.

The AICCM Code of Ethics and Code of Practice aims to 'provide members with guidelines for professional practice which emphasise at all times the protection and conservation of cultural material'.

The Burra Charter advocates a cautious approach of 'changing as much as is necessary but as little as possible' (Article 3.1).

Prioritisation and interpretation of the various articles in both the Burra Charter and the AICCM Code of Ethics and Code of Practice inform the development of CCMC's conservation policy for the *Keith Haring Mural*, as it relates to the painting as a site-specific work.

The *Keith Haring Mural* has numerous levels of significance as described in Section 2 of this report. Any future development of the site must take account of and retain the high significance value of the mural as site specific and intrinsically linked to its immediate surrounds. Similarly, the associations of the mural with special interest groups are deemed to be important to the long-term preservation of the mural. Any inappropriate changes to the mural and related surrounds may negatively impact on cultural significance, and conflict with Heritage Victoria status.

[14] HO324 Johnson Street Heritage Overlay Area, Collingwood is aesthetically and historically significant to the City of Yarra (National Estate Register [NER] Criteria E1, A4) cited in *Overview of Heritage Controls & Constraints Former Kangan TAFE College Collingwood,* Prepared for VicUrban, February 2009, by Lovell Chen Architects & Heritage Consultants, page 7. Also Victorian Heritage register H2055, showing the extent of registration for the Keith Haring mural (cited in *Overview of Heritage Controls & Constraints Former Kangan TAFE College Collingwood,* Prepared for VicUrban, February 2009, by Lovell Chen Architects & Heritage Consultants, Section 2.1, Figure 1, page 1).

Any conservation response for the *Keith Haring Mural* must conform to Burra Charter (1999) guidelines as well as the AICCM Code of Ethics and Code of Practice (AICCM) (2000)

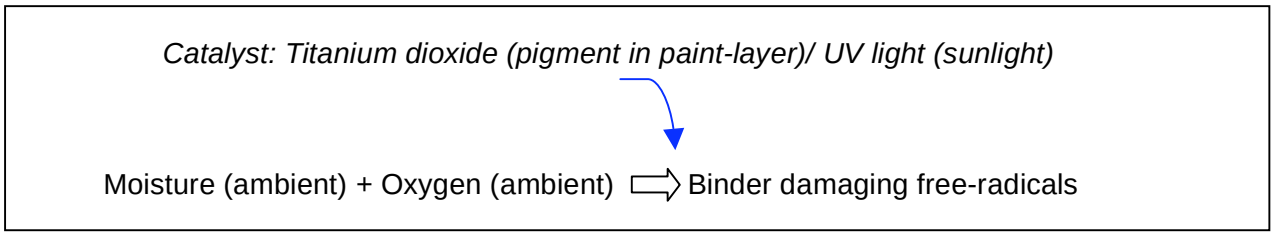
- Acknowledge the relationship between the mural, the built site and the environment
- Acknowledge and preserve the special associations and values or 'intangible significance' attached to mural and its setting by different individuals and groups
- Prioritise preservation over interventive treatments
- Be informed by appropriate testing and scientific rigour
- Use materials which are readily removable or do not interfere with the original materials. (AICCM Article 35)
- Fully documented and recorded via appropriate methods including photography (AICCM Article 35, 37)
- Include advice regarding essential future monitoring and evaluation of the treatment as part of on going management plan
- Changes to the setting in the mural, such as new usage or redevelopment of the building site must have minimal impact on the cultural significance of the mural (Burra Charter 21.1)
- Any new architectural work, or changes made to the mural and setting must be readily identifiable, and compatible with the overall significance of the place (Burra Charter 22.1 and 22. 2).

Any future conservation responses, where the site/ environment might be significantly altered, will require a separate conservation evaluation for the mural. This evaluation should occur when plans for any development of the site become available, so impacts on the environment or circumstances affecting the mural are re-evaluated.

5.2 Mechanisms of deterioration and the implications for future conservation

The deterioration of the mural is due to an interaction between the original materials in the paint layers and the external environment. Put simply, titanium dioxide (a white pigment in paint) and UV light in the presence of water and oxygen, form free radicals, which attack the binder in the paint (both the original any newly applied coatings).

Scheme 1: Overview of the deterioration mechanism



Previous conservation investigations conducted by Thorn have identified the deterioration mechanisms in the mural. Thorn's treatment plan was to minimise or eliminate the effects of harmful reactants (moisture and oxygen) and catalytic energies (sunlight) to which the mural is exposed. Future treatment response must take the Thorn's previous treatment approach into account.

Current research indicates that additives Tinuvin 292 and 1130 may have differing photocatalytic activities from those proposed previously and utilised by Thorn (Lowe et al, 2010, 486 - 495). Any new treatment plan for the mural must be devised according to this new information.

5.3 Addressing the visual presentation of the mural

The visual coherency of the mural has been affected by disruption by various damage, losses to the render/ paint layer and differential fading of the original colours. The aesthetic presentation is fundamental to how an artwork is appreciated and contributes in an indirect way to its ongoing conservation. An artwork that is well maintained is conducive to minimal conservation intervention, rather than a more invasive approach, which might occur if the work is presented in a state of neglect. Minimal interventions such as reducing visual disruptions associated with losses, in addition to maintaining the immediate surroundings of a mural can significantly improve the appearance of a scheme. The aim of 'minimal intervention' would be to retain the original work, use materials that reversible to improve visual cohesion under an established set of viewing conditions.

There has been discussion about the position held by the artist with regard to the restoration of his work. This is problematic firstly in the absence of an agreed definition of the terms *restoration* and *conservation* and where a proposed program of re-painting and/or conservation fits within this defined terminology. Secondly, the absence of a direct statement by the artist in response to the condition of the *Keith Haring Mural*, any interpretation of statements to support intervention one way or the other is speculation (Appendix D).

The current conservation policy acknowledges this limitation and therefore draws on the original Haring mural— its condition and the mechanisms of deterioration— as the primary source of information governing the best approach to the stabilisation and treatment of the mural.

5.4 Argument for minimal intervention vs. overpainting

Over-painting or re- painting has been suggested as a possible restoration approach to the treatment of the mural's perceived presentation issues. Currently the use of these terms and their application to the Haring mural are vague. It is unclear whether complete overpainting of the scheme or partial reintegration of selected passages of the work is implied. There is a pressing need to clarify and be consistent in the usage of terminology.

RBA states that in the reports and responses a wide variety of terms have been used for the act of repairing the mural including:

preservation, restoration, repainting and overpainting.

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration (Burra Charter 1.6). This is not an appropriate term if used in conjunction or synonymous with the term 'overpainting' (as outlined in Option 1, see below, page 41), as 'overpainting' will in fact exacerbate deterioration of the mural.

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material (Burra Charter 1.7). This too is not an appropriate term, as overpainting the mural (as per Option 1 methodology) introduces new materials.

RBA suggests that 'reconstruction' would be an appropriate *Burra Charter* term to use to describe the repainting/overpainting the mural as per Option 1 methodology, as new materials would be introduced, and is 'distinguished from restoration by the introduction of new material into the fabric'.

CCMC concurs that 'reconstruction' is a better term for the act of repainting/overpainting the mural as outlined in Option 1. However, as stated, this course of action cannot currently be undertaken to comply with the AICCM Code of Ethics and Code of Practice, as the process is not reversible, and will cause damage to the original paint layer.

CCMC suggests that the following term 'retouching' be used for addressing cosmetic inpainting of losses, damages and discontinuities in the *Keith Haring Mural*.

In the case of the *Keith Haring Mural* 'retouching' could be undertaken in conservation grade synthetic resin materials, which conform to current 'best practice'. The exact chemical structure of this resin is yet to be determined, as it is contingent on the proposed testing and research regime.

The context of the *Keith Haring Mural* in Melbourne is subject to unique circumstances, both environmental and legislative, which impact on every aspect of conservation evaluation of the mural and the proposed processes. The unique and harsh Australian outdoor environment is one that requires specific targeted research. This is because treatment approaches and interventions of Haring murals in other parts of the globe are not necessarily appropriate to the unique high UV and exposed position of the *Keith Haring Mural* in Collingwood.

Additionally, there are overarching legal covenants, which apply to the heritage status of both the mural itself and the immediate surrounds, which must be adhered to. The heritage classification imposes various limitations to the conservation approach, unique for the *Keith Haring Mural* in Collingwood. These legal requirements mean that any changes undertaken during conservation treatment must be subject to strict guidelines and review. Changes, which are not deemed to be acceptable, and/or those which do not conform to agreed 'conservation standards' of the National Trust Australia (Victoria) Public Art Committee (PAC), may alter the PAC classification of the mural.

Overpainting the *Keith Haring Mural* would obscure the original surface and contradicts standard conservation practice. CCMC considers that overpainting would be a highly unsuitable option particularly when a significant proportion of the mural is intact and the work, although faded, is still visually coherent.

The porosity of the substrate and level of deterioration of the original paint layers means that overpaint or additional materials used for cosmetic reintegration will be difficult or impossible to remove, without damaging or interfering with the original materials. Additionally an overpainted layer would obscure the original materials. This contravenes the AICCM Code of Practice Article 35:

"Any integration of losses should be documented in treatment records and reports and should be detectable by common examination methods. Such integration should be removable; not detrimental to cultural property; and should not modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material."

Selection of an appropriate over paint material would not be straightforward, as the materials must not exacerbate the deterioration of the original materials. A topical overpaint layer would behave differently both chemically and physically to the original layers therefore placing additional stress on them.

Moreover, reversibility of an over painting intervention—even with the presence of a directly applied interface layer over the original—would be impossible due to the porous nature of the original surface, in addition to problems with resolubilising an additional layer.

Further, overpaint may alter tonal or colour balances, which have changed both from the original and now extant colours. Due to lack of complete photographic evidence and/or colorimetry the exact original colour scheme of the mural is unknown. Any overpainting in an attempt to replicate the original colour scheme would be imprecise and not compatible with Burra Charter guidelines (Article 19). Overpainting would be termed a 'restoration' rather than conservation.

Similarly 'partial overpainting' which has been suggested in some quarters would create additional confusion, and alter colour balances, which are already disturbed.

The configuration of piping in the northern corner, to which Haring responded to in the arrangement of his figures, could theoretically be reinstated. Such reconstruction items could be considered moveable 'fixtures' and could be readily identifiable via documentation as 'reconstructions' (Burra Charter 20.2). However, it should be remembered that removal of non-original elements and reinstatement of 'original' elements to the mural might cause further deterioration to the render. This action would only be acceptable if their insertion/removal would not cause further damage to the mural.

Summary:

The *Keith Haring Mural* as a contemporary outdoor mural painted in synthetic commercial house paint presents a complex and unique situation for conservation community, both locally and internationally. Research into the conservation of acrylic paints is in its infancy and requires a great deal of further research and testing. As such, CCMC is submitting that any future treatment will be innovative with respect to understanding of the chemistry and sensitive to the complex legislative and artistic milieu within which the mural resides in the Australian context.

Cosmetic treatments such as inpainting and/or overpainting to improve aesthetic reading are sometimes acceptable within the Burra Charter guidelines if the artistic significance and artist's intention are preserved and maintained. This may be theoretically acceptable but practically impossible, due to the current condition of the *Keith Haring Mural*.

Full overpainting of the mural contravenes standard conservation practice and may obscure the original artists' painting technique, which is still visible. Considerations to be made are as follows:

1. The term 'over-painting' is vague and could imply either complete re-instatement of the scheme or selective over painting of some elements. This needs to be clarified.

2. Any materials proposed need to be appropriate for the conditions under which the mural exists. Materials must be selected to avoid exacerbating the inherent deterioration processes of the original paint.

3. Reversibility (removal of non- original conservation additions) is not possible with porous materials such as the deteriorated red and yellow paint.

In short, CCMC does not support 'overpainting' of the mural.

5.5 Hand of artist?

The newly revealed 'hand of artist' (Thorn 2010, 5) which has become apparent due to deterioration processes is of art historical interest, but may or may not be compatible with Keith Haring Foundation's mission to preserve the visual integrity or 'artist's intention'. Thorn argues that the 'hand of the artist' is of major significance and should be retained. This is not Thorn's only argument for the preservation of the mural in its current state, as he is also guided by the principles of best conservation practice as determined in the Burra Charter and the AICCM Code of Ethics.

The 'hand of artist' may only be of interest to a small number of 'connoisseurs' and possibly if this phenomena is found to be 'uniquely' displayed in the *Keith Haring Mural* in Collingwood and this could be deemed worthy of retention, as an example of the artist's working method. The retention of this feature requires discussion with the Keith Haring Foundation.

5.6 Argument addressing the application of an isolating layer

In is unclear whether an 'isolation or interface layer' which might theoretically separate the original paint from any topical material, would facilitate improved reversibility or protection of the underlying paint. The use of isolation layer' of different solubility might be familiar in restoration of oil based painted murals, however this technique is not applicable for new synthetic materials such as acrylic paint.

Due to the porous nature of the acrylic layer, the application of an 'isolation layer', or 'interface' between the original paint layer and any applied overpaint is unlikely to facilitate ease of separation. Again any barrier or isolation layer will be both physically and chemically difficult to remove due to the porous paint matrix.

Applying a coherent, uniform film of new paint (presumably acrylic resin) over the fragmented, porous layer of the original will impregnate and form a solid matrix with the original paint. The overpaint layer will become intimately merged with the original.

It is predicted that over time, the inevitable movement and deterioration of the overpaint layer, due to its expansion and contraction in response to fluctuations in relative humidity and temperature, will cause the paint to detach, taking with it the original layer. The overpaint layer may therefore contribute to the further deterioration/destruction of the original.

Furthermore, the application of 'a new overpaint layer' is an irreversible option over an acrylic film. The fragmented nature of the original, as well as the overpaint being painted in the same medium as the mural (acrylic resin), means that it would be impossible to remove the overpaint without also affecting the original. There is no known solvent that would permit the removal of one acrylic layer from another acrylic layer without solubilising both layers. Other types of paint suitable for outdoor murals would neither be appropriate (enamel, etc) as they would similarly be irreversible and incompatible with the original acrylic based paint layers.

Due to the *Keith Haring Mural's* acrylic base layer, there are no materials available at this time, which could satisfy the option of providing a physical or chemical separation layer, so that the original acrylic base layer could be protected and uncovered intact in future.

1. The paint layer needs to be sufficiently intact (not fragmented), coherent and well adhered to the substrate to withstand the imposed stressed resulting form an applied barrier layer. This is not the case with the *Keith Haring Mural*.

2. The barrier must be either physically or chemically different from the original to facilitate removal, either by mechanical action or via differently solubility. Again, no known conservation grade material satisfies these prerequisites. Is possible that future developments in the coatings industry may invent a material, which can perform to these requirements, but no such material is known at present.

3. The applied coating must withstand the harsh outdoor setting with uncontrolled temperature and humidity and UV exposure.

4. The new coating layer must have an appropriate glass transition temperature (Tg) to with withstand the conditions of this outdoor setting in which the *Keith Haring Mural* exists.

5.7 Art community concerns and responses to issues raised

Various individuals in the art community have submitted their opinions regarding the future of the mural, and specifically whether the mural should be 'allowed to fade', or repainted, a term which would imply application of an obscuring layer over the original paintwork.

CCMC appreciates the contribution and engagement of the art community on this matter, however, CCMC is concerned about what might be construed as a polarizing campaign, which suggests that 'conservators' have taken a conservative position and are applying what might be considered archeological conservation principles to what is essentially a contemporary artwork. This is not the case.

CCMC strongly states that the conservation issues and science presented by *Keith Haring Mural* are unprecedented and relate entirely to the need to devise a new research methodology driven by the deterioration processes of outdoor synthetic polymer paint, mixed media paint, combined with traditional and synthetic colorants (what is deemed 'modern paint' materials) in an outdoor and uncontrolled setting. The degradation issues found in modern synthetic materials such as the *Keith Haring Mural* are unique and are different from so called 'traditional artists' materials such as indoor frescoes or murals painted with enamel, oil, and/or alkyd resin paint.

The conservation of acrylic artists' paint/ artworks is an extremely new area of conservation research. CCMC actively engages with peer institutes such as TATE gallery and The Getty Conservation Centre in such initiatives. Modern materials such as acrylic are now displaying forms of degradation, which are unique and have no

relationship with degradation observed in traditional artists' materials. The research into modern materials is currently being pioneered by The Getty Conservation Institute, with which CCMC has a contracted research relationship within CCMC's *Twentieth Century in Paint project* (http://www.culturalconservation.unimelb.edu.au/research/materials/20century-inpaint.html) and ties in with other research initiates at CCMC such as deterioration of modern paints in tropical and harsh environments (see http://www.culturalconservation.unimelb.edu.au/research/materials/).

Various parties argue that several outdoor Haring murals have been 'repainted' and this process has been overseen and approved by the Keith Haring Foundation in the New York City Parks and Recreation. CCMC welcomes the opportunity to review the methodology and treatment approaches undertaken on these murals by New York City Parks. However, this information (other than what is observed on the website), as yet, has not been sighted and can only be considered as anecdotal at this point.

As such, this approach cannot be considered as a precedent for an 'internationally benchmarked' and sensitive approach to the appropriate treatment for a mural in the Australian context.

It is apparent from the footage on the New York Parks website that Keith Haring murals in the New York City (*Crack is Wack* and the mural at Tony Dapolito Pool (http://www.nycgovparks.org/sub_about/parks_history/pools.html), have been repeatedly overpainted. An 'art restorer' Robert Harding is pictured in video footage, using a brush and bucket of paint while seated on a scaffold. It is apparent in the footage that paint is blistering and bubbling in areas below and inside the mural proper, indicating active delaminating of the applied new paint layers. This is precisely the problem CCMC wishes to avoid, where newly applied paint buckles and pulls off the original layers below, and where the surface rapidly become unsightly, requiring repeated applications thus exacerbating the problems.

CCMC appreciates that there are many and diverse viewpoints regarding possible future treatment approaches. CCMC's proposed treatment options are governed by the externally imposed constraints and limitations imposed by the heritage classification of the mural and evidence provided by the physical and chemical degradation of the mural as it is presented in the unique Australian environment.

It is CCMC's opinion that a complete repainting of the mural, using any of the currently available materials (commercial and/or conservation grade) will irreparably alter the surface of the painting, and may compromise its heritage classification. Any form of overpainting/repainting of the mural as suggested by some parties, cannot conform to acceptable conservation practice and the formal guidelines under which CCMC operates.

Additionally it is the opinion of CCMC that at the current stage of paint acrylic technology chemistry, it is impossible to achieve a 'repainting' of the mural in any form, which might satisfy the guidelines of heritage classification, the Burra Charter (1999) and the AICCM Codes of Ethics and Code of Practice (2002).

Concerns raised by the National Trust in a letter dated 26 October 2010, regarding the peeling and delaminating of applied overpaint layers are valid. A new overpainted pigmented layer behaves physically differently to the underlying layers which are porous and fragmented. The new layer will be more 'plastic' and liable to flex, expand and contract in the uncontrolled outdoor environment. The continuous movement of the new paint will impose stresses on the original paint fragments below and is likely to cause delaminating of the original paint layer. This type of paint breakdown is illustrated most graphically in the intentional fragmentary appearance in the façade of the Provincial Hotel in Johnston Street. This type of delaminating is found in uncontrolled environments, such as outdoors and is not regularly seen in the controlled conditions found in a museum. In the similarly exposed outdoor environment any new applied layer on the *Keith Haring Mural* is likely to have a similar effect.

CCMC recommends thorough testing of different concentrations of consolidating media, with real time aging to review and assess the approach to various topical formulations via test patches in situ.

Concerns with potential delaminating and/or failure of applied consolidation layer is fundamental to the testing regime proposed by CCMC (outlined in Section 5.8). Testing patches will enable the best outcome to be selected by evidence presented and review of efficacy of test patches. As the conservation of outdoor acyclic paint is essentially an emerging area of expertise, CCMC recognizes that no solution is foolproof or perfect, and is committed to undertaking rigorous research and evidence based intervention and collaborating with all interested parties.

5.8 Action Plan

CCMC considers that Thorns' previous treatment regime was sound and acceptable, adhering to the best practice for conservation as stipulated in the AICCM Code of Practice at the time. CCMC's conservation management plan supports stabilisation of the surface of the deteriorating paint matrix of the mural as per Thorn's approach, albeit with new materials. This treatment will address some of the aesthetic issues of concern, such as fading and powdering of the paint layer.

It is important that the following actions are undertaken to establish a set point in the overall condition of the work:

1. Update and investigate approaches to the stabilisation of the mural based on current acrylic paint technology and coatings research and conservation research

2. The previous conservation approach be reviewed in light of any new research

3. Undertake full analytical testing regime including sampling

4. Full and complete documentation, including colorimetric measurement and photographic documentation of the mural to document future fading/ colour change

5. Establish a program of monitoring and regular evaluation of applied treatments

6. Investigate options for removal of impediments (bollards and electrical wiring) to permit access to the mural allowing complete documentation and/or treatment

7. Investigate options for replacement/ reconstruction of lost elements in the scheme

8. Investigate 'non invasive /reversible methods for re- integration of colour scheme of mural compatible with Burra Charter and AICCM Codes of Ethics.

9. A funding line for on-going maintenance of the mural be established.

Changes to the usage of the site will have immediate and possibly permanent impact on the condition and future treatment of the mural. Future treatment of the mural will be contingent on outcome of proposed site development. When site usage is clarified a full treatment plan can be established. Therefore, the architect has made a request that the CCMC presents a range of hypothetical options for the proposed development of the immediate site in order to explore at a general level the conservation implications (see Table 4).

Table 4: *Hypothetical conservation implications for proposed development*

Conservation options for site development		
Scenario 1: **Site and conditions remain unchanged**	**Scenario 2:** **Site developed, mural remains external**	**Scenario 3:** **Site developed mural enclosed with priority given to the conservation requirements.**
Conservation implications		
Environmental and site conditions remain unaltered	**Environmental conditions unchanged, site conditions altered**	**Environmental and site conditions altered**
Conservation response		
• Review and update appropriate treatments recommended by Thorn. • Research stabilisation of yellow acrylic paint • Complete colorimetric testing, full analytical testing of mural • Full pictorial documentation of mural • Devise and implement regime for monitoring/evaluation	• Removal of non original encumbrances • Review and update appropriate treatments recommended by Thorn • Research stabilisation of yellow acrylic paint • Installation of protective and surveillance measures • Investigations into methods to improve the visual coherency of the work • Devise and implement regime for monitoring/evaluation	• Removal of non original encumbrances • Assessment of the new conditions provided by the enclosure • Research stabilisation of yellow acrylic paint, if necessary • Devise new conservation plan • Installation of protective and surveillance measures • Devise and implement regime for monitoring/evaluation

RBA Architects have requested a possible methodology for a 'broad reconstruction' of the mural. CCMC considers that a 'Broad reconstruction' (repainting/overpainting) with any current paint media, or the application isolation layer would not be possible, not concur with the heritage classification of the mural, nor with established AICCM conservation guidelines or ethics. However, CCMC does not preclude a broad reconstruction approach in future, if suitable materials are identified that satisfy the imposed technical limitations and legal status of the *Keith Haring Mural*.

Option One - Broad Reconstruction

CCMC does not condone this option, but provides information in response to queries.

1. Full and detailed condition to established practice, including photography, colorimetry, etc.
2. Further testing required to identify full spectrum of media and pigments used in original paint and any residues from previous treatments.
3. Apply adhesive as per Thorn's approach but with updated research and new materials which are compatible.
4. Barrier unlikely to be successful. Removal of any barrier layer and/ or applied overlayer is unlikely to be achievable or have a successful outcome. CCMC cannot advise further.
5. Broad reconstruction by unskilled painter/ signwriters is not recommended – CCMC cannot advise further. The following points are in response to queries only:
    - Further investigation of colour should be undertaken with colorimeter and gloss meter.
    - Avoid titanium dioxide (anatase structure) pigment in any future option.
    - All paint media will fail over time in an exposed outdoor environment (cannot advise further).
    - Sunscreens (UV blocking materials such as Tinuvin 292, 1135) can be added to any paint material, and were added to Thorn's treatment, however they all have limited lifespan, must be tested, and reapplied as necessary.
    - Original will be permanently obscured and destroyed by deterioration of applied layers.

Option Two - Repairing/Retouching the red paint areas (Preferred Option)

CCMC suggests a stabilization and retouching approach to the treatment of the mural. The proposed methodology for this is outlined below.

Proposed CCMC methodology:

1. Pre treatment requirements

- Removal of bollards and overhead power lines to ensure access and installation of scaffolding and /or cherry picker to access upper reaches
- Permits required from Heritage Victoria.
- Gain permits for sampling and removal of representative samples from paint layer.

If CCMC were to be involved in future treatment of the mural, CCMC would require permission from stakeholders, owners, and permit from Heritage Victoria to remove small samples (size of pin head) from several representative areas on the mural which will enable full identification of media, original pigments used and identification of residues (if any) from Thorn's treatments. This is to ensure that full evidence is available for development of the treatment program and that the proposed treatment options will be compatible with any residues from Thorn's treatments, and the existing matrix of the mural

2. Full and detailed documentation and condition report

3. Testing

A. In situ monitoring/analysis (non destructive) (outlined in Table 5)

- Moisture detection to assess damp levels in the mural.
- UV and RH variation diurnal and extrapolate to seasonal/annual exposure
- Datalogger for environmental monitoring.
- Colorimetry to determine colour variation between better preserved paint and deteriorated surfaces.
- Gloss measurements, as above.
- XRF for in-situ elemental (pigment) analysis.

Table 5*: CCMC's proposed in situ monitoring/analysis (non destructive)*

Test	Equipment	Rationale	Comments
Pigment identification in different paint areas	Portable XRF	Identification of pigments present	• Cross check with Thorn's evidence. • Identify missing/omitted/new information.
Temperature/Humidity of surface of mural	Data logger	Range of temperature/humidity for surface and air temperature.	• Need data to determine appropriate Tg of new coatings. • Leave for extended period to note changes over day/season/annual exposures.
Light and UV on surface	Lux meter/UV meter	Record incident visible and UV light exposure.	• Cross check with Thorn's evidence.
Moisture detection	Moisture probe	Examine deep moisture content of render.	• Cross check with Thorn's findings. • Quantify and evaluation of previous treatment. • Identify new issues.
Colour	Colorimeter	Check colour measurement and note changes over time.	• Identify original colours from well preserved paint area. • Data collate for 'chalking paint'. • Create 'set point' for benchmarking changes/treatment • Data collection of colour for development of desired 'test panels'.
Gloss	Gloss meter	Detect gloss/ chalkiness over time.	• Checks for gloss changes/ chalkiness over time. • Determine 'desired' gloss levels for final colour/ coating finish from test panels. • Data collection for evaluation of changes during and post treatment.

B. CCMC testing requiring sample extraction (destructive sampling, permission required) (outlined in Table 6)

- FTIR for identification of pigments and original binders, and residual components from previous treatment
- SEM EDS for non-organic materials.
- Cross- section for optical microscopy, with normal and UV light, to examine layer structure, pigment distribution and examine deterioration of binder.

Table 6*: CCMC's proposed testing requiring sample extraction (removal of sample, destruction of sample and permission required)*

Test	Equipment	Rationale	Comments
Materials identification	Fourier Transfer Infra Red Spectroscopy (FTIR)	Identification of pigments, dyes, binder components and residues from previous treatments.	• Cross check with Thorn's evidence. • Expand on Thorn's evidence. • Identify pigments binders and treatment residues and degradation products.
Pigment ID	Scanning Election Microscopy, Energy Dispersive Spectroscopy (SEM-EDS)	Identification of pigments.	• Cross check with Thorn's evidence. • Expand on Thorn's evidence.
Microscopy Cross sections (if possible)	UV and visible light	Paint statigraphy. Degree of degradation of polymers Pigment distribution.	• Look at physical evidence of pre/post treatment success.

The suggested CCMC testing regime will confirm and expand on information which has been noted by Thorn and will provide important benchmark data from which the efficacy of the proposed treatment can be tracked.

4. Research

- Engage industrial coatings experts and polymer/colour chemists to research appropriate new materials for mural coatings and colorants.
- Establish testing regime and install test panels *in situ* for natural aging real time exposure and monitor with appropriate equipment.

5. In situ tests and treatment development

- In consultation with stakeholders, assess efficacy and success of test panels, or stabilization of chalking surface and aesthetic legibility.
- Develop full application and treatment methodology based on the findings of the test panels and review by stakeholders.

6 . Application of treatment

- These steps are outlined in the following table (Table 7).
- These steps are a potential methodology, but may be altered contingent upon new information gained via test results.

Table 7: *CCMC's proposed future analysis, testing and treatment for the Keith Haring Mural*

Material	Future Pretreatment Analysis/ Research/Testing	Future Proposed treatment
Render	• Gain permit for in-situ testing and sampling. • Inspect and sample to identify residues of earlier treatment. • Review moisture ingress and moisture content of render. • Monitor over time. • Determine new treatment approach, if required, that is compatible with past treatment materials.	• Remove old, discoloured retouching. • Reapply retouching and infills to these areas, to integrate areas into image. • Repeat appropriate treatment to detached render, if necessary. • Reapply waterproofing if required.
Red Paint (probably an alkyd resin oil based paint)	• Gain permit for in-situ testing and sampling. • Analysis to determine residues of previous treatments. • Identification of original binders/ pigments. • Research appropriate materials for consolidation and retouching. • Test treatment panels *in situ* to assess level of future retouching, in consultation with stakeholders. • Colorimetry. • Moisture treatment. • Detailed photo documentation before and after treatment.	• Consolidation where necessary. • Selective retouching to reintegrate red elements of design to enable visual continuity. • Apply consolidating and saturating protective layer.

Material	Future Pretreatment Analysis/ Research/Testing	Future Proposed treatment
Yellow Paint (acrylic paint)	• Gain permit for in-situ testing and sampling. • Analysis to determine residues of previous treatments. • Identification of original binders/ pigments. • Test treatment panels in situ to establish colour and gloss levels, in consultation with stakeholders. • Colorimetry. • Moisture testing and treatment. • Detailed photo documentation before and after treatment.	• Removal of graffiti and detailed cleaning. • Apply consolidating and saturating protective layer.
Green paint	• Gain permit for in-situ testing and sampling. • Analysis to determine pigment /binder content may identify the cause of this layer being in a better state of preservation. • Other treatment/analysis as per yellow.	• As per yellow.

Table 8: *CCMC's proposed pre-treatment to surrounds*

Pre-treatment Task	Post treatment	Comments
Removal overhead power lines/ wiring		Access to upper sections required for documentation/photography/treatment Wiring/lighting is non-original Non-compliant with OHS during works
Remove bollards for access		Blocks access to mural face and for scaffolding etc. Non original
Removal non original elements/ fixtures		Does not concur with Heritage Status, damaged, unsightly
Assess surface finish (asphalt) of mural surrounds with RBA architects		Will this surface be maintained or resurfaced? How will this be done? When?
	Fabricate facsimiles of lost elements	Reinstatement of lost elements to comply with original scheme, if possible.
	Maintenance program.	Develop on-going maintenance program to monitor and evaluate condition of mural (annual assessment by conservators). Reapplication of coatings as required. Develop funding line for maintenance program. Develop on-going basic cleaning and upkeep of surrounding area for new occupiers. Training of new occupiers re: maintenance program for mural and surrounds.

6. Bibliography

Artworks Feature: How to save the Keith Haring mural, (2010) ABC Radio National, presented by Suzanne Donisthorpe, <http://mpegmedia.abc.net.au/rn/podcast/2010/05/aks_20100523_1105.mp3> accessed 11/10/2010

Art Nation, 2010, ABC Television <www.abc.net.au/arts/stories/s2893060.htm> accessed 11/10/2010

Allen, N et al., 2004, 'Degradation and stabilisation of polymers and coating, nano versus pigmentary titania particles'*, Polymer Degradation and Stability*, 85, 927-946

AICCM Code of Ethics and Code of Practice, 2002, Australian Institute for the Conservation of Cultural Material

Bennett, G et al., 2010, 'Degradation of Poly (methyl methacrylate) model compounds under extreme environmental conditions', *Macromolecular Chemistry and physics*, 211, 1083-1098

Braun, J., 1989, 'Titanium dioxide contribution to the durability of paint films'*, Progress in Organic Coatings, 15*, 249-260

The Burra Charter The Australia ICOMOS Charter for Places of Cultural Significance, 1999, Australia International Council of Monuments and Sites

Department of Premier and Cabinet, 2010, *'Project Specification, Conservation Management Plan, 35 Johnston Street Collingwood',* Cultural Infrastructure, Arts Victoria.

'Forum: The Keith Haring mural – yesterday, today, tomorrow', Yarra Talking Art Forum April 2010 <http://melbourneartnetwork.com.au/2010/04/28/forum-the-keith-haring-mural-yesterday-today-tomorrow/> accessed 11/10/2010

Gruen, J 1991, *Keith Haring: The Authorised Biography*, Thames and Hudson

Haring Foundation website <http://www.haring.com/about_haring/collections/index.html> accessed 11/10 2010

Heritage Council of Victoria, 2010 *Conservation Management Plans: Managing Heritage Places, A Guide*, Melbourne <http://www.heritage.vic.gov.au/admin/file/content2/c7/CMP_Guide_1278369664770.pdf>

Heritage Victoria Register (H2055) 2004

Lovell Chen Architects & Heritage Consultants, 2009, Overview *of Heritage Controls & Constraints Former Kangan TAFE College Collingwood*, Prepared for VicUrban

Lowe, T A et al 2010, 'Structural identification of hindered amine light stablisers in coil coatings using electrospray ionisation tandem mass spectrometry'*, Journal of mass spectrometry*, 45, 486-495

Spathis, P, et al, 2003, 'Influence of Titanium Dioxide Pigments on the Photo degradation of Paraloid Acrylic Resin', Studies *in Conservation*, 48, 57-64

Thorn, A., 1997, 'The Keith Haring Mural. Johnson Street Collingwood, Conservation Treatment Report' (unpublished report prepared for Northern Institute)

Thorn, A., 2000, 'Titanium Dioxide. A catalyst for deterioration mechanisms in the third millennium', *Tradition and Innovation Advances in Conservation, Contributions to the Melbourne Congress,* International Institute for the Conservation of Historic and Artistic Works, 195-199

Thorn, A., 2007 'Keith Haring Mural, Johnston Street, and Collingwood: Review of condition and treatments', (unpublished report prepared for the City of Yarra)

Thorn, A., 2010, 'Haring mural Collingwood; Assessment of condition and previous interventions' (unpublished report prepared for Arts Victoria)

Volz, H et al., 1973/4, 'Surface reactions on titanium dioxide pigments in paint films during weathering', *Progress in Organic Coatings*, 2, 223-235

7. Appendices

Appendix A:

Victorian Heritage Register, Registration Report

Hermes ID: 12532

Heritage Register Number: H2055

Name: Keith Haring Mural

Victorian Heritage Register

VICTORIAN HERITAGE REGISTER NUMBER: H2055
NAME: KEITH HARING MURAL
LOCATION: 35 JOHNSTON STREET COLLINGWOOD, Yarra City
LOCAL GOVERNMENT AREA: YARRA CITY
CATEGORY: Heritage place
DATE REGISTERED:
FILE NO: HER/2002/000133

EXTENT: 1. All of the Mural known as the Keith Haring Mural as shown M1 on Diagram 2055 held by the Executive Director
2. All of the land shown asL1 Diagram 2055 held by the Executive Director being part of the land described in Certificates of Title Volume 0767 Folio 252 and Volume 3307 Folio 398

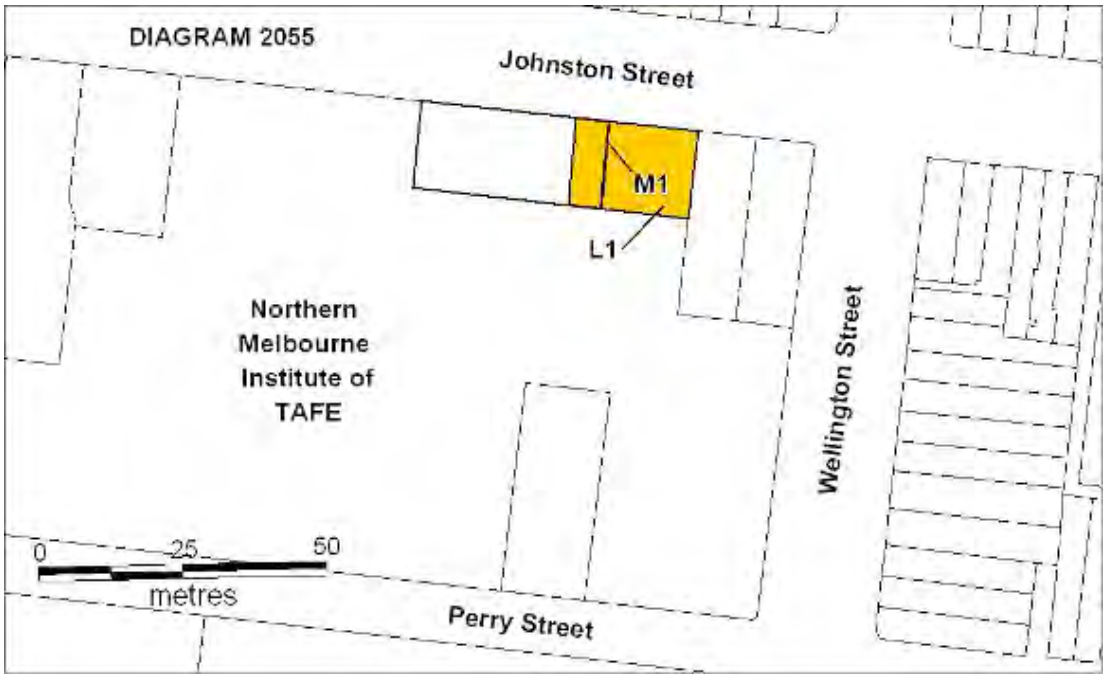


DIAGRAM 2055
Johnston Street
M1
L1
Northern
Melbourne
Institute of
TAFE
Wellington Street
0
25
50
metres
Perry Street

STATEMENT OF CULTURAL HERITAGE SIGNIFICANCE:

What is significant?

The Keith Haring Mural consists of a large panel, 7.4 x 11.5 metres on a cement rendered wall at the eastern end of the Collingwood Technical School. The New York artist Keith Haring visited Melbourne in March 1984, during this time he created a number of works, the most lasting of which is the Mural on the side of Collingwood Technical School.

Keith Haring (1958-1990) was an important member of the New York art scene of the early 1980s, this movement incorporated Hip Hop, graffiti, and gay culture. Haring was an openly gay artist at a time when this was still gaining acceptance, he was also a sufferer of AIDS and a campaigner for the acceptance of those with AIDS. Drawing on graffiti and hip hop culture Haring created art that had far reaching influence. His visit to Melbourne, early in his short career, was to influence a number of young artists. His strong graphic style and its application in many forms, album covers, murals, tee shirts, permanent works of art was also influential, as was his interest in 'public art'. The Collingwood mural draws directly on popular culture for its themes and form. The Collingwood mural is one of the few Haring murals that still exist of the number he executed across the world and the only extant work from his visit to Australia.

The Mural was one of a number of projects Haring undertook during his visit. More temporary was a mural on the glass water windows at the National Gallery of Victoria on St Kilda road. John Buckley the inaugural director of the Australian Centre for Contemporary Art, and sponsor of Haring's visit to Melbourne, approached Collingwood Technical College, who had a convenient wall for Haring to create a more permanent work.

The mural is a large work of art, on a cement rendered wall, with a yellow background and red, blue and green figures. The upper half of the mural depicts a hybrid man/computer monster, ridden by two human figures, this was a comment on technology and television. The lower half of the mural consists of vibrant dancing figures, reflecting an interest in the contemporary rap/hip hop movement of the period. Its themes and treatment are typical of Haring's work at the time.

How is it significant?

The Keith Haring Mural is of historic and social significance to the State of Victoria.

Why is it significant?

The Mural has historical and social significance as the work of a major artist. Keith Haring is considered one of the most significant artists of his generation. As a role model for gay artists and Aids activism his influence was international.

The Keith Haring Mural is of social significance as a landmark piece of public art in Melbourne. Its prominent inner city location is indicative of the changing physical and social landscape of a former working class suburb.

The Mural is also of social significance for its influence on young artists for its inner city setting and use of popular culture themes and imagery.

PERMIT POLICY:

Any work undertaken for the conservation of the Mural must be undertaken by a professional conservator. The report by Andrew Thorn completed in 2001 (The Keith Haring Mural, Johnston Street, Collingwood. Conservation Treatment Report) may be helpful.

PERMIT EXEMPTIONS:

No data available

RECOMMENDATION AND DETERMINATION ON A NOMINATION TO THE VICTORIAN HERITAGE REGISTER

NAME: KEITH HARING MURAL

VHR NO: H2055

LOCATION: 35 JOHNSTON STREET COLLINGWOOD, Yarra City

CATEGORY: Heritage place

FILE NO: HER/2002/000133

OFFICER/S REPORTING: Jenny Dickens

RECOMMENDATION BY EXECUTIVE DIRECTOR

- That the Place or Object be included in the Heritage Register [Section 32(1)(a)]

Manager Heritage Assessments	Date	Executive Director	Date

DETERMINATION BY HERITAGE COUNCIL

(Strike out where not applicable)

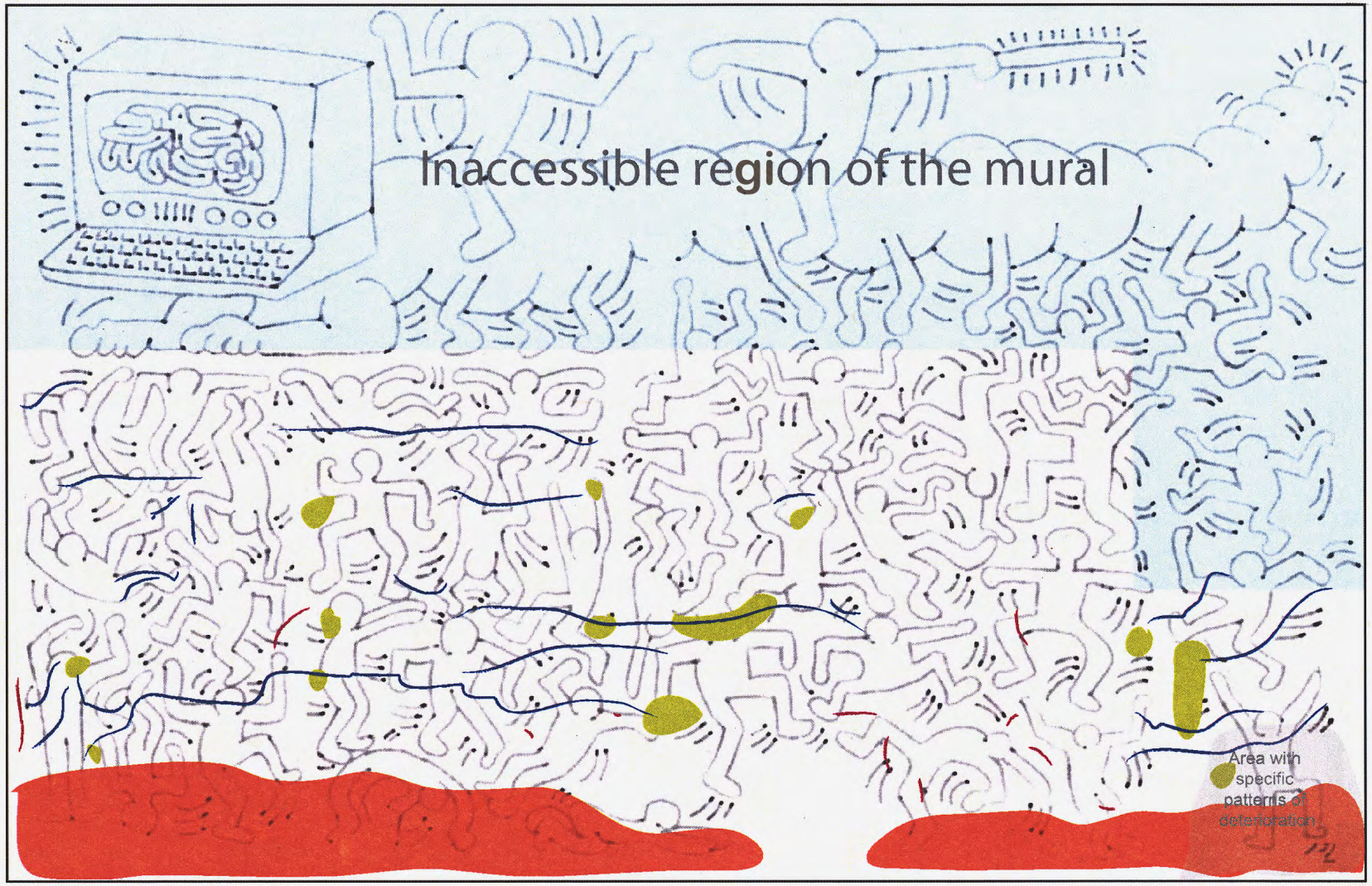
- That the Place or Object be included in the Heritage Register [Section 42(1)(a)]
- That ALL or PART of the Place be included in the Heritage Register [Section 42(1)(b)]
- That the Place or Object or part of a place NOT be included in the Heritage Register [Section 42(1)(c)]
- That the Place NOT be included in the Heritage Register but instead referred to the relevant planning authority [Section 42(1)(d)(i)]
- That the Place or Object NOT be included in the Heritage Register but instead other steps be taken to protect or conserve it [Section 42(1)(d)(ii)]

Comment:

Meeting No	Date	Registrations Co-ordinator	Date

Appendix B:

Line drawing showing major cracking related to insertions.



The Keith Haring Mural
35 Johnston St,
Collingwood

Scale (approx.)

0 15 cm

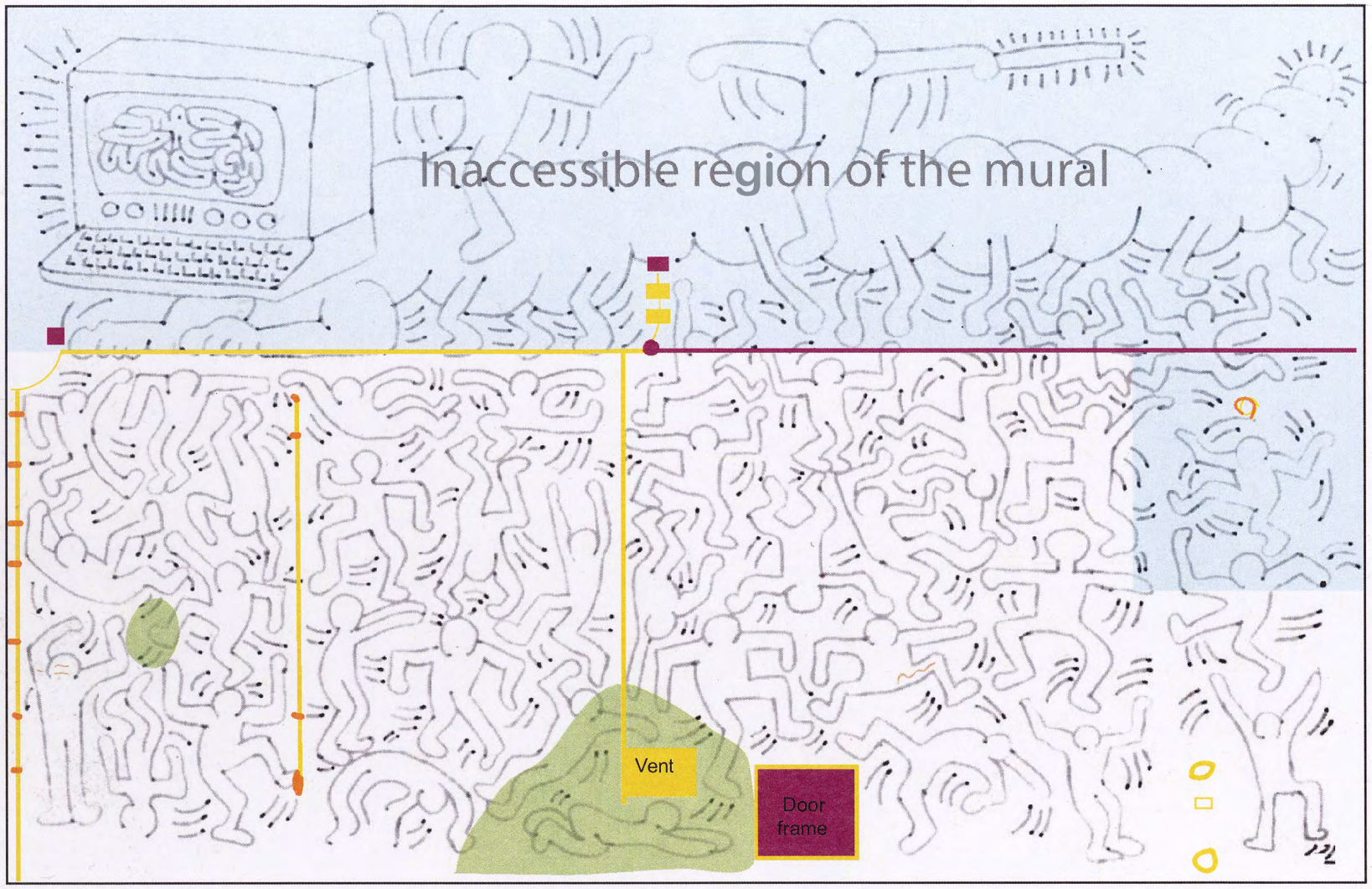
Centre for Cultural
Materials Conservation

Condition Catergory: Losses and deterioration through to the support

- Concentration of losses/deterioration
- Cracks
- Detachment/delamination
- Losses and abrasions

Appendix C:

Line drawing showing insertions.



The Keith Haring Mural
35 Johnston St,
Collingwood

Scale (approx.)

0 15 cm

Centre for Cultural
Materials Conservation

Condition Catergory: Insertions and acretions

- Corrosion product runs
- Grafitti
- Concentration of surface acretions
- Insertions pre-1984
- Insertions post-1984

Appendix D:

Correspondence between Tom Dixon (National Gallery of Victoria) and David Stark (Estate of Keith Haring).

NATIONAL GALLERY OF VICTORIA

7 July 1994

Mr Franklin Bonem
Proskauer Rose and Goetz
1585 Broadway
New York New York 10036
U.S.A.

Dear Mr Bonem

I understand that you have recently represented the estate of the late artist Mr Keith Haring and the Keith Haring Estate. I am currently trying to locate information that may help in making a decision regarding an outdoor mural painting which Keith Haring did while visiting Melbourne a number of years ago. This mural is now deteriorating and there is a question regarding the wishes of the late artist with regards to the restoration of his work in general and how that might apply to this specific work.

I will appreciate it if you could comment, or pass on to another appropriate person to comment, on the proposition that Keith Haring expressed a wish that his works be left alone to deteriorate. I am interested in confirming or refuting that this was his opinion and if he specifically expressed this opinion or left instructions to this effect.

It has been stated by some here in Melbourne that it is their understanding that Keith Haring felt this way due to his affinity with graffiti art and the inevitable deterioration of such items. If this is the case, we would wish to recognise the late artist's moral rights and would discourage either protection of the mural with, for example, awnings to protect it from rain and sun, and/or the actual restoration of the image.

On the other hand, were there no basis for such a claim we would encourage both the future protection and restoration of what I believe is the only such work in this country by an artist who has had a significant influence on a generation of Australian artists.

Any guidance you can provide would be most gratefully accepted.

Yours sincerely

Thomas Dixon
Chief Conservator

180 ST. KILDA ROAD MELBOURNE VICTORIA 3004 AUSTRALIA TELEPHONE (03) 685 0222 FAX 686 4337

Appendix E:

Frequently asked questions and CCMC responses

Has CCMC approached the Keith Haring Foundation re: providing technical advice repainting of mural?

CCMC welcomes information provided by the Keith Haring Foundation regarding appropriate treatment of murals and artworks. However, CCMC has not yet approached the Foundation. As a professional conservation body within a University environment CCMC operates within a highly specialised field where treatment developments and research information must be published and subject to peer review. CCMC is of the opinion that no such information regarding the 'repainting' of Keith Haring murals has been published. If engaged to treat the *Keith Haring Mural* in Collingwood in the future, CCMC would contact the Keith Haring Foundation regarding any written or photographic documentation of treatments of equivalent acrylic based outdoor murals undertaken under their supervision.

There is an argument that the Keith Haring Foundation 'clearly state that they advocate repainting of Keith Haring murals worldwide'.

CCMC has not sighted a written statement by the Keith Haring Foundation to that effect in any of their literature nor published materials. Further, there are many different understandings as to what 'repainting' might mean. It is important that CCMC assesses the 'conservation standards' to which the Keith Haring Foundation adheres, and how they have approached the treatment of other murals where they have supervised or advised on preservation. At this stage, CCMC has not sighted any literature or located research, which concurs with international best practice standards applying to Keith Haring murals. The repainting treatment of *Crack is Wack* as illustrated on website does not conform to international conservation standards and therefore the issues raised in this report in regard to Haring murals are not addressed in this form of intervention, and it should not be used as a base standard for the preservation of Haring murals.

Does CCMC consider the cultural and social significance of the mural?

CCMC's final report clearly articulates expert opinion regarding the social and art historical significance of the mural. It is clear that the *Keith Haring Mural* in Collingwood has significance to a very wide and disparate group of stakeholders who are alert to any potential change of its condition and/or status. It is important to note that any 'repainting' of the mural will permanently alter the mural and may change the significance of the mural. Changes, which are not deemed to be acceptable, and/or those which do not conform to agreed 'conservation standards' of the

National Trust Australia (Victoria) Public Art Committee (PAC), may alter the PAC classification of the mural.

Can the use of new infrared technology to reveal the artists' hand?

Infra red technology is specifically used on tradition oil paint media to reveal carbon-based materials, such as graphite sketches, which have been obscured by later layers of opaque oil paint. This technology is not applicable to the *Keith Haring Mural*, which is acrylic paint, and does not have 'hidden' strata or obscured layers of paint or underdrawing. The use of this technology would not reveal anything in the *Keith Haring Mural* in Collingwood, as there is nothing to be seen which has not already been sighted or noted.

Why can't the mural just be repainted?

There are overarching legal covenants, which apply to the heritage status of both the *Keith Haring Mural* in Collingwood itself, and the immediate surrounds, which must be adhered to. The heritage classification imposes various limitations to the conservation approach, unique for the *Keith Haring Mural* in Collingwood. These legal requirements mean that any changes undertaken during conservation treatment must be subject to strict guidelines and review. That means that conservators, or anyone who might undertake any work on the mural, must get permission from the relevant heritage bodies to make any changes. Any changes made to the mural which alter its significance (as might occur if the painting was 'repainted') may alter the PAC classification of the mural. Therefore, conservators must devise a treatment which satisfies conventions established by both the Burra Charter and the AICCM Code of Ethics and Code of Practice.

At this stage, there is no paint material available, which could be used to repaint the mural, which could be effectively removed in future, while preserving the underlying paint and therefore conform to 'conservation standards'. This means that 'repainting' could not be done without fundamentally affecting the heritage status of the mural.

Additionally, the mural was painted with acrylic paint, which is a relatively new material and has inherent deterioration problems, particularly when used in an outdoor setting. Acrylic paint behaves very differently from oil paint and other paint materials which have been used on outdoor settings in the past, and where the research for deterioration processes is well established. This means that CCMC must undertake innovative or new research to establish a completely new methodology for the preservation of this acrylic mural.

There is a complex set of requirements, including the concerns of community, artistic and social significance of the mural, which must met by anyone thinking about preserving this mural. CCMC is cognisant of all these requirements, and has taken them into account when formulating their proposal.

At this stage, CCMC determines that 'repainting' or 'overpainting' the mural cannot be done in a way which satisfies all the legal, conservation and aesthetic requirements applicable to the unique circumstances of the mural.

The colours in the mural appear to be faded. What can be to fix the fading and make it more legible?

The colours seem to be 'faded' but in fact what has happened is a fairly complex optical phenomenon, which occurs when light hits a disrupted deteriorated paint surface. The paint powdering scatters white light back to the eye, resulting in the paint appearing to be lighter in colour. Some people will interpret to be this as 'faded'. In fact, the colours in the pigment have not faded at all. If the powdering is arrested by replacement of the broken down acrylic with an appropriate coating, the surface of the paint will be smoother, light will not scatter and the colours should appear closer to the colours they were originally painted by the artist.

The treatment proposed by CCMC will investigate and provide test panels for various stakeholders to assess, so that they can clearly understand what is being proposed by the treatment.

The test panels will indicate that much of the so-called 'faded' colour can be re-established simply addressing the powdering problem. This should render the demand for 'repainting the fading colours' redundant.

Many letters request restoration or refreshing of the mural. Others advocate a preservation approach.

CCMC understands the term 'restoration' and 'preservation' is used loosely in the architectural and general community, and is open for interpretation in the Burra Charter, and indeed within the art community itself. According to the Burra Charter 'preservation' means maintaining the fabric of a place in its existing state and retarding deterioration (Burra Charter 1.6). This is not an appropriate term to describe overpainting the mural, as overpainting will in fact exacerbate deterioration of the mural, as described in CCMC's final report (Section 5.6, page 35-6).

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material (Burra Charter 1.7). This too is not an appropriate term, as overpainting the mural introduces new materials.

RBA suggests that 'reconstruction' would be an appropriate *Burra Charter* term to use to describe the repainting/overpainting the mural, as new materials would be introduced, and is 'distinguished from restoration by the introduction of new material into the fabric'.

CCMC concurs that 'reconstruction' is a better term for the act of repainting/overpainting the mural. However, as stated, this course of action cannot currently be undertaken to comply with the AICCM Code of Ethics and Code of Practice because the process is not reversible, and will cause damage to the original paint layer.

CCMC suggests that the following term 'retouching' be used for addressing cosmetic inpainting of losses, damages and discontinuities in the *Keith Haring Mural* in Collingwood. This means that original materials will not be obscured, and any materials, which are applied to the surface, will be selected to the highest possible conservation grade, be reversible, and not interfere with the original materials.

Because the *Keith Haring Mural* is acrylic, there are very limited choices of materials available which will satisfy these criteria. CCMC has proposed a treatment, which conforms to the international best practice, is innovative and sensitive while satisfying the very complex requirements of the *Keith Haring Mural*.

CCMC is aware that many people in the art world have written letters of support for a 'restoration' of the mural to 'prevent its further decline' (Keith Haring Foundation) and a 'return and retain the murals as Keith originally intended' (Gruen 2010).

What will happen if sign writers or anyone for that matter, repaints the mural with a fresh layer of acrylic paint?

Applying a coherent, uniform film of new paint (presumably acrylic resin) over the fragmented, porous layer of the original will impregnate and form a solid matrix with the original paint. The overpaint layer will become intimately merged with the original.

It is predicted that over time, the inevitable movement and deterioration of the overpaint layer, due to its expansion and contraction in response to fluctuations in relative humidity and temperature, will cause the paint to detach, taking with it the original layer. The overpaint layer may therefore contribute to the further deterioration/destruction of the original.

Furthermore, the 'a new overpaint layer' is an irreversible option. The fragmented nature of the original, as well as the overpaint being painted in presumably the same medium as the mural (acrylic resin), means that it would be impossible to remove the overpaint without also affecting the original. There is no known solvent that would permit the removal of one acrylic layer from another acrylic layer without solubilizing both layers. Other types of paint suitable for outdoor murals would neither be appropriate (enamel, etc) as they would similarly be irreversible.

In addition, deterioration in both the original and newly applied paint would continue, thus requiring continuous reapplication of new layers of obscuring paint which cannot be removed in future. The problems would recur, and the cycle would repeat itself within several years.

Thorn states that the green pigment is soluble? Why is this important?

The pigment tests will identify the unknown colorants such as the green paint and may elucidate on observed solvent sensitivity of this part of the scheme. This might have implications for the selection of solvent used as carrier for applied consolidation resin in future treatment. Solvent sensitivity (depending on degree) might determine how the new treatment resin is applied, either via brush and/or spray.

CCMC and Thorn suggest strengthening or retouching the red? Why is this what they say any different from just repainting the red with a new layer of acrylic housepaint?

Thorn suggests that in order to strengthen the red '... a judicious use of thin washes of colour in the protective coating system could be employed. This treatment could also be considered for the yellow and green, but these areas are not as compromised as the red (Thorn 2010, 5). CCCM concurs with Thorn's suggestion that the colour red 'strengthened' via application of thin washes of colour/tint applied in the chosen (yet to be determined) consolidation resin. This treatment means that a 'tint' or dye colorant of some sort (to be determined), which is non-particulate, is added to the consolidating acrylic resin. Because the dye is non-particulate the intention is that the dye colour be 'exhausted' and fade simultaneously with the erosion and inherent deterioration of the consolidating resin. At the conclusion of the 'fade' there would be no residual additional colorant material remaining in the consolidating matrix of either the original/new material. As such, this will not impede future treatment options, likewise it can be reapplied without a build up of solid 'coloured' pigment layers (e.g. 7 year cycle reapplication).

Wash application means that tint can be built up to desired strength gradually, primarily by filling in lacuna around original red paint 'islands' to create the appearance of a continuous red area. The transparency of the colorant will tint both exposed area of loss or discontinuities thus linking existing red paint patches creating an overall effect, which will appear more solid and more visually legible. This a common method practiced by painting conservators, we call this 'retouching'.

Has CCMC addressed all the concerns of the art community expressed in their letters responding to the circulated Draft Proposal?

Various individuals in the art community have submitted their opinions regarding the future of the mural, and specifically whether the mural should be 'allowed to fade', or repainted, a term which would imply application of an obscuring layer over the original paint.

CCMC appreciates the contribution and engagement of the art community on this matter, however, CCMC is concerned about what might be construed as a polarizing campaign, which suggests that 'conservators' have taken a conservative position and are applying what might be considered archeological conservation principles to what is essentially a contemporary artwork.

This is not the case.

CCMC strongly states that the conservation issues and science presented by the *Keith Haring Mural* are unprecedented and relate entirely to the need to devise a new research methodology driven by the deterioration processes of outdoor synthetic polymer paint, mixed media paint, combined with traditional and synthetic colorants (what is deemed 'modern paint' materials) in an outdoor and uncontrolled setting. The degradation issues found in modern synthetic materials such as the *Keith Haring Mural* are unique and are different from so called 'traditional artists' materials such as indoor frescoes or murals painted with enamel, oil, and/or alkyd resin paint.

The conservation of acrylic artists' paint/ artworks is an extremely new area of conservation research. CCMC actively engages with peer institutes such as TATE gallery and Getty Conservation Centre in such initiatives. Modern materials such as acrylic are now displaying forms of degradation, which are unique and have no relationship with degradation observed in traditional artists' materials. The research into modern materials is currently being pioneered by The Getty Conservation Institute, with which CCMC has a contracted research relationship within CCMC's *Twentieth Century in Paint project* (http://www.culturalconservation.unimelb.edu.au/research/materials/20century-inpaint.html) and ties in with other research initiates at CCMC such as deterioration of modern paints in tropical and harsh environments (see http://www.culturalconservation.unimelb.edu.au/research/materials/).

Various parties argue that several outdoor Haring murals have been 'repainted' and this process has been overseen and approved by the Keith Haring Foundation in the New York City Parks and Recreation. CCMC welcomes the opportunity to review the methodology and treatment approaches undertaken on these murals by New York City Parks. However, this information (other than what is observed on the website), as yet, has not been sighted and can only be considered as anecdotal at this point. As such, this approach cannot be considered as a precedent for an 'internationally benchmarked' and sensitive approach to the appropriate treatment for a mural in the Australian context.

It is apparent from the footage on the New York Parks website that Keith Haring murals in the New York City (*Crack is Wack* and the Tony Dapolito Pool (http://www.nycgovparks.org/sub_about/parks_history/pools.html), have been repeatedly overpainted. An 'art restorer' Robert Harding is pictured in video footage, using a brush and bucket of paint while seated on a scaffold. It is also apparent in the footage that paint is blistering and bubbling in areas below and inside the mural proper, indicating active delaminating of the applied new paint layers. This is exactly the problem CCMC wishes to avoid, where newly applied paint buckles and pulls off the original layers below, and where the surface rapidly become unsightly, requiring repeated applications thus exacerbating the problems.

CCMC appreciates that there are many and diverse viewpoints regarding possible future treatment approaches. CCMC proposed treatment options are governed by the externally imposed constraints and limitations imposed by the heritage classification of the mural and evidence provided by the physical and chemical degradation of the mural as it is presented in the unique Australian environment.

It is CCMC's opinion that a complete repainting of the mural, using any of the currently available materials (commercial and/or conservation grade) will irreparably alter the surface of the painting, and may compromise its heritage classification. Any form of overpainting /repainting of the mural as suggested by some parties, cannot conform to acceptable conservation practice and the formal guidelines under which CCMC operates.

Additionally it is the opinion of CCMC that at the current stage of paint acrylic technology chemistry, it is impossible to achieve a 'repainting' of the mural in any form, which might satisfy the guidelines of heritage classification, the Burra Charter (1999) and the AICCM Codes of Ethics and Code of Practice (2002).

Concerns raised by the National Trust in a letter dated 26 October 2010, regarding the peeling and delaminating of applied overpaint layers are valid. A new overpainted pigmented layer behaves physically differently to the underlying layers which are porous and fragmented. The new layer will be more 'plastic' and liable to flex, expand and contract in the uncontrolled outdoor environment. The continuous movement of the new paint will impose stresses on the original paint fragments below and is likely to cause delaminating of the original paint layer. This type of paint breakdown is illustrated most graphically in the intentional fragmentary appearance in the façade of the Provincial Hotel in Johnston Street. This type of delaminating is found in uncontrolled environments, such as outdoors and is not regularly seen in the controlled conditions found in a museum. In the similarly exposed outdoor environment any new applied layer on the *Keith Haring Mural* is likely to have a similar effect.

CCMC recommends thorough testing of different concentrations of consolidating media, with real time aging to review and assess the approach to various topical formulations via test patches in situ.

Concerns with potential delaminating and/or failure of applied consolidation layer are fundamental to the testing regime proposed by CCMC in the Treatment Strategy (outlined in CCMC's final report). Testing patches will enable the best outcome to be selected by evidence presented and review of efficacy of test patches. As the conservation of outdoor acyclic paint is essentially an emerging area of expertise, CCMC recognizes that no solution is foolproof or perfect, and is committed to undertaking rigorous research and evidence based intervention and collaborating with all interested parties.

8. Illustrations

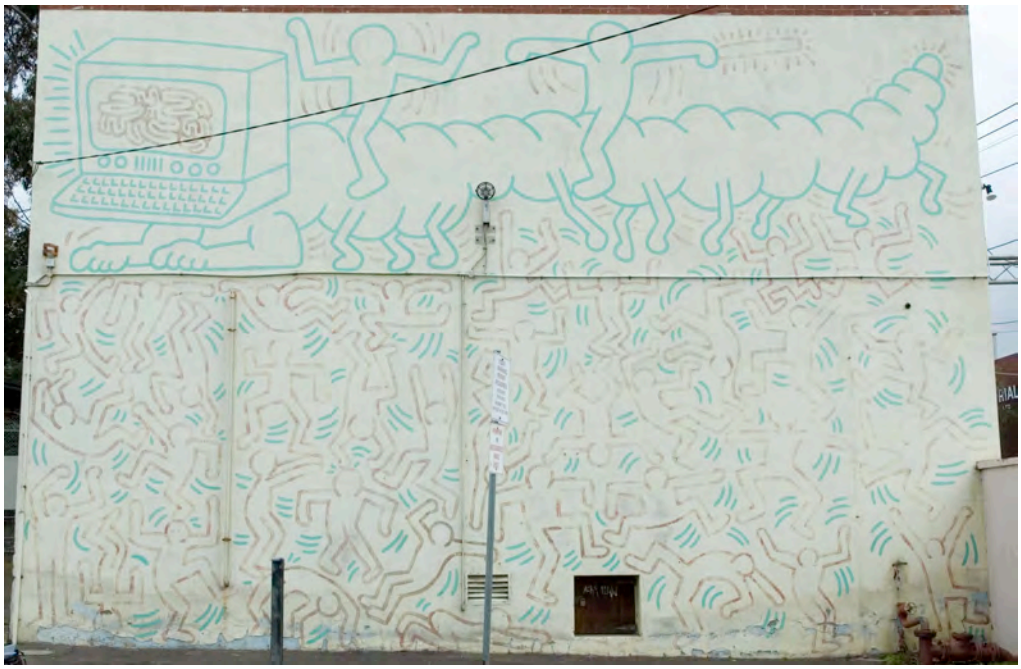


Figure 1: *Keith Haring Mural*, overall image.

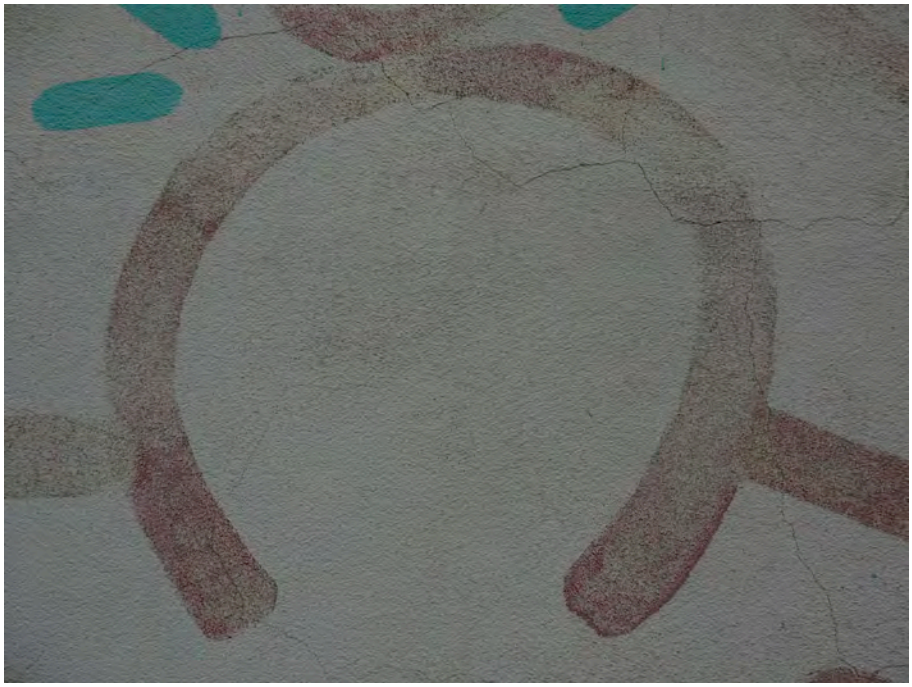


Figure 2: *Keith Haring Mural* (detail), showing hand of artist in head of figure.

Figure 3: *Keith Haring Mural* (detail), showing hand of artist evident through deterioration of red paint.

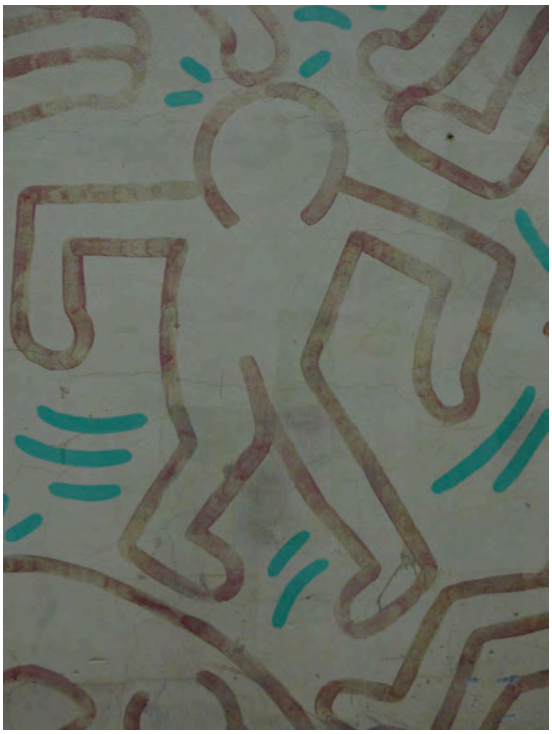


Figure 4: *Keith Haring Mural* (detail), showing hand of artist made more visible due to deterioration of the red paint.

Figure 5: *Keith Haring Mural* (detail), showing hand of artist evident in red paint.

Figure 6: *Keith Haring Mural* (detail), showing losses and fracture of support.

Figure 7: *Keith Haring Mural* (detail), showing assorted damage at base (losses to plaster, degradation of paint, abrasions).

Figure 8: *Keith Haring Mural* (detail), showing losses to yellow paint.

Figure 9: *Keith Haring Mural* (detail), showing losses to the yellow paint layer at base of mural.

Figure 10: *Keith Haring Mural* (detail), showing losses through to the support through red layer and better preservation of yellow colour where it has been protected to some extent by the red paint.

Figure 11: *Keith Haring Mural* (detail), showing vegetation at lower right corner and better preservation of the yellow colour.

Figure 12: *Keith Haring Mural* (detail), showing degradation of red paint.

Figure 13: *Keith Haring Mural* (detail), showing degradation of red.

Figure 14: *Keith Haring Mural* (detail), showing the green paint in a better state of preservation than the surrounding yellow and red.

Figure 15: *Keith Haring Mural* (detail), showing removed element and lacunae in composition.

Figure 16: *Keith Haring Mural* (detail), showing runs of staining from corrosion products from iron fastenings.

Figure 17: *Keith Haring Mural* (detail), showing pipes applied over left hand side of mural.

Figure 18: *Keith Haring Mural* (detail), showing application of pipes at left hand side.

Figure 19: *Keith Haring Mural* (detail), showing graffiti on face of a figure at the lower, accessible level.

Figure 20: *Keith Haring Mural* (detail), showing losses at base and visual disruption.

Figure 21: *Keith Haring Mural* (detail), showing damage at base.

Figure 22: *Keith Haring Mural* (detail), showing losses at hand of figure and vent at base.

Figure 23: *Keith Haring Mural* (detail), showing faded reintegration at base.

Figure 24: *Keith Haring Mural* (detail), showing damp 'greying' colour change of render at left hand side.

Figure 25: *Keith Haring Mural* (detail), showing damage and 'greying' colour change at base.

Figure 26: *Keith Haring Mural* (detail), lower right corner of mural showing area with microclimate deterioration.

APPENDIX D – ANDREW THORN REPORT 2010

Haring Mural Collingwood

Assessment of Condition and Previous Treatments

Prepared for
Arts Victoria

July 2010

Prepared by Andrew Thorn

ARTCARE : 2 McCabe Place, North Melbourne, 3051.
artcare@iprimus.com.au

1. Introduction

This report outlines the findings of a recent in situ condition assessment of the Keith Haring mural painting, located on the east wall of the front building of the former Northern TAFE site in Johnson Street Collingwood.

The painting was applied to a previously rendered section of the east wall by Keith Haring and friend in 1984. Conservation work was carried out in 1996 to stabilize the painting in its then degraded visual appearance, wit the emphasis being on correcting the destabilization processes and slowing them into the future.

Since 1996 no further work has been carried out, despite recommendations in 1996 that regular maintenance treatments would be necessary to effectively slow deterioration. A condition survey was commissioned by City of Yarra in 2007 that established among other things that the stabilizing treatments had been depleted and that the 5 yearly maintenance cycle previously identified was a necessary and appropriate treatment requirement. The 2007 study found that there had been little visual alteration in the 11 years since treatment but there were signs of ongoing degradation.

The current assessment has determined that the stabilization treatment, that is reattachment of flaking paint and consolidation of the paint film itself, remain effective. It is clear however that degradation continues through the insipient degradation through chalking and breakdown of the synthetic medium continues in the form of chalking. Of particular note is the progress of the greens elements that were very stable in 1996, displayed signs of disruption in 2007, and now have evidence of chalking not seen before.

2. Summary of previous treatments and investigations

The painting was first assessed in 1996 and found to be in an advanced state of degradation, in keeping with the expected life of acrylic and other synthetic house paints. Typically acrylics are expected to last 7-10 years outdoors and the Haring painting after 12 years showed various signs of both pigment and resin degradation. The interaction between titanium dioxide and acrylic has been discussed by the author in a recent publication (file attached).

In 1996 the painting suffered a range of deterioration conditions including –

- Micro-spalling of the red paint areas
- Sheet detachment of the yellow background in sheets up to 200 mm in length
- Chalking of the yellow paint
- Rising moisture
- Graffiti and other human impact

The full account of the condition and treatment are contained in Appendix A.

All of the conditions were addressed except for the issue of rising moisture. While it was found that the lower wall was high in moisture, particularly within the render layer the condition was not immediately corrected as this would require the insertion of a chemical or physical barrier into the painted wall. Chemical injection would be the least interventive and least effective option. It was believed that if drainage could be improved and maintained the source of water should diminish.

While the 1996 treatments attempted to address all previous degradation the report also strongly emphasized the need to maintain the protective coating. This coating was applied as a two part application containing UV absorbers, anti-oxidants, and hydrophobic constituents within a consolidative coating.

The 2007 study the overall condition was considered stable to the extent that there were no further sections of large detachment, the paint film remained durable and the micro-spalling of the red was less evident than previously. It was of some concern however that the red continued to show signs of spalling but this simply highlighted the sensible recommendation of 1996 that a regular 5 yearly maintenance treatment was necessary.

There was no way of assessing the state of depletion of the antioxidant and UV absorbers, however it was clear that the water repellency of the coating had been exhausted after 11 years. This is not surprising given water repellent treatments last in the range of 10-20 years.

The 2007 study concluded with the need to maintain the painting on a regular basis and that this would prevent or slow damage to the paint film.

3. Condition in 2010

The condition of the painting has been assessed in each of the condition categories relevant to the main degradation mechanisms. These conditions are then related to the conditions in 1996.

3.1. Summary of Condition

On first inspection it is clear that the Haring mural is in a degraded condition. What this report attempts to achieve is to distinguish between stable alteration and ongoing degradation and to describe the current state in relation to how it was before and after treatment in 1996. It was proposed in 1996, and holds true today, that if the paint remains attached to the wall and if the degradation mechanism can be arrested then there is no reason for the painting to deteriorate further.

UV light, and to some extent catalytic reactions induced by titanium dioxide and other pigments degrade acrylic resin by breaking the single bonds either side of the carbonyl bond. The carbonyl bond is a strong double bond and this creates a pull on the neighbouring single bonds, weakening them more than if they were arranged as single bonded chains. To stop the energy applied from UV and some other frequencies is quite simple and is in effect at every beach across Australia – sunscreen. Sunscreen is simply a UV absorber but the fact that it is an absorber rather than deflector or destroyer means that it has a finite capacity.

One of the fundamental requirements of all electrochemical reactions is water. Without an aqueous medium the reaction will simply not take place. A combination of absorbing the damaging UV and keeping the paint dry should go a long way in slowing the reactions. Once either is depleted the reaction is free to recommence at maximum velocity once more.

From this simple chemical balance, described in more detail in the attached article, a treatment regimen has been developed, as described in Appendix A. What is key to its success is maintaining its effectiveness and not allowing it to become depleted.

In 1996 the painting was highly degraded with advanced deterioration in terms of detachment of paint from the render, the render itself detaching in the lower wall, and individual loss mechanisms within the red and yellow paint. The red paint deterioration was characterized by micro-spalling whereas the yellow showed advanced chalking.

In 2010 the painting has changed and continued to degrade. The reattached paint remains secure and no further major detachment has taken place. The renders remain largely secure although further attachment is recommended in some places. The rising water that has caused the render detachments in the lower wall has receded enormously to the point where on the day of inspection only two small areas of elevated moisture could be detected.

3.2. Chalking

Chalking is a perceptible indicator of the degradation of the paint medium. As the resin breaks down, from the outside surface inwards, pigment is freed and can be wiped from the surface. Titanium and zinc oxides are known to accelerate chalking of acrylic and other synthetic resins.

In 1996 the yellow was chalking substantially but there was no evidence of this on the green. The red was dominated by micro-spalling.

In 2010 chalking was apparent in all three colours. The 2007 survey had indicated that the green had become more degraded than in 1996 and this is now confirmed by the level of chalking.

One outcome of chalking is that the surface becomes dominated by white particles leading to the impression that the surface has faded. By saturating the surface it is possible to gauge the degree of chalking induced blanching and hence the degree of recovery of the true colour.

Figure 1 The difference in colour between the exposed yellow surface and that protected by red for some time. A small area between the red strokes has been saturated to show the recovery of yellow lost by chalking and general degradation of the surface.

To prevent further chalking it is necessary to maintain the protective coating system. Cleaning of the surface will remove some of the white chalking material and in combination with the protective coating system will recover much of the true yellow appearance.

3.3. Micro-spalling

The loss of strength in the red colours is not through fading as much as stripping of the paint from the surface. Where the red survives it is still very red in appearance.

Figure 2 1996 photo. Spalling of the red takes two forms. In the lower section the paint has peeled back to the render. Along the upper edge the red has been detached from the underlying yellow. This latter machanism is the more typical situation.

A comparison of one section of the painting is offered showing the condition in 1996 with that in 2010. The 1996 image is scanned form Kodachrome while the 2010 digital image was taken on a very dark day. Nevertheless it is clear that while the overall image clarity is unchanged there has been some diminution of the red in the thinner areas.

To prevent further loss of red the protective coating needs to be applied at 5 yearly intervals. This means that since 1996 the painting has missed two of these applications with the third one due in 2011.

There is also a case for strengthening the red to some extent. Repainting of the mural in paint similar t that already used will not only obscure the original but damage the paint by applying excessive stresses to the original layers. This will lead to a more rapid detachment of both original and overpaint. The judicious use of thin washes of colour using the protective coating as medium will not cause this damage and may be considered as an option for strengthening the red. This treatment may also be considered for the yellow and green, however at this stage they are not as compromised as the red.

Figure 3 Comparison between the 1996 (left) and 2010 (right) appearance of a detail near the light. The 1996 image is scanned form Kodachrome while the 2010 digital image has been cropped from a shot taken in dark conditions. While there is little change in the overall distribution of the more intense remnants of colour, the thinner sections appear somewhat diminished by 2010.

3.4. *Rising damp*

Rising damp was found to be a significant mechanism in 1996, affecting the stability of the lower render and staining the wall. The 2010 survey using the same device has revealed a much drier condition.

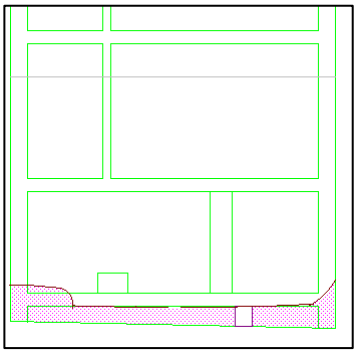
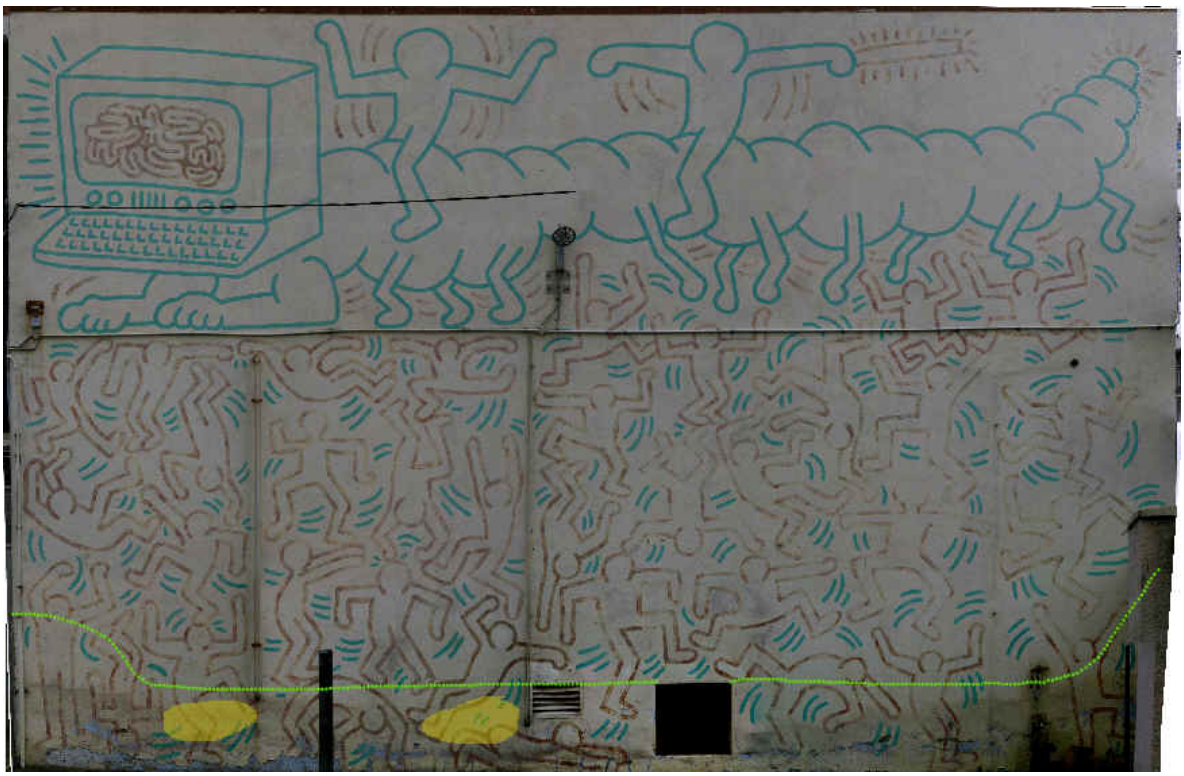


Figure 4 The 1996 moisture distribution map.

Figure 5 Moisture distribution comparison. All of the are below the green line was high in moisture in 1996. Using the same instrument and criteria, this zone has contracted to two small and isolated locations, both of which disp0kay no sign of impact from the moisture.



The rising damp solution was explored in 1996 with three options. The first two interventions required the insertion of chemical or physical barriers. Chemical treatments are of uncertain coverage and limited durability (as they are on the surface of the painting itself). The insertion of a physical damp course would have cut a solid line across the painting at ground level. At the time the third option was adopted as a first measure. All drains were made functional and the wall has been allowed to dry out. The 2010 survey has shown this to be a seemingly sensible judgement as there are only two isolated wet areas remaining. More importantly there is very little disturbance to the lower render attachment, other than a need to further secure some of the previously reattached areas. There have been no new detachments develop since 1996. Not only was the render detaching in this area but large sheets of paint had separated from the wall. There are no paint detachments of this type in 2010.

The main change as a result of the rising damp has been increased staining to the paint surface in the affected zone. It is expected that this problem will not be ongoing now that the wall appears dry. The stain is partially due to greater saturation of the paint causing it to look darker but mainly discolouration. Cleaning of the whole surface is recommended to reduce this if possible, together with removing the chalky film that has lightened the upper painting.

3.5. Painting and site encumbrances

In 1996 the site in front of the painting was dominated by a toll booth and rubbish skip. The latter had led to excessive splatters across the paintings while the booth itself blocked much of the lower painting. Adopted recommendations saw the removal of these two intrusions.

In 2007 the painting was more or less clear except for a water pipe taking water from the nearby mains stop valve. This pipe was curled up across the painting. The pipe has since been removed.

Since 2007 a number of changes have taken place.

- An electricity power line has been connected from the street diagonally across to the southern corner of the painting. This power line limits access to the painting for all inspections and treatments. It is illegal and highly dangerous to work within 5 metres of a power line and this ensures that almost none of the painting can be safely accessed. It will be necessary to redirect this power line onto the northern wall away from the painting for future works, including condition inspections.
- A bollard has been permanently set into the pavement in front of the painting. This is a sensible protection in preventing vehicles entering the space and damaging the wall. The bollard has been permanently fixed however and cannot be removed. This prevents mobile scaffold access along the painting. This bollard should be either removed or converted to a removable type before nay further works can proceed. It is recommended that the painting be screened by a low rail all round, starting along the slightly raised wall to the east and terminating to the south in a manner that prevents vehicle access but retains full scaffold access. A minimum clearance of 2.800 metres should be maintained within the fenced area along the full length of the wall.
- The mains water supply has been disconnected from the wall. The remaining pipe work should be tidied up to reduce its visual impact and provide better scaffold access to the corner.

Changes since 1984 that affect the painting include;

- Several new electrical conduits have been run across the painting since it was completed. These are easily recognised as unpainted pvc whereas all fittings in place in 1984 have been painted yellow and form part of the painting.
- The light has been changed from a fleuro type to carbon arc or similar

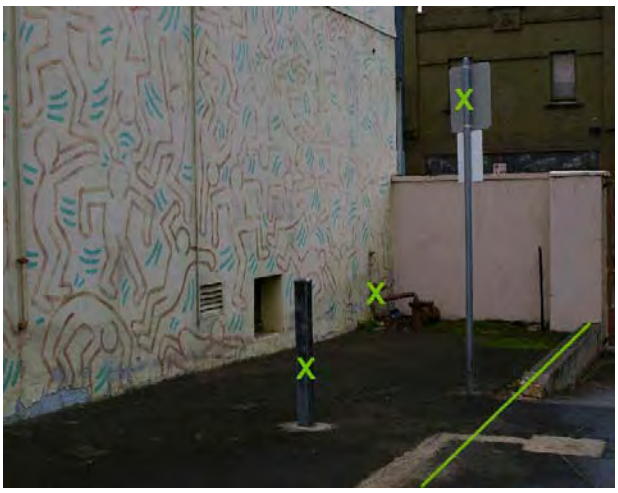


Figure 6 The site in front of the painting contains a fixed bollard, an obscuring sign and redundant pipe work. The green line along the low wall indicates where a low barrier could run to prevent all vehicle access into the whole precinct.

3.6. Recent changes

Pipes attached to the wall and incorporated into the painting have rusted to a point where they stain the painting itself. The stains need to be reduced and the pipes, painted by Keith Haring, stabilized to prevent further release of iron stain.

Figure 7 Rust stains emanating from the painted pipe above. This occurs wherever painted mild steel pipes and brackets contact the painted surface.

There is some minor graffiti that has been on the painting for some time. There are no recent incidents.

Figure 8 Graffiti at the southern end at ground level.

4. Status of 1996 treatments

Most treatments from 1996 have been discussed above and this section collates all treatments into a summary section.

Cleaning This has removed all of the splattered food and other deposits from 1996. To some extent the chalking was reduced but this has since accumulated back to previous levels. Further cleaning is an essential pre-requisite of future conservation treatments.

Paint reattachment Remains very effective. No further large detachments can be found and all previous reattachments hold firm.

Micro-spalling consolidation This is considered a separate condition due to the treatment requirement. While the majority of the spalling red is now stable there are areas requiring further treatment. This is addressed in the consolidative coating that should be applied every five years.

Water repellency of paint film This treatment was redundant in 2007, indicating that the recommended reapplication every five years is essential.

UV-O2 reduction There is no way of assessing what impact this treatment had on stabilizing the painting or how long it remained effective. Recent studies have confirmed it as a sensible approach and it should be persevered with as recommended.

Control of rising damp The measure adopted of maintaining drainage appears to have been effective. It is not recommended that any damp course be introduced unless damp returns.

Retouching After completing the work in 1996 it was suggested that the exposed render be toned to re-integrate these losses into the pictorial surroundings. The original yellow was a synthetic yellow oxide but using this alone in 1996 did not provide a good match. It was found that a stronger cadmium yellow was required to match the colour,. It was unknown at

the time that Cadmium light is very fugitive in outdoor exposure. The yellow faded very quickly, leaving the retouched surface a pale grey. It is recommended that this retouching be reapplied in what are now known to be stable pigments. Cadmium pigments are too expensive to find their way into house paint and thus the behaviour of cadmium light yellow was a recent discovery within fine art conservation science.

5. Recommended treatments

This section outlines the series of treatments recommended to stabilize the painting and bring it to a stable and cohesive appearance. The issue of repainting is one not considered for this report as it is not a conservation treatment and will destroy the original artwork. The painting is registered by Heritage Victoria and as such cannot be repainted under the current act. A permit from Heritage Victoria must be sought for nay works and these are limited to conservation of the original work by Keith Haring.

Repainting if it were to be carried out will suffer as the original has done and require renewal every 10-15 years. Repainting is substantially more time consuming and hence costly that the regular application of protective treatments. The painting has been neglected for the 14 years since its last conservation treatment but if the recommended protective treatment is implemented every five years, the cost of maintaining the painting will be no more than $ 400 per year for the life of the work.

The following treatments are recommended. Figures n brackets are expected costs for the work of others and reliable estimates for conservation works.

Preliminary site works

- **Electrician to relocate power line to northern side of building, clear of the painting.**

($ 4,000)

- **Remove or modify steel post to provide scaffold access to painting. ($800)**
- **Plumber to remove all redundant or non essential plumbing in northern corner ($ 600)**

Conservation treatments

- **Clean whole surface ($ 4,800)**
- **Remove graffiti ($ 800)**
- **Render reattachment grouting in identified areas in lower wall. ($ 2,400)**
- **Isolated reattachment of paint flakes. ($ 1,600)**
- **Protective coating and hydrophobic application. ($ 1,600)**
- **Retouching of plaster losses ($ 3,200)**

After discussion

- **Strengthening of red lines with pigmented consolidant ($ 7,200)**

Future

- **Reapplication of protective treatment every 5 years ($ 1,600)**

APPENDIX E – ANDREW THORN REPORT 2007

Appendix B 2007 Assessment

Keith Haring Mural
Johnson Street Collingwood

Review of Condition and Treatments.

Prepared for
City of Yarra

August 2007

Prepared by Andrew Thorn
ARTCARE : 2 McCabe Place, North Melbourne, 3051.
artcare@iprimus.com.au

Introduction

The Keith Haring mural painting is located at the former Northern Tafe Complex on Johnston Street, near the intersection of Wellington Street (Figure 13). The painting was applied by the New York artist Keith Haring in 1984 using commercial house paints. Haring applied the image layer in red and blue green to a yellow ground, prepared in advance of his visit. The painting received a range of conservation treatments by the author of this report in 1996 and has been inspected at regular intervals since.

The painting was included on the Victorian Heritage Register in 2002, as follows;

KEITH HARING MURAL

35 JOHNSTON STREET COLLINGWOOD, Yarra City

VHR Number	H2055
File Number	HER/2002/000133
Other Names	NORTHERN METROPOLITAN TAFE MURAL
Year Construction Started	1984
Municipality	Yarra City
Extent of Registration	All of the Mural known as the Keith **Haring** Mural marked M1 on diagram 2055 held by the Executive Director.
Other Listings 1	Yarra City Planning Scheme
Spatial Information	-37.79939, 144.98684
Heritage Act Categories	Heritage place

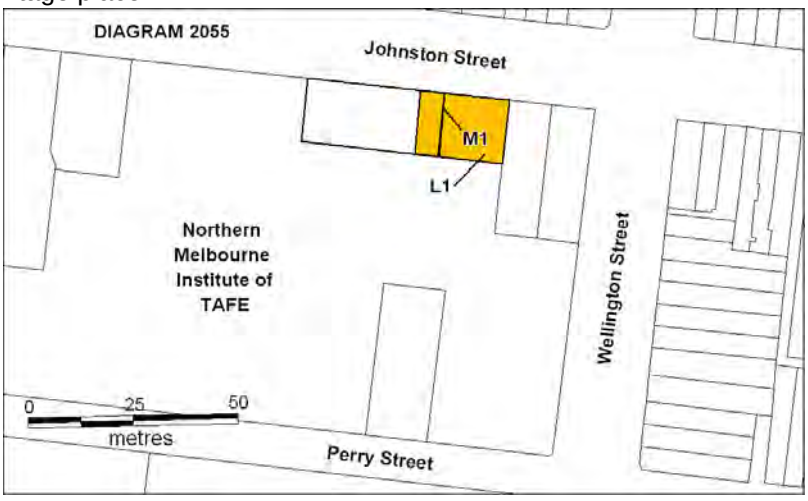


Figure 13 Heritage Register street plan showing the mural M1

The painting has been assessed for significance by the author and in more detail by Dr Ted Gott. More recently the Heritage Register entry has provided another statement of significance (Appendix A) but this falls short in describing both the national and international significance of this work and does not discuss the painting in artistic terms, purely in social and streetscape values. It is advised that to ensure the painting receives an appropriate level of protection, the assessment by Dr Gott be consulted and an appropriate revision be made to the Heritage Victoria statement. In its current form there is no prerogative to maintain the painting at all costs or to adopt the recommendations of this and previous reports to ensure the painting does not degrade to a point where it cannot be effectively preserved. The conservator has published an article on the degradation issues surrounding the painting (Appendix B) and it is clear from these that insipient deterioration can be avoided, but if regular maintenance is not continued, the painting will be lost.

Survey of current conditions.

The painting has been inspected from a cherry picker, which has also included a photographic survey of the painting and all conditions observed. The performance of treatments applied in 1996 has also been made.

The following conditions have been observed, presented in the order in which they were noted.

- Cracking along the top edge lets in water. Vertical cracks developing in response to water entry. These extend down as much as 80mm below top edge. If left untreated this cracking will lead to complete detachment.

Recommended Action

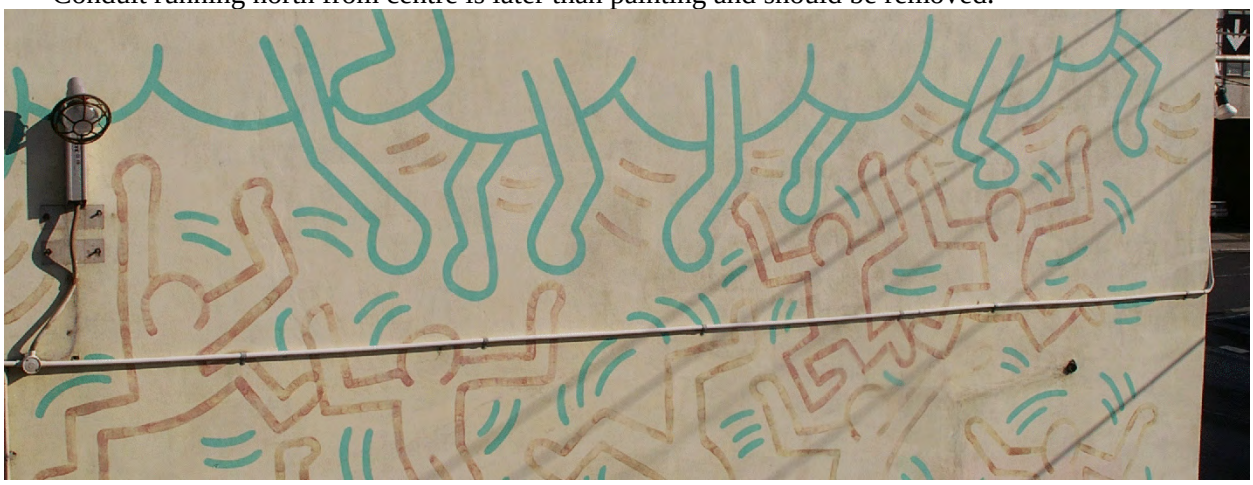
Seal the top edge of the render where it contacts the brick, using a light coloured polyurethane mastic. Do not use silicone or any other polymeric material. A cement based grout may be acceptable but will not prevent water entry for long.

- Gloss level in upper painting still quite high but uneven. This indicates the degree to which the 1996 acrylic saturation layers survive.

Recommended Action

The undulating gloss indicates that the resin is still effective but degrading. This resin was applied to consolidate the paint layer by replenishing the degraded original, but also as a vehicle for the anti-oxidant and UV filter treatments. It has been recommended in the 1996 report that this treat5ment needs to be reapplied at 5 yearly intervals to maintain the effectiveness of the AO and UV treatments. After 11 years this advise appears quite accurate in that there are clear signs of degradation and the whole preservation treatment should be applied at the stipulated intervals.

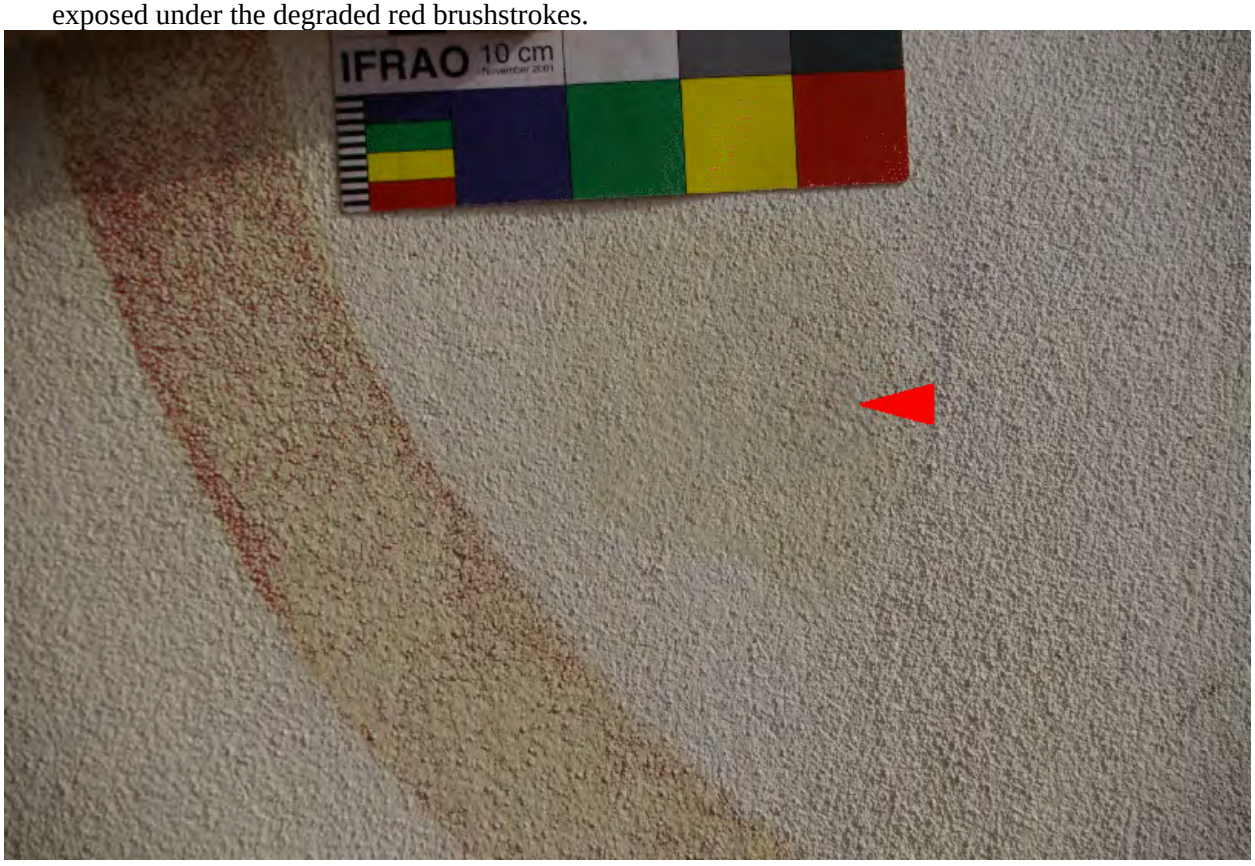
- Conduit running north from centre is later than painting and should be removed.



Recommended Action

Remove this conduit and rewire street light via another wall surface.

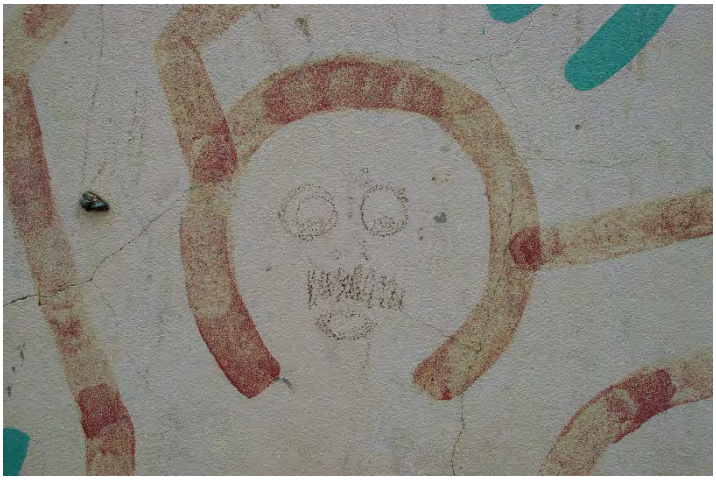
- The yellow ground colour has become paler since 1996. This is due to the white pigment chalking, leaving the yellow beneath the chalked surface. Saturation of the surface with water (marked with red arrow) brings the colour back but not to the same intensity as the yellow exposed under the degraded red brushstrokes.



Recommended Action

Reapply the modified resin treatment at five yearly intervals as recommended previously.

- Vandalism limited to eyes etc. painted onto one figure.



Recommended Action

Remove this graffiti and any other materials such as the gum to the left.
Several old stains do not mitigate readily as they have saturated the painting and made it deeper in colour.

- In lower painting the yellow is cracking up more within the red areas than on fully exposed yellow areas. These eroded reds need consolidation.

Recommended Action

The consolidation treatment required to impart the UV and antioxidant treatments will address this issue to a large extent. There will be a need however to then press these raised areas back into place with gentle heat softening.

- Lower reattached area holding up reasonably well but more required.
- Rising moisture having greater impact on surface than previously. Moisture stops at a horizontal crack in the render. Below this the painting is darker and browner. This contrast will be reduced a little with re-saturation.

Recommended Action

Some further reattachment in this area but despite its rather damaged appearance the reattached plaster is holding up reasonably well in most places. A damp course was discussed in the 1996 investigation but argued against because of its severe intrusion into the painting. This is still justified despite there being a more noticeable darkening along the lower edge where water rises. The dark line ends at horizontal cracks

- Green brush strokes beginning to show signs of loss now, in the form of micro-craters with paint lost from high points. A milder version of what has happened to the red. This is perhaps the most significant new development in degradation terms as there was no sign of any impact on greens up until 1996.

Recommended Action

Consolidation as for other areas will slow down degradation of the greens.

Recommendations

1. That the Heritage Register Statement of Significance be revised to reflect the National and International significance of this painting. Keith Haring was an internationally acclaimed artist and there is no other mural painting in Australia by an equally high profile artist. Haring's murals are a central part of his international profile and many others have been destroyed (Berlin Wall) or covered (Rijksmuseum Store). Protection of heritage places depends to a large extent on how they are seen by the public and how they are classified by Protection Agencies. Under the current significance assessment there is little likelihood that the Haring will attract any form of government funding for its protection.
2. That the recommendations of the 1996 Artcare Report, especially the section relating to ongoing maintenance be mandated into future occupation of this property. To treat the painting at five yearly intervals will sustain it for a very long time. For every year the painting is neglected beyond this 5 year interval is to reduce its life expectancy dramatically.
3. Undertake a small scaled conservation in the near future to address other issues such as graffiti removal, and to attend to minor adjustments to render and paint reattachment. This is in addition to the coating replenishment which needs to be applied routinely at 5 yearly intervals.

Appendix C

Statement of Significance from the Victorian Heritage Register file.

What is significant? The Keith **Haring** Mural consists of a large panel, 7.4 x 11.5 metres on a cement rendered wall at the eastern end of the Collingwood Technical School. The New York artist Keith **Haring** visited Melbourne in March 1984, during this time he created a number of works, the most lasting of which is the Mural on the side of Collingwood Technical School.

Keith **Haring** (1958-1990) was an important member of the New York art scene of the early 1980s, this movement incorporated Hip Hop, graffiti, and gay culture. **Haring** was an openly gay artist at a time when this was still gaining acceptance, he was also a sufferer of AIDS and a campaigner for the acceptance of those with AIDS. Drawing on graffiti and hip hop culture **Haring** created art that had far reaching influence. His visit to Melbourne, early in his short career, was to influence a number of young artists. His strong graphic style and its application in many forms, album covers, murals, tee shirts, permanent works of art was also influential, as was his interest in 'public art'. The Collingwood mural draws directly on popular culture for its themes and form. The Collingwood mural is one of the few **Haring** murals that still exist of the number he executed across the world and the only extant work from his visit to Australia.

The Mural was one of a number of projects **Haring** undertook during his visit. More temporary was a mural on the glass water windows at the National Gallery of Victoria on St Kilda road. John Buckley the inaugural director of the Australian Centre for Contemporary Art, and sponsor of **Haring**'s visit to Melbourne, approached Collingwood Technical College, who had a convenient wall for **Haring** to create a more permanent work.

The mural is a large work of art, on a cement rendered wall, with a yellow background and red, blue and green figures. The upper half of the mural depicts a hybrid man/computer monster, ridden by two human figures, this was a comment on technology and television. The lower half of the mural consists of vibrant dancing figures, reflecting an interest in the contemporary rap/hip hop movement of the period. Its themes and treatment are typical of **Haring**'s work at the time.

How is it significant? The Keith **Haring** Mural is of historic and social significance to the State of Victoria.

Why is it significant? The Mural has historical and social significance as the work of a major artist. Keith **Haring** is considered one of the most significant artists of his generation. As a role model for gay artists and Aids activism his influence was international.

The Keith **Haring** Mural is of social significance as a landmark piece of public art in Melbourne. Its prominent inner city location is indicative of the changing physical and social landscape of a former working class suburb.

The Mural is also of social significance for its influence on young artists for its inner city setting and use of popular culture themes and imagery.

Appendix D

Thorn, A. 2000, *Titanium dioxide: a catalyst for deterioration mechanisms in the third millennium.* Tradition and Innovation: Advances in Conservation. International Institute for the Preservation of Historic and Artistic Works 195-199.

ABSTRACT:

Titanium dioxide has been used in acrylic dispersions for both house paints and artists' materials, largely for its superior hiding power. While its use in canvas paintings attracts critical comment regarding cloudiness and deadness of colour, its use in outdoor murals is nothing short of catastrophic.

Titanium dioxide absorbs UV light but facilitates photocatalytic oxidation leading to degradation of the acrylic binder. These reactions are at their peak when the glass transition temperature (Tg) of the medium is exceeded and in the presence of moisture.

This paper discusses two outdoor paintings executed in the early 1980s, one by the New York artist Keith Haring and the second, claimed to be the largest outdoor mural in the southern hemisphere, by a local Sydney painter, Peter Day.

The deterioration mechanism will be outlined, together with the painting technique and other associated deterioration problems. Treatment of the Haring mural was undertaken in 1996 and will be discussed in detail.

INTRODUCTION

Mural paintings have been executed outdoors, possibly for as long as those found in more protected locations. It was not however until the 1970's that a great explosion of outdoor murals covered the earth, adorning almost every vacant city wall across the globe. Often termed "community murals" these vast expanses of creativity defied all traditional values of craftsmanship and taste to tame the concrete jungle.

Modern materials were preferred for their immediacy and cost with the surfaces chosen for their dimensions rather than stability. This paper looks at the degradation of outdoor acrylic paints with the view to alerting the conservation community to the problems that may develop within museums.

The Haring mural was executed in 1984 and displayed advanced degradation within 10 years. The mural was conserved in 1996 and since then other murals of a similar age and material composition, such as that by Peter Day in Sydney, have been surveyed and found to display similar symptoms.

The Haring Mural in Melbourne is discussed in detail to provide an opportunity to look closely at a typical interaction between the pigment, the medium and their environment. The painting consists of three colours and the background yellow is discussed in detail. The yellow is comprised of Titanium dioxide and yellow oxide pigments in a commercial acrylic house paint. Each of these three components are studied in the following sections.

THE SIGNIFICANCE OF TITANIUM DIOXIDE

The technology and history of Titanium dioxide as an artist's pigment has been thoroughly described by Laver[2]. The pigment was commercially available from 1918 and Heaton[3] states that by 1927 the colour purity was improved to a point where Titanium dioxide superseded all other whites in the paint industry. Heaton also mentioned in 1947 that titanium dioxide had a propensity to chalking when exposed to outdoor conditions but at that time the mechanism was undefined.

It has since been explained that a photocatalytic oxidation cycle takes place in the medium and that Titanium dioxide is a strong catalyst for the reaction. The reaction has been described by Volz[4] et al as a six step cyclical reaction, which in the presence of water and oxygen, forms OH and HO_2 radicals, causing the rapid degradation of resin molecules.

The reaction proceeds in six steps and can be summarized as;

Equation 1 The formation of radicals by TiO_2

$$H_2O + O_2 \xrightarrow{TiO_2, h\nu} OH + HO_2^{\cdot}$$

hv represents an exciton (electron/hole pair) formed by the absorption of UV energy.

Volz has demonstrated the photocatalytic oxidation cycle only takes place at wavelengths of 375-395nm. While this mechanism is very destructive within this narrow wave band TiO_2 actually screens the medium from shorter wavelength UV by absorbing at these lower frequencies and converting the energy to heat. This property has been exploited in the production of titanium wet suits to keep the surfer warm in cold seas.

Figure 14 Reflectance of three white pigments in the range 200-500nm.

Titanium dioxide in the Rutile form is more stable to photocatalytic oxidation than Anatase. However, more recent pigment production methods have reduced the photo-oxidation by either selecting Rutile or coating both Rutile and Anatase with other metal salts[5]. Cobalt acetate coated Anatase can have its photocatalytic activity reduced to 6% of the untreated pigment. Commercial house paint pigment may not be stabilized in this way as a slightly chalking surface appears cleaner and brighter.

Titanium dioxide is also known, through the mechanism described, to react not only in organic media but with dyestuffs fading when mixed with the pigment[6, 7]. Such fading is apparent in both the Haring and Day murals, where a synthetic dyestuff has been used as the red pigment.

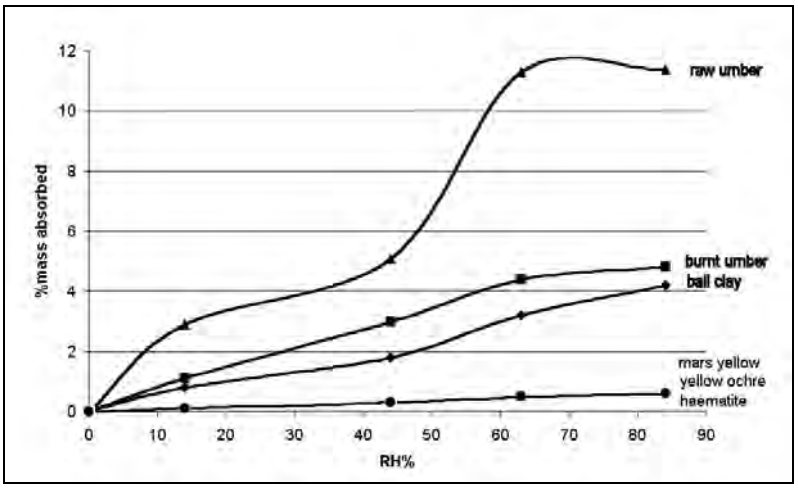
YELLOW OCHRE IMPLICATED

The yellow paint forming the background to the Haring mural contains yellow ochre. Irick et al has indicated that Fe^{+++} ,for example, can reduce the photocatalytic activity of Titanium dioxide by coating the particles. Whether this will also happen through the adjacent association found in a mixed pigment paint layer containing iron pigments, has yet to be described. More recent studies[8] have shown Fe^{+++} to increase the photocatalytic activity of TiO_2 in the oxidation of water. While such proximity of Fe containing pigments may or may not control the activity of TiO_2 the use of hygroscopic pigment minerals contribute to degradation by absorbing and holding atmospheric moisture for long periods. As described in the previous section titanium activity not only requires a select light bandwidth but both oxygen and water.

Recent studies[9 10 11] of the pigments used in indigenous rock paintings have shown a substantial loss of pigment through repeated humidity cycles in high humidity environments. The study has assessed a wide range of pigments, few of which are unique to indigenous rock paintings.

Observations of several hundred paintings in climates ranging from tropical to arid have shown that hematite is stable to moisture while yellow ochre deteriorates at a moderate rate. The two most affected rock painting pigments are charcoal and white clays (Umbers are seldom found).

Figure 15
Moisture response of some pigments



This paper does not discuss the moisture stability of pigments but draws on the cited research to illustrate the ability of pigments and inert minerals within a paint matrix to absorb atmospheric moisture and hence create the conditions necessary for photocatalytic reactions without the need for direct rain wetting.

Figure 15 illustrates the moisture absorption curves of yellow ochre, Mars yellow and other reference pigments. While there is seemingly not a great deal of difference between yellow ochre and hematite,

observations at rock painting sites indicate the differences are sufficient to destabilize the yellow. This has been confirmed by studies of Huntite,[12] having a very similar absorption to yellow ochre and reportedly, similar instability characteristics.

The resin film itself provides very little resistance to moisture, particularly as it begins to deteriorate. Figure 16 shows the surface of a titanium pigmented alkyd film becoming increasingly porous and open on aging with pits forming around the TiO_2 particles.

Table 1 Moisture absorption of various pigments in order of increasing absorption

RH%	0	14	44	63	84
Silica	**0.00**	**0.04**	**0.11**	**0.08**	**0.05**
Ultramarine	0.00	-0.22	0.00	-0.22	0.08
Dolomite	0.00	0.02	0.06	0.09	0.09
Calcite	0.00	0.09	0.16	0.19	0.26
Whewellite	0.00	0.35	0.19	0.22	0.30
Gypsum	0.00	0.23	0.37	0.41	0.41
Hematite	0.00	0.11	0.33	0.46	0.63
Yellow ochre	0.00	0.30	0.43	0.70	0.76
Huntite	0.00	0.06	0.25	0.54	0.77
Mars yellow	0.00	0.33	0.43	0.78	1.09
Burnt ochre	0.00	0.86	1.58	1.86	1.95
Manganese	0.00	0.54	0.68	1.55	2.50
Kaolinite	0.00	0.93	1.83	3.25	3.16
Raw sienna	0.00	1.11	2.21	2.51	3.71
Ball Clay	0.00	0.79	1.83	3.25	4.16
Burnt sienna	0.00	0.78	2.92	4.69	4.81
Burnt umber	0.00	1.13	2.96	4.40	4.82
Green earth	0.00	1.07	3.69	5.76	4.91
Charcoal	0.00	1.87	4.97	6.46	6.91
Raw umber	0.00	2.91	5.14	11.32	11.38

While at the Haring mural, water absorption of yellow ochre contributes to the deterioration of the resin, the degradation caused by TiO_2 and the permeability of the resin itself all contribute to making a very water vulnerable painting.
Other pigments, such as the earths, will provide a far greater moisture supply to a painting than yellow ochre.

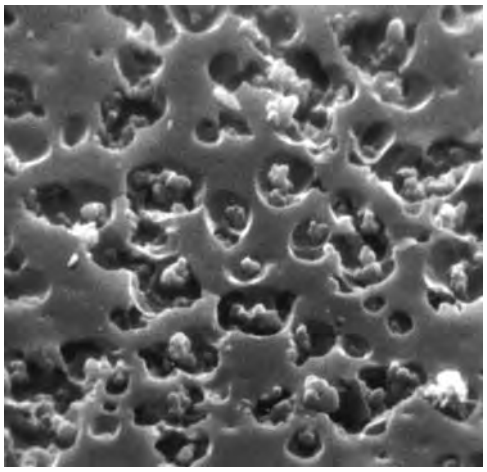


Figure 16
SEM image of TiO2 degraded Alkyd film showing pits developing around the pigment particles. These pits make the paint film increasingly porous.

THE VULNERABILITY OF ACRYLATES

The background yellow of the Haring mural is an acrylic house paint. An amateur video13 shows housepainters applying the paint by roller before Haring's arrival at the site. House paint acrylics are formulated not for durability of the paint but durability of the company that makes them. Seven years is considered a good service life, by which time the colour scheme has dated and the pressure to repaint enormous.

Consultation with a large house paint manufacturer and their resin supplier, has confirmed the standard medium for house paint is a copolymer of methyl methacrylate and butyl acrylate. Methyl acrylate may

also be used but the key property of acrylates is their very low glass transition temperature (Tg). This allows the copolymer to coalesce at ambient temperatures to a uniform coherent film and upon drying, maintain a flexible membrane to accommodate movements in the substrate, etc.. Table 2 gives the Tg range for typical acrylic resins.

Table 2 Glass transition temperature of various acrylic polymers[14 15]

	Tg °C of all grades	Typical resin
MMA	87-105	
EMA	63-65	
MA	5	
BA	6	
*n*BMA	15	Retouching medium [26]
EMA/MA	40	Paraloid B72
*i*BMA	55	Paraloid B67
MMA/MA	82[16]	

The Tg of a typical house paint should be approximately 82°C and thus not prone to accelerated degradation reactions under typical outdoor conditions. During the Haring conservation project the east facing surface reached 36°C while other surfaces exposed to direct noon sun have been recorded at 65°C.

A study of a methyl methacrylate/methyl acrylate (MMA/MA) copolymer[16] has shown the MMA to undergo chain scission while the MA cross links. The scission of MMA increases dramatically as the Tg is approached, as seen in Figure 17. Once the Tg is exceeded degradation reactions accelerate exponentially.

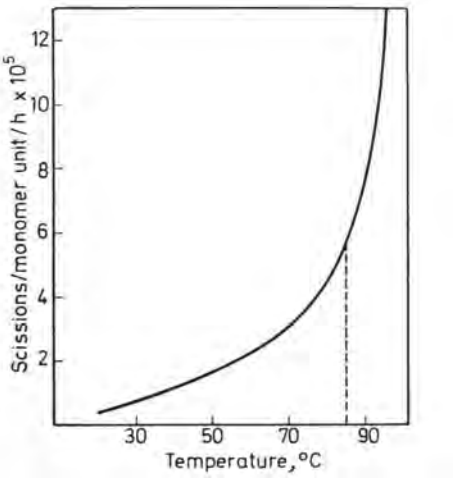


Figure 17
MMA Chain scission with increasing Tg. (MMA Tg indicated by vertical hashed line)

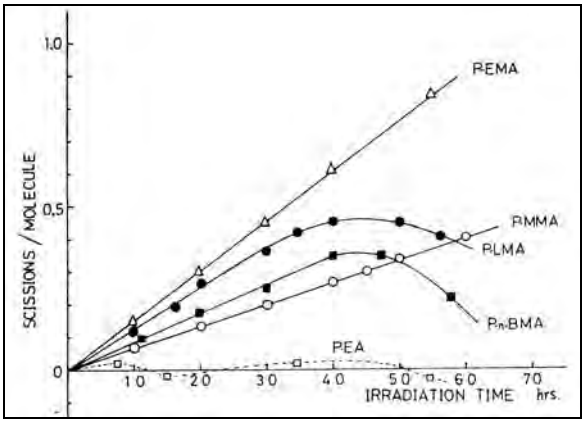


Figure 18
Chain scission of acrylics subjected to a mercury vapour lamp at ambient temperature

A study of the degradation of a copolymer of MMA/nBA[17] has shown the peak UV absorption occurs in the band 293-300 nm with rapid diminution above and below this frequency. This critical wave band can be compared with that described above for the photocatalytic activity of TiO_2, 375-395nm.

The significance of Tg in photo-degradation becomes more significant with other acrylic copolymers such as Paraloid B72 having a Tg of 40°C. Figure 5 shows ethyl methacrylate (the greater component of B72) to be the most prone to chain scission reactions while at the same time having a moderately low Tg.

TREATMENT OF THE HARING MURAL

Having thus diagnosed what were thought to be the main deterioration mechanisms on the Haring mural, a treatment program was designed to address these and other problems, not discussed in this paper. Three conservators, Lisette Burgess, Carrie Thomas and the author, undertook the treatment and all participated in the treatment development.

The paint had deteriorated to the point where it was very powdery and discontinuous. Many cracks had developed through the painting allowing water to penetrate into the Portland cement render and gather behind the paint itself.
The yellow acrylic paint had become soluble in moderately mild solvents as described in Table 3. The green linear paint remained stable while the red alkyd had become detached from the yellow in uniform micro-flakes. Haring was not the type of painter to consider resin compatibility and had not undertaken this project with longevity in mind. The Du Pont[14] literature states Alkyds are not compatible with acrylics of any class unless they have been modified. PVC on the other hand is fully compatible and is evidenced by the better adhesion of Haring's paintwork covering a number of PVC electrical conduits.

Table 3 **Solubility characteristics of the three Haring colours.**

	cyclohexane	white spirit	toluene	acetone	ethanol
yellow	**ns**	**ns**	**s**	**s**	**s**
red	**ns**	**ns**	**ss**	**ss**	**ss**
blue green	**ss**	**s**	**s**	**s**	**s**
	⇒ ⇒ ⇒ ⇒ Increasing Polarity ⇒ ⇒ ⇒⇒				

Thus the mechanisms described in sections above, requiring treatment included;

- Preventing water entering the wall behind.
- Preventing water interacting with the Titanium dioxide pigment.
- Preventing UV light interacting with the resin and Titanium dioxide pigment.
- Preventing oxygen interacting with the Titanium dioxide pigment
- Consolidating the degraded and soluble yellow pigment
- Reattaching the red pigment

The majority of the treatments were thus aimed at turning off the mechanism rather than remedying the effects of such degradation.

To hydrophobe the painting, both substrate and paint film, the treatment needed to be effective and compatible with both earth pigments and Portland cement. The treatment must also not have any solvent action on the painting. Previously cited research[9] determined the most successful reduction in moisture absorption was that achieved with hydrogen functional Siloxane, a product used for some time in the treatment of porous artworks[18]. The second best choice proved to be a fluorinated acrylic but this was overlooked, despite the seeming compatibility with the painting, as it has not been thoroughly tested or used in conservation treatments. The preparation and properties of Fluorinated acrylic have been described[19] and used experimentally[20] in conservation with the commercial product Fluorad used to prevent condensation on electronic circuit boards[21].

Given the broad solubility of the painting the Siloxane has added appeal in being applied in very non polar solvents, not affecting the painting. The compatibility between siloxane and acrylic is not known however it is increasingly incorporated into polymer production to achieve the results sought at the Haring[22 23].

The siloxane was tested at various concentrations to ensure that no substantial darkening of the painting occurred. Due to the chalking some darkening was considered acceptable if it ensured greater stability or protection. An 8% w/w Siloxane in Petroleum spirit was applied by spray to the entire surface.

Upon drying the painting appeared unaltered and while it displayed considerable water repellency remained under-bound. The conservation team agreed that the addition of thin consolidative acrylic would be beneficial.
The first instinct of any conservator would be to choose Paraloid B72, however there are two reasons why this was not selected. The first reason is B72 requires the application of solvent having action on the painting itself.

The second, and possibly more persuasive reason, was that described in preceding sections. The Tg of B72 is 40°C, not much above recorded surface temperatures. Once Tg is reached a number of undesirable properties develop. Figures 4 and 5 show how EMA will undergo more rapid chain scission in temperatures around its Tg. Other properties such as tackiness, leading to dust collection, and even a tendency to flow worked against B72. EMA copolymers are compatible with MMA copolymers however, a point also casting further doubt over the fluorinated acrylic.

Isobutyl methacrylate (Elvacite 2045, similar to Paraloid B67) was chosen due to its non polar solubility and higher Tg of 50°C. While there is less compatibility between MMA copolymers and iBM the degraded surface offered high mechanical adhesion. It was also considered a slight advantage that the consolidant would not form an intimate bond with the original acrylic surface.

To reduce the absorption of UV and oxygen it was agreed the iBM should be stabilized with an oxygen scavenger and UV stabilizer. One may ask “Why bother?” in such a harsh environment to which the best answer is possibly “Why not?” Feller et al[24] have shown an Isobutyl methacrylate copolymer treated with Tinuvin could be given a 15 times longer induction period before cross linking commenced.

The iBM, was applied as two coats in the following formulation;

Elvacite 2045	Isobutyl methacrylate	5% in white spirit.
Tinuvin 292	Hindered amine light stabilizer	3% solids
Tinuvin 1130	UV light absorber	3% solids.

Whether this stabilizes the painting is unclear but it will at least provide a more stable iBM consolidant. After two coats the gloss level had increased to perceptible levels and the yellow begun to darken.

The reattachment of the red paint has presented a dilemma in the self evident knowledge that acrylic and alkyd resins are incompatible. Having little knowledge of a conservationally sound coupling adhesive the decision was left to a method producing the best results. An acrylic dispersion AC 2245 (Rohm and Haas) was found the most effective and after 3 years the red remains attached.

CONCLUSION – IMPLICATIONS FOR MUSEUM OBJECTS

This paper has illustrated the deterioration mechanisms prevailing on an exposed acrylic paint pigmented with titanium dioxide rather than present a case study of mural painting conservation.

The first reaction of a museum conservator may well be to thank the heavens they work in a museum rather than outdoors. However the study of titanium pigmented house paint has drawn attention to mechanisms equally valid in the protected environment.

Almost every museum object is assessed in relation to UV light entering a building and the display environment is conditioned in some way to minimize degradation. Window glass is considered adequate while UV filters screening all wavelengths below 400 nm are considered ideal.

Window glass excludes almost all light energy below 330nm. While this is suitable to prevent the peak UV damage described by Gupta it will not control the mechanism of Photocatalytic oxidation initiated by Titanium dioxide (375-395nm). UV filters screening all wavelengths under 400nm should be used. Artificial light must also be assessed to determine whether it has a peak in the critical TiO_2 photocatalytic band.

The study has shown Tg as a critical factor in polymer degradation, highlighting the danger of using a "conservation class" resin in outdoor conditions. It is unlikely Paraloid B72 will be subjected to temperatures approaching its Tg in a museum however Paraloid is a word imparting sanction while in fact it is the B72 component that ensures stability. Pressure sensitive adhesives need to employ low Tg resins[25] and these may well be acrylates and softer methacrylates with a Tg below ambient museum levels, typically 22°C.

Recent studies[26] have noted butyl methacrylate (Tg 15°C) employed as a retouching medium. Given the various discussions above it is most likely this resin will undergo cross linking rather than chain scission and do so at an exponential rate above 15°C. The same study demonstrated TiO_2 to be the most destabilizing pigment but it was not alone in this. Zinc oxide also has photocatalytic potential. Degradation tests were conducted using a Sylvania UV light with a spectral distribution peak almost exactly between that critical to UV degradation (293-300 nm) and TiO2 photocatalytic oxidation (375-395nm), with very slight energy levels at these two critical bands.

Titanium white in acrylic is a very common ingredient in modern paintings and one prone to alteration. The special role TiO_2 plays in the alteration of acrylic paintings has been noted without explanation on some paintings[27] [28] but it is used in a wide variety of objects such as photographic and other papers.

This paper has focussed on one colour component of one artwork located in a particular environment. The painting is modern both in the materials employed and the method of execution but is typical of a large percentage of stored cultural heritage.

Before undertaking the Haring project the author knew little about the mechanisms outlined in this paper. On completion the Haring was a little clearer but the door had been opened.

What is happening to modern art?

MATERIALS SUPPLIERS

REFERENCES

[2] Laver M. Titanium dioxide whites. In Fitzhugh EW (ed) Artist's pigments: A handbook of their history and characteristics, Volume 3. National Gallery of Art (Washington 1997) 295-355.

[3] Heaton N. Outlines of Paint Technology Charles Griffin and Co (London 1947) 82-88.
[4] Volz H.G., Kaempf G., Fitzky H.G. and Klaeren A. The chemical nature of chalking in the presence of Titanium Dioxide pigments. in Photodegradation and Photostabilization of Coatings. American Chemical Society, (Washington 1981) 163-182.

[5] Irick G., Newland G.C. and Wang R.H.S. Effect of metal salts on the photoactivity of titanium dioxide. in Photodegradation and photostabilization of coatings. American Chemical Society. (Washington 1981), 147-159.

[6] Bentley P. McKellar

[7] Wu T., Lin T., Zhao J., Hidaka H. and Serpone N TiO_2-Assisted photodegradation of dyes. 9. Photooxidation of Squarylium Cyananine Dye in Aqueous dispersions under visible light irradiation. Environmental Science and Technology, 1999, 33(9) 1379-1387.

[8] Ohno T., Haga D., Fujihara K., Kaizaki K and Matsumura M. Unique effects of Iron(III) ions on photocatalytic and photoelectrochemical properties of titanium dioxide. Journal of Physical Chemistry B (Washington 1997) 6415-6418.

[9] Thorn A. The stabilisation of rock art pigments to moisture. Unpublished report to the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra 1995.

[10] Thorn A. The stability of rock painting pigments and their relevance to the deterioration of fresco and other wall paintings. Studies in Conservation (in preparation)

[11] Thorn A. Jumping off the cliff. A study of the moisture instability of pigments used in indigenous paintings. Paper presented to the third AURA Congress, Alice Springs Australia, July 2000.

[12] Ford B., MacLeod I. and Haydock P. Rock art pigments from Kimberley region of Western Australia: identification of the minerals and conversion mechanisms.
Studies in Conservation vol 39 no 1 (London 1994) 57-69.

[13] Collection of Thomas Dixon, Head of Conservation, National Gallery of Victoria

[14] anon. Elvacite acrylic resins: properties and uses. Du Pont technical data sheet.

[15] Anon Acryloid thermoplastic grade and solid grade acrylic resins for industrial finishing. Rohm and Haas technical data sheet.

[16] Grassie N. Photodegradation of Methacrylate/Acrylate Copolymers. Pure and Applied Chemistry vol 34. 1973 pages: 247-257.

[17] Gupta A., Scott G.W. and Kliger D. Mechanisms of photodegradation of ultraviolet stabilizers and stabilized polymers. in Photodegradation and photostabilization of coatings. American Chemical Society. (Washington 1981), 27-41.

[18] Hosek J. and Sramek J. Arkoses and their highly hydrophobic treatment. In Delgado Rodrigues J., Henriques F. and Telmo Jeremias F.(eds) 7th Int. Congress on Deterioration and Conservation of Stone. (Lisbon 1992) 1197-1204.

[19] Thomas R., Anton D., Graham W., Darmon M., Sauer B., Stika K and Swartzfager D. Preparation and surface properties of acrylic polymers containing fluorinated monomers. Macromolecules 30 (Washington 1997) 2883-2890.

[20] Aglietto M., Passaglia E., Taburoni E., Ciardelli F., Botteghi C., Matteoli U., Paganelli S., Arbizzani R. and Fassina V. A new class of fluorinated acrylic polymers: protective materials for stone. In Janet Bridgland (ed) ICOM 1993 Washington (Los Angeles 1993) 553-558.

[21] Pers comm 3M company.

[22] Hu J. and Son D. Modifiable siloxane containing polymers via hydrosilylation polymerization. Macromolecules 31 (Washington 1998) 4645-4647.

[23] Perfluorocyclobutane aromatic polyethers. Synthesis and characterization of new siloxane containing fluoropolymers. Macromolecules 29 (Washington 1996) 852-860.

[24] Feller R.L., Curran M. and Baillie C. Photochemical studies of methacrylate coatings for the conservation of Museum objects. in Photodegradation and photostabilization of coatings. American Chemical Society. (Washington 1981) 183-196.

[25] Roche A. Pressure-sensitive adhesives for the attachment of reinforcing canvasses to the back of paintings. Studies in Conservation 41 no 1 (London 1996) 45-54

[26] Whitmore P.M. and Bailie C. Studies on the photochemical stability of synthetic resin-based retouching paints: the effects of white pigments and extenders. In Cleaning, Retouching and Coatings. International Institute for Conservation of Historic and Artistic Works Brussels Congress 1990. (London 1990) 144-149.

[27] Barcilon P.B. and Galassi A.G. Some cases of colour alteration in white paintings of Lucio Fontana. ICOM-CC 8th Triennial Meeting, Sydney 1987 (Los Angeles 1987) 265-266.

[28] Barcilon P.B. and Galassi A.G. White paintings by Lucio Fontana: investigation and scientific examinations. ICOM-CC 9th Triennial Meeting, Dresden 1990 (Paris 1990) 211-213.

APPENDIX F – ANDREW THORN REPORT 1997

Appendix A 1996 Condition Survey incorporated in to 1997 Treatment Report

The Keith Haring Mural
Johnston Street, Collingwood

Conservation Treatment Report

Final Report

prepared for

Northern Institute

1997

prepared by Andrew Thorn

ARTCARE : 2 McCabe Place, North Melbourne, 3051.

Introduction

This report has been commissioned by The Northern Institute, Collingwood Campus initially to investigate the condition of the Keith Haring Mural painted onto the eastern wall of the main college building in Johnson Street, Collingwood. Following the recommendations of the Condition Survey the Conservation Treatment Program has been carried out. This report details the findings of the survey and subsequent treatments.

The painting was executed by Haring in 1984 during a visit in which he carried out numerous works that have since been destroyed or removed from their original places. Haring was initially invited to make paintings at the National Gallery of Victoria and the Art Gallery of NSW but while in Melbourne was offered the wall in Collingwood. Other works are known including a painting at the now defunct Hardware Club and at a Kindergarten in South Yarra. Works by Haring in Australia but not from the time of his visit include a painting and decorated tea set at the Museum of Contemporary Art in Sydney.

The painting has been applied to a render that must have existed for some time before 1984 having a number of damages painted over by Haring. The render is subject to slight rising moisture and this can readily be seen as a darkened surface at the base of the wall. The painting is exposed to the weather but as it faces east does not receive the most intense radiation. Even so the medium has deteriorated as have two of the pigments.

A photograph taken of the painting during the final stage of its completion [1] is reproduced in this report as figure 1. The photograph shows a glimpse of the now removed door showing Haring's characteristic "sign" of a radiating baby and also his last name.

The painting depicts a centipede like creature ridden by two human figures. The creature has a computer for a head with a brain showing on the screen. Under the creature other humans are tightly grouped either being down trodden by the creature or as is implied from other observers dancing with joy. Haring has not recorded the true meaning of the subject and the alternatives offered above are quite diverse. The former implies a reaction against the technological beast while the latter implies a celebratory response. There are no other clues to the true meaning, either in the painting or in accounts of Haring's attitude to technology.

The painting was photographed on completion, as reproduced in Haring's authorised biography[1].
The painting has also raised some interest in the print media with debate about the status and future of the mural [2].

Figure 9 The mural during completion in 1984.

Keith Haring can be seen completing details of the painting at the far left while the signed door is just visible in the lower centre right of the photograph. The now removed fluorescent luminaire is also shown.

Statement of Significance

There are many levels on which the painting can be assessed. Its status as an International work of art, mural painting and its social awareness will be discussed. The painting has been referred to previously as graffiti art and although this does not alter its importance as an art work it is clear from Haring's own words that it is a permanent work. In his biography[1] Haring states *"it's become a permanent site!"*. The exclamation mark is significant but the phrase indicates that in Haring's mind the mural was now permanent on completion. Haring defines his attitude to the status of any created work as follows [1]
"*When the act of creation is really successful the thing creates itself. The artist is only a vehicle, a tool. Once created the thing has a life of its own. I want to live and make things that live.*

It is clear that Keith Haring would want this work to be preserved and thus it is a question of its worthiness as a work of art.

International prominence

Keith Haring is an artist of International standing as attested by the number of commissions he was invited to carry out in many parts of the world. He held exhibitions (including group shows) in 16 countries outside his native USA. It would be misleading, in light of his exhibition career, to suggest that Haring was a graffitist turned artist (as has been implied by some). His achievements as an artist combined with the fact that few of his other murals survive makes the Collingwood mural of high International significance.

The work was originally signed by Haring and remains one of the few intact outdoor works by a prominent Internationally renowned artist of the 1980s.

The Australian mural tradition

The above section heading is ironic in the realisation that very few mural paintings in Australia have been executed by known artists. In Victoria Napier Waller is perhaps the best known artist painting murals yet he could not be held up as a major artist even within Victoria. Most other murals, particularly those from last century have been carried out by skilled decorators and although the more skilled of those such as J Ross Anderson or the Patterson Brothers could boast an accomplished artist (Hugh Patterson in the latter case) the works themselves are largely decorative.

Social significance and influence

Keith Haring is best known as an artist but has also been an important voice in many social issues most notably, AIDS awareness. Although the Collingwood mural has none of these elements the painting remains a focus for all those connected with Haring's life and values.

Discussions with several practicing artists in Melbourne have elicited a range of responses which is to be expected about the work of such a young artist. Older artists (Haring was born

in 1958) tend not to consider his work of any inspiration whereas younger people are more inclined to look to street art and Keith Haring in particular as a major force in current visual expression. They have responded to Haring's defiance of the conventional art market's processing of artists and they identify strongly with his free spirit and disregard for the rules.

Description of the painting

The brevity of this report prevents an elaborate description of the painting and its structure however it is important to outline the nature and condition of the work.

The painting has been applied to an existing render over brick. The brick wall is approximately 450 mm thick but the presence of a cavity has not been ascertained. The render varies in thickness from 20-25 mm at the bottom tapering to 12-15 mm at the top. The render appears well attached at all the accessible places inspected but a number of defects have been painted into by Haring indicating that the render was not prepared specifically for the mural project. In particular Haring has painted into areas affected by rising damp making it clear that the render had some time to deteriorate prior to being painted.

The painting itself measures 11.5 metres in width by 7.4 metres high. Only three colours have been used - red and blue green applied over a light yellow ground colour. While the blue has remained moderately stable the yellow has chalked to a lighter hue and the red has faded dramatically. It is evident from an amateur video[2] that the yellow paint was applied by roller in two coats and is most likely an acrylic. The green paint is not filmed but the red has the appearance of a much thicker paint and this combined with its current appearance implies that this was most probably an alkyd or enamel type paint.

The painting originally extended over the small door leading to the under floor space but this has since been replaced. The door can be seen in the photograph of work in progress and from this it can be seen that it is free of human figures. It is reputed that the door was signed by Haring and although its loss is regrettable it does not diminish the painting in any significant way.

A number of plumbing and electrical fittings can be seen over the surface and all but one of these have been painted on and are visible in contemporary photographs. One conduit at the southern end replaces an earlier pipe that would have been painted. The current unpainted conduit does not impinge unduly. A fitting has been removed from the upper centre of the painting and this can be seen to be a fluorescent light in contemporary photographs.

Although a full view of the painting would be difficult at any time this has been made impossible by the placement of a guard post to control traffic into the adjacent car park and to some extent by the presence of a skip. More recently builders rubble has been dumped against the base of the wall and will cause further damage to an already fragile part of the painting.

Condition Survey

This report has focused on the condition of the painting drawn from a study of deterioration apparent on the surface of the painting. The wall supporting the work has been inspected from both sides and measurements taken of all walls and floors intersecting the wall supporting the painting. Figure 2 shows the relationship between the painting (hatched) and the internal walls and heater.

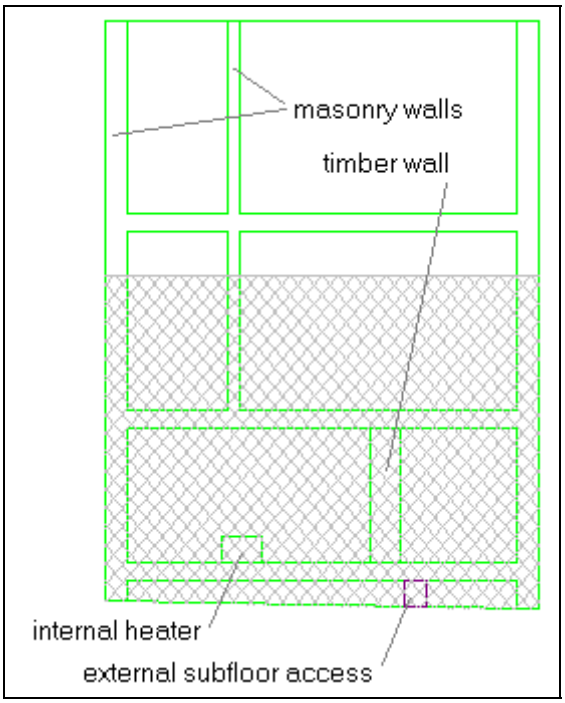


Figure 10

The wall structure behind the painting *(indicated by hatching)*

It can be seen that there is no particular impact on the outer painted surface although the upper painting changes colour at approximately the first floor level. There is no visual impact from the heater and the only real structure related deterioration is that from rising damp.

Rising damp

It is clear from a moisture survey of the wall that the outer surface is affected by rising damp. This was determined with a Protimeter moisture and salts meter. Additional deep wall readings were taken by drilling a pair of holes into the masonry through an existing damage. The deep hole moisture measurements revealed that moisture was present throughout the thickness of the wall and not simply confined to the outer render. Figure 3 shows rising damp is influenced by the two end walls that are capable of absorbing and holding greater amounts of water from the ground. The rising moisture begins at the footing, having no visible damp course, and ends at a random height determined by horizontal cracks in the render. The rising damp has been assessed with an electronic moisture meter and is confined to the area marked. It can be seen that it does not rise above the suspended ground floor suggesting there may be a damp course or simply that the concrete of the floor prevents moisture rising further.

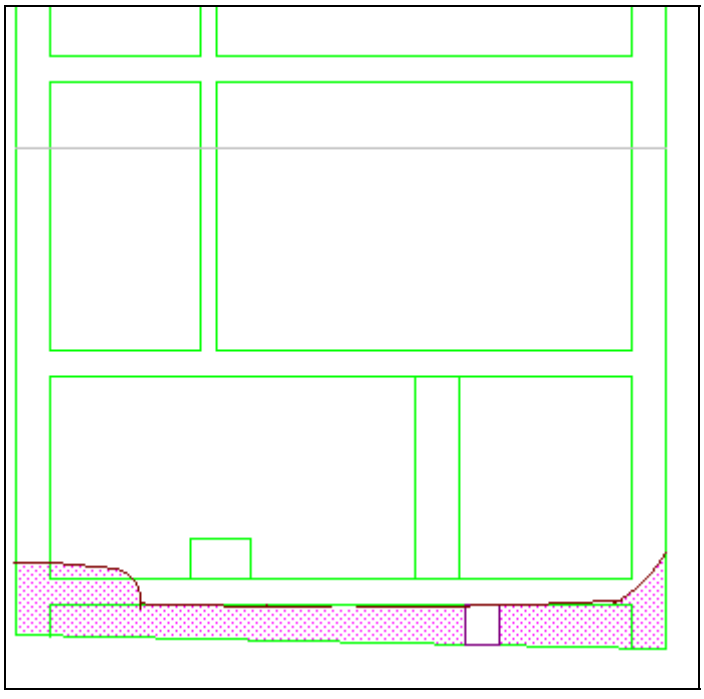


Figure 11

Dampness on painting surface

In any event the moisture is confined to the lower part of the wall and has caused not only the current discoloration but several detachments across the surface. Without removing the moisture supply the lower part of the painting will continue to deteriorate but the discoloration should not be as apparent once the paint has dried out. Associated with the rising damp is the detachment of small flakes around many of the cracks in the lower water affected zone.

The rising moisture is one of the two main threatening mechanisms causing deterioration on the painting, the second being alteration to the pigments themselves.

There are two drain junctions near the base of the wall and both of these were blocked at the time of inspection. It is quite possible that the rising moisture is due solely to the excess water build-up caused by these blocked drains and these, together with all drainage in the vicinity need to be cleared and maintained.

Pigment alteration

The painting contains only three colours - red, yellow and a blue green with only the latter remaining unaltered. The red has been analyzed using Polarizing Light Microscopy (PLM) but has no crystalline features. Non crystalline red pigments have not been well described but are definitely organic dyestuffs, known to be fugitive at ambient light levels. Almost every shop sign painted onto masonry displays a similar fading of the red component and the Haring example has been reduced considerably. The brushstrokes have become more obvious whereas in the contemporary photographs the reds all appear as solid continuous lines. Where the surface is shaded by a wall at the northern end the images tend to be less affected by fading. On the other hand some of the brightest red is found in the upper areas suggesting that the paint application has been inconsistent and that the brighter upper images may have received more paint applications. Regardless of this it is clear that those areas less exposed to light are more stable.

The yellow has chalked and is now lighter than it would originally have been. The intensity of the colour can be better seen in the colour plate in the Haring biography[1] although colour accuracy in the plate cannot be considered a true representation. It is conjectured that the currently wet yellow paint is a truer impression of the original paint. The blue green has remained relatively unaltered.

The three colours were sampled from fragments of painting found on the ground in front of the painting and consist of the following pigments;

Red organic red (identity unknown but forming a fine stain in the sample)
yellow ochre
haematite (1 particle, possibly associated with the yellow ochre)
titanium dioxide
gypsum
chalk (none of these three whites in abundance)

The red is deteriorating by micro-cracking within the paint layer. This leads to detachment from the yellow underpaint which visually gives an impression of the red fading. This is not to the case however as the remnant red on the upper wall is as bright as that found in the fully shaded areas next to the front garden wall. It is known that alkyd paints have a tendency to embrittlement and the cracking of the red is more typical of an alkyd than acrylic.

Yellow Yellow oxide
Titanium dioxide

Quartz

The yellow paint is deteriorating in a very uniform chalking due to the high Titanium dioxide content [3,4]. The titanium dioxide was confirmed using UV light which in itself highlights an important feature of titanium dioxide and its influence on paint media. Under UV TiO_2 appears black indicating that it completely absorbs UV energy. Apart from being a convenient confirmation of the pigment's identity it also demonstrates the influence the pigment will have. By absorbing all UV light (lead white and zinc oxide reflect UV). At wavelengths below 400 nm TiO_2 has sufficient energy to initiate electron/hole separation causing photoreactions including the breakdown of acrylic resins[6-8] and alkyds.

It is known that many reactions only begin once the glass transition temperature of the resin is reached. It is also known that typical house paint acrylic emulsions are and would have been in 1984, composed of a methyl methacrylate and butyl acrylate copolymer. The glass transition temperature of these emulsions would typically be 6^{o}C (the Tg of butyl acrylate[9]) thus promoting degradation reactions.

Blue Green

Yellow oxide
green dyestuff (not thalocyanine)
titanium dioxide (not in abundance)

Staining

A number of spills have occurred on the surface of the painting and these disfigure the image to a marked degree. The spills are of some congealed liquid but can be removed with appropriate solvents. Further work will be required to determine the ideal solvent for stain removal but this should improve the appearance considerably in those areas affected.

Abrasion - graffiti

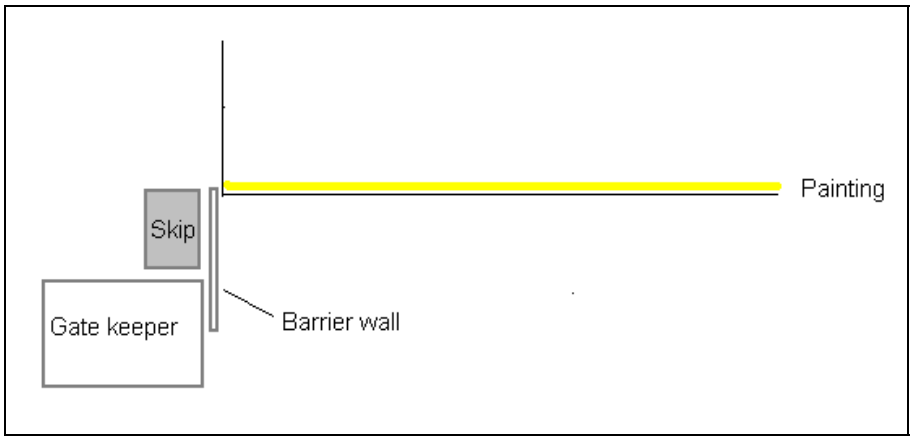
One area of the surface, at about 1.700, centre right, has been abraded by some object rubbing against the surface. It appears that this worn area may have been an attempt to remove graffiti as there is evidence of darker thin lines within the abraded area. Associated with this abraded area is a powdery bloom which may be the remnants of some cleaning agent used to remove graffiti. The total effect of this graffiti and removal has left the current surface thin, powdery and marked.

Obstructions

Part of the staining problem may be ascribed to the closely placed skip at the southern end of the wall. Although the skip does not overly obscure the painting its presence is clearly threatening. Next to the skip is a guard box used to control access to the car park in which the painting is located. The guard box does obscure much of the lower part of the painting and could equally be placed on the opposite side of the entrance gate.

While it would be best to have all of these moveable fixtures relocated well away from the painting the following figure offers a layout that would enable the painting to remain unobscured while still retaining the function of each object.

Figure 12 **Recommended relocation of skip and gatehouse.**



Removed sections

The contemporary colour plate shows that the now unpainted square high up on the wall once held a fluorescent outdoor luminaire. This no longer exists but the exposed square should remain as testament to its presence. The door to the subfloor originally contained Haring's signature and "sign" but has been replaced. One electrical conduit that ran up the southern edge of the wall has since been replaced by a more recent PVC conduit. The current conduit does not intrude onto the painted surface greatly.

Environmental assessment

As part of the condition assessment the painting has been monitored to determine the environmental impact on the surface. A data logger was installed on the surface for the duration of the treatment and set up to measure Relative Humidity together with the air and surface temperatures. The surface temperature probe was attached to the yellow background colour while the air temperature was measured very close to the surface, thus representing air temperature around the painting rather than in the shade. Shade temperature on those particular hot days was about 15% below the recorded air temperature. The following graph illustrates the results of the temperature measurements. The graph runs from the 13th of February through to the end of the month and shows five days of very hot weather followed by a cool change that continued through for several more days.

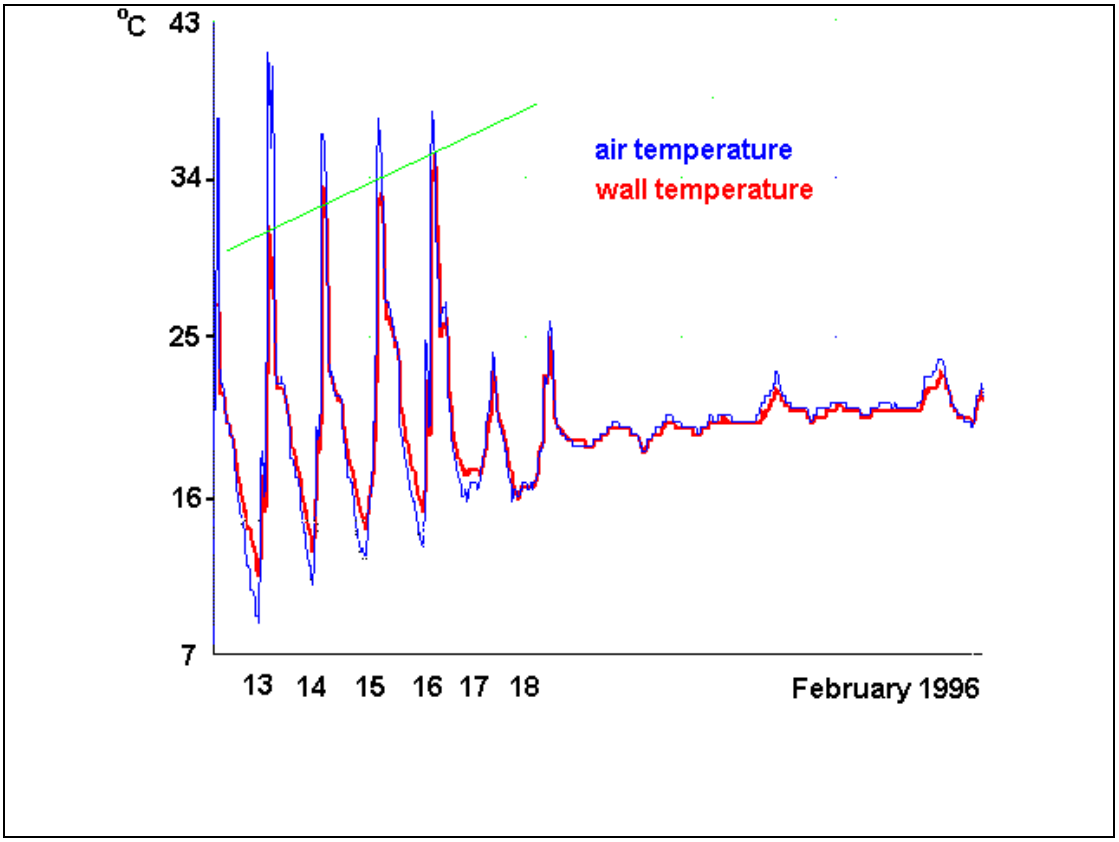


figure 5. surface and air temperatures in february 1996

The graph presents a number of interesting and pertinent observations as listed below;

The surface temperature, as clearly seen during the first five days, remains cooler than the adjacent air temperature. On the 13th for example the peak surface temperature was 10°C cooler than ambient.

While in the first five days the air temperature fluctuated, the wall gradually gained in temperature indicating a thermal storage capacity. This has been highlighted with a green line across the peak wall temperatures but can be seen equally across the minima. It can be seen that the heat storage in the wall causes the minimum temperature to remain well above ambient. The storage capacity is short lived as can be seen by the fact that the cool change maintains the same relationship at peak heating. A longer heat retention period in the wall would produce higher wall temperatures during cool changes.

The maximum air temperature is approximately 5-10 °C above recorded shade temperature while the wall temperatures would remain at or just below shade temperatures for most of the year. Hence while the air temperatures may rise above the glass transition temperature (Tg) of several acrylic resins the wall temperatures are such that most grades of acrylic would not reach their Tg. There may be several days each year however where the paints Tg is exceeded The importance of Tg is outlined in section **Error! Reference source not found.** covering pigment alteration.

Condensation potential exists on the painting but is highly unlikely to occur in reality. Condensation is generally considered only to be possible when the surface

temperature is lower than the surrounding air. This theory works well on non porous surfaces like glass but is far more complex within porous bodies. It is difficult to determine whether the current paint film is porous or continuous but regardless of this some comments on condensation can be drawn.

It can be seen from the graph that the surface temperature is only substantially cooler than the air during the hottest part of the day. The typical relationship can be summarized by the following daily cycle;

Wall warmer	20:00 - 06:00
Equilibrium	06:00 - 10:00
Air warmer	10:00 - 13:00
Equilibrium	13:00 - 20:00

This heating relationship is unique to the easterly facing wall and would vary on other walls. Were the painting on any of the three other walls it may well have deteriorated more rapidly. The above thermal balance may not be maintained at all times of the year but indicates the only danger period for condensation is between 10:00 - 13:00, not only the hottest part of the day but a time when humidity is at its lowest.

Despite there being a potential for condensation it is not fulfilled at any time. Summer is also the more likely season for condensation of this sort. The wall has already demonstrated an ability to store heat that would guarantee no condensation during Winter when the air is generally colder than building walls facing the morning sun.

The environmental study has shown that the yellow paint is a heat reflective surface that helps stabilize the painting to some extent. The study was conducted for less than a month but fortunately February is the ideal month to monitor extremes of temperature. Additional information could readily be extrapolated from this by simply comparing the temperature curves with data from the National Climate Centre thus extending the thermal behaviour to all months of the year.

Of greatest importance in the study is the recognition that temperature plays a significant role in the degradation of synthetic polymers and that many reactions will occur only when the Tg is reached. Without a knowledge of the exact

Treatments

The Condition Survey has enabled a clearer understanding of the deterioration and threatening agents around the painting, many of which have been addressed during the Treatment Programme. The following section outlines each of the interventive treatments.

Cleaning

While the overall paint surface was very clean due to self chalking the painting had received a diverse accumulation of debris and stains, largely from the presence of a waste disposal bin placed immediately in front of the painting. Prior to any solvent cleaning tests the whole surface was brush cleaned to remove any loosely attached debris. The most common debris was cobwebs and very little dust was removed from the surface.

To determine how the stains near the skip and other accumulations could be removed or diminished a series of solubility tests were undertaken. A range of solvents were tested and the impact on the paint film noted as follows. The first column lists each of the three paint

colours while the solvents have been listed in order of increasing polarity. The impact of each solvent on the paint has been classed as no solubility (ns), solubility (s) or slight solubility (ss)

	cyclohexane	white spirit	toluene	acetone	ethanol
yellow	**ns**	**ns**	**s**	**s**	**s**
red	**ns**	**ns**	**ss**	**ss**	**ss**
blue green	**ss**	**s**	**s**	**s**	**s**
	⇒ ⇒ ⇒ ⇒ Increasing Polarity ⇒ ⇒ ⇒⇒				

It can be seen that in each of the paint types there is a trend to greater solubility with increasing polarity and that in the case of the blue green paint solubility occurs with relatively non polar solvents.

The findings of this preliminary test have influenced the whole approach to the treatment of the painting. Firstly it has become clear how sensitive the paint is to almost all solvents and all treatments involving solvent application have been adjusted to accommodate this sensitivity.

The cleaning of the painting has been particularly influenced by the paint sensitivity, resulting in the realization that much of the staining caused by the skip has not been removable without causing unacceptable damage to the original surface.

Cleaning of the deposits around the skip was undertaken in two steps. It was found that the stain deposits formed a brownish film above the paint layer that was readily removed by swabbing with cyclohexane. Once this was removed the underlying stain was contained within the paint film and had the appearance of a waxy clear deposit. It was clear that the outer material was an oxidation or deteriorated outer surface that had developed different solubility properties to the underlying stain within the paint.

The remaining embedded stain was approached with further solvent treatment but with little improvement. Solvents applied in paper tissue compresses were gentle on the original paint film but softened the paint and residue equally. It was found in some cases further stain reduction was achieved but in no instance could the stain be made totally invisible. Cyclohexane proved consistently to be the better and safer solvent of the series but it was not possible to selectively remove stains from within the paint film.

It is possible that with further exposure to the sun the remaining residue will alter and become more amenable to treatment but this must take time to determine. Added to the difficulty of solvent activation of the stain was the problem of creating a halo around the stain. This was a short term concern however as the halo effect disappeared with subsequent consolidation of the yellow.

Further attempts to reduce the stain included mechanical and enzyme removal but with no significant progress. There was some reduction on some stains by the use of a sharp scalpel but overall the visual reduction was not significant. The enzyme tested was Lipase chosen for its ability to break down oils. The enzyme was prepared following procedures outlined by Richard Wolbers [10].

Paint consolidation

The Condition Survey had established that one of the greatest defects threatening the longevity of the painting was the fine cracking and detachments within the red paint. When

looked at from the normal viewing position the red areas gave the impression of having faded yet close inspection revealed that the fading was in fact caused by very small detachments of red paint from the yellow ground underneath.

Not only was the red clearly detaching from the yellow but the red brushstrokes were crazed throughout. In a few cases the detachments were visible but in general the deterioration could not be discerned by eye. It was interesting to not that this form of detachment was confined exclusively to the red brushstrokes and was totally absent from the green.

Reattachment of the red areas was effected using an acrylic emulsion (Rohm and Haas AC2235) comprised of an undisclosed ratio of methyl methacrylate and butyl acrylate. It is believed from discussions with commercial paint laboratories that this resin is almost identical to that used for formulating exterior acrylic house paints and would thus be very compatible with the yellow ground.

The method of paint consolidation was as follows:

- ◊ The surface was pre-wetted with water applied on a brush.
- ◊ The consolidant was brush applied to the surface.
- ◊ Excess adhesive was removed immediately from the surface dampened cotton swabs
- ◊ A hot air gun (paint stripping gun) was used to heat set the adhesive, thereby consolidating the flaking paint.
- ◊ Pressure was immediately applied to the heated area. (Silicone release paper was used to avoid disturbing the tacky surface).

During consolidation the following was noted:

- ◊ Care needed to be taken to ensure adhesive did not run onto the yellow background, otherwise it would result in partial saturation and darkening of the area.
- ◊ The adhesive could only be applied to relatively small areas at once (i.e. in about 3" lengths), otherwise the adhesive would begin to dry on the surface before it could be removed.
- ◊ The heat applied to the area needed to be strictly controlled to avoid any softening of the paint layer.

Establishing a resin that would remain attached to the red is more problematic and depends on the extent of deterioration of the red. It is believed from watching a video of the painting execution that the red is an oil based paint (either oil or alkyd) that has become embrittled through loss or deterioration of the plasticizer. The problem is further compounded by the incompatibility between alkyd resins and methyl methacrylate [9.] There is no similar published information on butyl acrylate with alkyd.

Continuing deterioration is almost solely dependent on how much further embrittlement takes place. However the acrylic emulsion employed can be considered a suitable plasticizer for such a resin.

An emulsion grade of resin has been chosen over solvent grades simply because it can be applied and contained at the site of detachment. Resin grades tend to be readily absorbed into the surrounding paint unless made of high viscosity.

In some of the lower areas the original yellow paint was peeling off in quite large sheets making reattachment more difficult than on the red. The main problem encountered in the yellow, due mainly to the film thinness, was the problem of resin saturation of the acrylic binder through the paint film.

The first successful approach relied on applying the hydrophobic chemical H-siloxane (described further on) to the yellow followed by acrylic emulsion to the interface. Once the yellow paint was hydrophobic the acrylic emulsion would not penetrate into the film as readily although this could result in a poor bond between the adhesive and the original.

Although this method worked well it became possible to achieve similar results without pretreating with siloxane.

Reattachment of lower render detachments.

In the lower wall as indicated by the rising damp pattern in figure 3 much of the render had become detached from its underlying rough coat while in the majority of cases the paint surface remained well attached to the detaching render.

In these areas the whole render surface was firstly consolidated with ethyl silicate to establish a sound interface. Generally when porous materials spall in this manner the interface is comprised of a very granular surface that will not readily reattach or take adhesives.

The ethyl silicate treatment has the benefit of imparting good consolidation without changing the moisture permeability of the consolidated surface. It had already been agreed that while the rising damp presented a problem that could not be ignored it was preferred at this stage to advance gentle approaches in the first instance and to then adopt more disruptive approaches if these first attempts failed. Thus it was preferred that reattachment alone should be tried without installing a damp course or otherwise modifying the permeability of the wall.

During preparation for the treatment proposal all damp proofing consultants invited to inspect the wall insisted that effective treatment would require the removal of at least a metre of the painted surface. While this could be done without loss to the painting it would be a time consuming and expensive process. The first approach has thus been to reattach the renders and determine whether they can withstand the pressure of rising moisture once the drainage is improved.

To achieve this it has been important to control the placement of treatment products that may alter the permeability of the lower wall. Ethyl silicate was thus an obvious consolidant for the render as it has no impact on the moisture movement through porous bodies. The dilemma in the whole treatment has been the fact that while the lower moisture affected renders need to remain porous the painting itself has required significant hydrophobing.

The ethyl silicate treatment was applied and left for approximately 5-6 weeks before reattachment of the renders was undertaken. This time is sufficient for the ethyl silicate to fully react and ensure a well consolidated interface.

Reattachment was then commenced using the following treatment sequence.

◊ The detached areas were once again consolidated with ethyl silicate to the specific surfaces to be reattached.
◊ A grout (formulation listed below) was applied to all of the larger detachments and to the outer edge of the thinnest detachments and allowed to cure for at least two days.
◊ A pre-wetting solvent composed of half water and half ethanol was injected into cracks and drill holes through the render to aid penetration of the adhesive.
◊ The now enclosed detachments were injected with acrylic emulsion AC 2235. The objective was to apply as much siliceous grout as possible however the fineness of the detachments prevented access for this coarser fill material in many places and the only path was through very fine cracks or through 1 mm diameter drill holes directly into the render.

The siliceous grout is comprised of the following ingredients;

ethyl silicate formed into a stable gel with hydrophilic fumed silica.
Quartz flour
Graded sands
colorants

Consolidation and protection of the paint film.

It has been described in the Condition Survey that one of the major defects with the painting, that will cause it to deteriorate in image quality quite quickly, is the chalking of the yellow ground colour.

The mechanism has been described as a result of chemical reactions between the pigment titanium dioxide and the acrylic resin. It has also been pointed out that such reactions take place at a far greater rate when the temperature exceeds the glass transition temperature of the resin (6°C in the case of butyl acrylate and hence most house paints and emulsion acrylics) and when water is present in the electro-chemical system.

A protective coating system has been applied to the painting with the following objectives.

- Consolidate the powdering yellow paint
- Keep water out of the paint layer and the underlying render
- Reduce deterioration due to ultraviolet radiation
- Reduce oxidation potential within the paint film

These four objectives must also be achieved without altering the painting's appearance in any way. It has been noted earlier that the yellow paint has undergone a substantial chromatic shift from deep yellow to light yellow and the team agreed that any saturation of the paint layer that brought the altered yellow towards the original appearance would be acceptable, if not desirable.

The treatment system was designed to address each of the four objectives and to incorporate as many treatments into the one application as possible. The system was designed as a two stage coating application and applied to the whole painting by brush application as follows;

Coating 1. Hydrogen functional siloxane at 8% concentration in white spirit.

This coating was applied by brush to the entire surface. Various concentrations were tested from 2-10%. The higher concentration was found to darken the surface while 8% had some darkening within acceptable limits. The siloxane was chosen for its known water repelling properties that have been established by Artcare through research[11] involving testing on a range of pigments including yellow oxide. The siloxane treatment was initially considered to prevent water entering the render and re-emerging behind the paint layer causing peeling. Once the mechanism of oxidation of the resin was more clearly understood it was realized that keeping water out of the paint layer itself would be of considerable benefit as well.

Coating 2. Acrylic resin with UV filter and radical scavenger.

While the first coating was applied with very clear benefits the second treatment required a great deal more deliberation. The incorporation of a UV filter has obvious benefits in preventing damaging irradiation of the acrylic medium while the radical scavenger will absorb any free oxygen forming around the reaction sites.

The products chosen were both Ciba Geigy products incorporated into a 5% w/v solution of isobutyl methacrylate (Elvacite 2045)

Tinuvin 292	Hindered amine light stabilizer	applied at 3% solids
Tinuvin 1130	UV light absorber	applied as 3% solids.

The resin thus modified with the Tinuvin products was applied in two applications. The first produced an uneven surface while after the second the painting appeared much more uniform but had increased in gloss to some extent. It was decided that another coat would produce too much gloss.

Reintegration of Losses

Although several areas of loss have occurred on the painting it is difficult to justify their complete reinstatement.

Small areas of scratching and graffiti have been painted out to minimize the their impact within the main body of the painting. At the lower edge, where rising damp has caused the loss of the rendered surface, the decision to repaint losses was slightly more difficult.

Firstly the conservation team felt strongly that additional painting would not add to the understanding or readability of the painting. This sentiment could be combined with the fact that it was clear that several areas were missing prior to Haring painting the wall. In other places it can be seen where Haring painted into pre-existing losses, thus making it difficult to contemplate filling any render loses.

A compromise was reached whereby the loss areas were not filled but toned with yellow to match the surrounding wall. After 12 months however the excessive water moving through the wall had removed or altered the yellow pigment component. The yellow used was cadmium yellow, not known to be water soluble however the titanium and zinc white used appeared to remain undisturbed.

Following this alteration, which is limited to the rising damp zone and has not affected the same pigments higher in the painting, it was decided that further reintegration should not be

undertaken at this time. The lower edge of the painting looks deteriorated but remains stable. Its deteriorated state does not detract from the reading of the image but does indicate that the painting is not a recent event.

Future maintenance

There is no denying that the Haring Mural is of great significance to Australia and to International Art. For this reason it needs to be maintained in the best possible condition. The current project has attempted to stabilize and protect the painting in a manner that does not alter its visual appearance unduly, either through physical modifications to the structure or through reconstruction of missing parts.

To maintain the painting and to ensure that it survives for as long as possible a number of procedures should be adopted.

Regular inspections

The painting should be surveyed by a trained Mural Paintings Conservator at least once every two years. The attachment of the paint needs to be assessed and the general attachment of the lower render needs to be studied very closely.

The recent treatment undertook to stabilize the lower wall without the more interventionist approach of removing the water levels within the wall. While in the proposal this approach was preferred it was pointed out that such high moisture levels may cause further losses. After almost 2 years the reattached plaster remains firmly fixed however it must be monitored for signs of failure.

It is hoped that the wall can remain in its current condition, avoiding the need to insert a damp proof course into the wall.

General Maintenance and Care

It has been noticed that since completion of the site works the Gatekeepers Hut and the skip have been relocated away from the painting. This is a very good result for the painting and it is hoped that a similar regard for the significance of the work will be maintained for the future. More recently it was noticed that a load of gravel had been dumped against the wall, threatening to damage the lower edge. This gravel and other similar activities should be avoided and the area immediately in front of the painting closed to traffic

Appendix - Interview with Keith Haring[1]

KEITH HARING Right after my 1984 show at Shafrazi, I'm invited by the National Gallery of Victoria in Melbourne, and by the Gallery of New South Wales, in Sydney, to go to Australia. Each wants me to do an on-site project.

The Melbourne gallery wants me to paint a huge glass wall, which has a cascade of water running down the front of it. This was the facade of the gallery, which is considered an equivalent to the Metropolitan Museum of Art in New York. So, they turn off the waterfall and supply me with a sort of scissor lift, which moves me back and forth or up and down.

I buy paints that work on glass, and proceed to do this mural with red and black paint. It takes about two days, and the whole thing is documented on film by pupils of the Australian Film School. When the mural is finished, front-page stories begin to appear in the Melbourne press stating how insulting it was that I, an American artist, had been hired to come to Australia to make Aboriginal art. I didn't even know what Aboriginal art was! But the Australians took real offense at what they considered to be an invasion of their artistic heritage. They got real paranoid about the whole thing.

Well, what I had painted on the glass wall was exactly what I was painting all over the world. I mean, the imagery contained all kinds of concentric arches and snakes and little figures and patterns I had no idea they strongly resembled Aboriginal art. Two months later, I learned that someone had taken a gun and shot through the central panel of the painting--and the whole thing had to be removed.

While I was in Melbourne, somebody called from the Collingwood Technical School, which is an all-boys elementary to junior high school. This person said that they had no funds, but that there was a great wall just outside the school, and would I be interested in painting it? I went to look at it, and agreed to do it - and it's become a permanent site!

For the Gallery of New South Wales of Sydney, I did an enormous indoor mural, which was temporary and was painted over a few months later.

On the whole, the Australian experience wasn't all that hot. What finally happened was that the guy who sponsored the whole trip - someone who seemed like a really nice guy - just ripped me off. I mean, he got me to do all these paintings and drawings, which I left there because he was going to organize this big exhibition. Instead , he flaked on the whole thing. When I got back to New York, we never heard from him again. We tried to track him down, because he never paid for the art works, and there was never an exhibition. So I have all these lost works in Australia!

When I get back to the states, I do other murals in fairly quick succession. One is at the Walker Art Center in Minneapolis. One is on Avenue D in New York. One is in an orphanage called Children's Village in Dobbs Ferry, New York. I also have a brief stint as artist-in-residence at the Ernest Horn Elementary School in Iowa City, Iowa.

References

1. Gruen J. Keith Haring: The authorized biography. Thames and Hudson (London 1991)

2 As published in the AGE newspaper, 27/12/94 but from uncited publication.

3 Video held by Tom Dixon, Head of Conservation, National Gallery of Victoria.

4 Volz H.G., Kaempf G., Fitzky H.G. and Klaeren A. The chemical nature of chalking in the presence of Titanium Dioxide pigments. in Photodegradation and Photostabilization of Coatings. American Chemical Society, 1981, 163-182.

5 Irick G., Newland G.C. and Wang R.H.S. Effect of metal salts on the photoactivity of titanium dioxide. in Photodegradation and photostabilization of coatings. American Chemical Society. 1981, 147-159.

6 Grassie N. Photodegradation of Methacrylate/Acrylate Copolymers. Pure and Applied Chemistry vol 34. 1973 pages: 247-257.

7 Feller R.L., Curran M. and Baillie C. Photochemical studies of methacrylate coatings for the conservation of Museum objects. in Photodegradation and photostabilization of coatings. American Chemical Society. 1981, 183-196.

8 Morimoto K. and Suzuki S. Ultraviolet irradiation of Poly(alkyl acrylates) and Poly(alkyl
methacrylates. Journal of Applied Polymer Science vol 16. John Wiley and Sons 1972 pages: 2947-2961.

9 Du Pont technical note Elvacite acrylic resins, Properties and uses.

10 Wolbers R.C. Workshop on new methods in the cleaning of paintings: Course notes J. Paul Getty Trust 1990.

11 Thorn A. The stabilization of pigments to moisture. Research report to the Australian Institute for Aboriginal and Torres Strait Islander Studies. (Canberra 1996). Unpublished

APPENDIX G - RESPONSES

Following table summarises the responses that were received during the course of preparing the CMP about the future of the Keith Haring Mural.

Date	Name	Title/Position/Company	Location	Summary
03.03.2010	Louise Mirrer	President and CEO New York Historical Society Haring's ceiling mural from the Pop Shop has been relocated to its museum	New York, USA	'I write to stress the importance of preserving and restoring the Keith Haring mural.'
05.03.2010	Jonathan Kuhn	City of New York, Parks and Recreation This agency is custodian of two Haring murals: *Crack is Wack* and one at the Carmine Street outdoor pool in Greenwich Village.	New York, USA	'The investment in public art and its care is one of enormous value and I urge those with oversight of the mural in Melbourne to take appropriate action and do the right thing.'
11.03.2010	Tony Goldman	Chairmen/CEO The Goldman Properties Company He collaborated with the Keith Haring Foundation, and Deitch Projects to temporarily reconstruct one of Haring's murals.	New York, USA	'I strongly recommend that if you have an original piece, reasonably intact that you take all proactive steps to preserve and maintain his great work.'
17.03.2010	Kenny Scharf	Kenny Scharf Studio Scharf was a colleague of Haring and recently repainted one of his murals in Brazil.	Los Angeles, CA, USA	'The positive impact alone on the surrounding area should suffice in the urgency to keep these treasures alive. The education and inspiration that these murals provide is invaluable and to lose one out of negligence would be more than a shame.'
19.03.2010	Lisa Phillips	Director, New Museum	New York, USA	'.. it is arguable that he is the most important muralist of the second half of the 20th century ... in this light, it is absolutely critical to make sure that any extant public works of Haring's are restored and preserved.'
23.03.2010	David. A. Ross	Department Chair, MFA: Practice School of Visual Arts Ross worked with Haring and	New York, USA	'It would be a shame and an outrage if a major work of Haring's tragically foreshortened life be destroyed for any reason. In fact, as a work belonging to the people of Australia and to the history of art, Haring's 1984 "Collingwood Technical School" mural needs to be

Date	Name	Title/Position/Company	Location	Summary
		presenting major exhibitions of his work.		restored and preserved.' 'I implore you to do all you can to preserve this rare and important example of Keith Haring's public mural work.'
23.03.2010	Tom Eccles	Executive Director, CCS BARD HESSEL MUSEUM Eccles has recently organised a major outdoor exhibition of Haring's work.	New York, USA	'I strongly believe that we are better for the life and work of Keith Haring and that, as custodians of his art, we are responsible for its care in our time and for the future. Every generation will be richer as a consequence of preserving its legacy. Nowhere is this truer that in the case of his pubic work in our cities.'
26.03.2010	David Galloway	Curator and critic for the International Herald Tribune (Paris) and ARTnews (New York)	Wuppertal, GER	'Every effort must be made to preserve this art-historical document for future generations. Its universal form-language testifies not just to the artist's technical skills but to his own profound humanism'
26.03.2010	Dr William Yang	Photographer	Wolli Creek, AUS	'I photographed Keith Haring when he painted the mural at the Art Gallery of NSW in 1984. This work was painted over, through lack of foresight, I think that was always the intention, but the end result was the work was lost. It would be terrible shame if the mural in Collingwood was lost through neglect.'
29.03.2010	Vincenzo Letta	Edzioniets	Pisa, ITALY	'... I appeal to whom it may concern so that the Melbourne mural can be suitably restored to survive and keep on talking to future generations, together with all the works of art left us by Keith all over the world.' He describes the impact the Haring mural in Pisa, *Tuttomond*o, has had on the city and recounts witnessing Haring painting the work.
30.03.2010	Jeffery Deitch	Deitch Projects	New York, USA	'It is a historic work and one of Keith Haring's most important public mural projects.' 'It is very important that Keith Haring's Melbourne mural be preserved and restored.'
31.03.2010	Julia Gruen	Executive Director, The Keith Haring Foundation Worked with Haring for six years, beginning shortly after his visit to	New York, USA	Soon after Haring's death, the board of the KHF unanimously agreed that overseeing and guiding the preservation and restoration of existing Haring murals would be one of its goals and responsibilities. The Collingwood mural is a unique and joyous landmark, and the KHF fully supports its restoration and preservation. We look forward to

Date	Name	Title/Position/Company	Location	Summary
		Australia.		working closely with those into whose care its rejuvenation will be entrusted.'
31.03.2010	Roberto Guiggiani	Director, APT PISA	Pisa, ITALY	'I sincerely hope that the Keith Haring mural in Melbourne can be restored and will continue being a cultural and tourist attraction for Australians and foreigners. In Pisa (Italy) – you know – we have a beautiful and important mural of Keith Haring, *Tuttomondo*, painted in June 1989, just half a year before his death.'
31.03.2010	Shepard Fairey	OBEY Contemporary artist	Santa Ana, CA, USA	The mural '.. had faded a good bit over the years.... I wondered why such an important artist's work had not been restored.' '... the murals of Keith Haring should be preserved with the same reverence for their place in history as a Michelangelo fresco.'
01.04.2010	Ian Howard	Dean, College of Fine Arts, UNSW	Paddington, AUS	'This is a great public work by a renowned artist that needs to be preserved, not only as artistic history but also as part of the cultural history of the city.'
19.04.2010	Gil Vazquez	President The Keith Haring Foundation Inc.	New York, USA	'After seeing images of the Collingwood mural in its current state, we sincerely hope that it is still considered by the community a treasure worth revitalizing. We are prepared to offer our support and would be delighted to see the Collingwood mural returned to its former beauty.'
1.10.10	Tom Dixon	Public Art Committee National Trust of Australia [Victoria] Part of the National Gallery of Victoria conservation department for many years.	Melbourne, AUS	He outlined in a phone conversation how during the early 1990s, the National Trust classified the mural, well before it was included on the VHR. At that time, the Trust fought various parties who wanted to repaint it. NMIT accepted responsibility for care of the work and raised money for the original treatment. Subsequently ownership of the site changed and follow up treatments have not been undertaken. He described repainting it as 'akin to repainting Tiepolo's *The Banquet of Cleopatra'* at the NGV.
14.10.2010	Julia Gruen	Executive Director, The Keith Haring Foundation Inc.	New York, USA	Further to the earlier response, the following was part of specific response to the draft version of the CMP issued in September 2010. 'Preserving the hand of the artist unquestionably important and preserving the mural in its current condition is an option to prevent its

Date	Name	Title/Position/Company	Location	Summary
				further decline. However, Keith did not consider his outdoor murals in the same category as his paintings, drawings or sculpture. His murals were not objects intended for connoisseurs and collectors who could 'appreciate the artist's hand' but large outdoor works executed at a scale that allowed for public viewing and which contained prophetic messages captured in energetic forms and bold colour. Keith's murals were larger than life and intended to contribute to the lives of the urban communities in which they were welcomed. Generally painted in lower socio-economic areas, Keith wanted his murals to enhance the lives of those who lived with them. As the recipients of such a genuine and generous gift, the Collingwood mural should have been better understood and care for since its inception. Other communities have undertaken this care through the restoration of their own Haring murals, choosing to return the murals as Keith originally intended and gifted them'.
18.10.2010	Craig Kenny	Director, Community Programs, City of Yarra	Richmond, AUS	'There seems to be a general consensus to at least stabilise the work to prevent further loss.' 'Council is supportive of taking immediate action to stabilise the Haring mural.'
18.10.2010	Hannah Matthews	Contemporary Art Curator Has been instrumental in raising the recent wave of interest in the fate of the mural, along with Wendy Bigami, and has been the principal contact with the Keith Haring Foundation.	Fitzroy, AUS	Provided detailed comment on the draft version of the CMP issued in September 2010. 'Essentially, the draft CMP ... deals with the Haring mural through a detailed chemical analysis and recommendations related to conservation outcomes for the site. My strong view, having engaged in detailed conversation with representatives of Keith Haring's Estate and my own expertise in contemporary art practice, is that this focus is misplaced. Concentration should not be focused on the conservation of the mural but on its restoration through re-painting as advised by the Haring Estate, people Haring entrusted with his legacy.'
26.10.2010	Paul Roser	Conservation Manager, National Trust of Australia [Victoria]	East Melbourne, AUS	'Physically, any new paint will absorb into the porous surface and there is the strong likelihood that new paint will peel up, taking the remains of the original paint with it.'

Date	Name	Title/Position/Company	Location	Summary
				'There will be also potentially adverse publicity for the Government as owner of the artwork in the form of criticism for in effect destroying a nationally significant artwork.' The Public Arts Committee strongly supports the immediate commencement of follow up treatments to be carried out by Andrew Thorn as per his report to the City of Yarra in August 2007.'
04.11.2010	Chris McAuliffe	Director, The Ian Potter museum of Art	Parkville, AUS	'I always felt, while the Tech College was still in operation, that repainting the mural with student involvement would have recaptured the emotional aspect of its production that Haring valued.' '… I would endorse the repainting of the mural, on the basis of principles and processes established by the Haring estate, in order to re-boot it as a vibrant and highly visible part of Melbourne's mural and street art history.'
04.11.2010	Simon Maidment	Director, Satellite Art Projects	South Melbourne, AUS	'In this instance the artist's relationship to these issues are absolutely clear, in addition to publicly communicating as much, he oversaw the creation of the Keith Haring Foundation, founded before his death, which has been instrumental in advocating for restoration of his public murals around the world.'
05.11.2010	Juliana Engberg	Artistic Director, ACCA	Southbank, AUS	'In the instance of this work we have the guidance of the Haring Foundation who have clear and categorical understanding that this work was considered permanent by Keith. I understand that they encourage its renewal through repainting.' '... but I do think if there is a possibility to return this important part of visual culture of the 1980s to its original intent it should be explored. ... To preserve the work in its current faded state also seems counter to the intention of the artist and is articulated by his Estate.'
05. 11.2010	Max Delany	Director Monash University Museum of Art (MUMA)	Caulfield, AUS	'The Keith Haring mural in Collingwood is important to Melbourne's cultural heritage. In return for the generous gift Keith Haring made to the Collingwood community and the city's broader cultural history it is critical that his wishes, as articulated by his Estate, be respected, and as such, I would encourage consultation with, and input from the Haring Estate in establishing the Conservation Management Plan.'

Date	Name	Title/Position/Company	Location	Summary
12.11.2010	Alexie Glass-Kantor	Director-Senior Curator Gertrude Contemporary	Fitzroy, AUS	'... in the case of the Keith Haring Mural it was the artists wish that the mural either be allowed to dissolve or re-worked at strategic times.' 'It is our view that where an artists estate is managed by a credible and respected body such as the Keith Haring Foundation, that the conservation and preservation of the artwork should be undertaken in consultation with that organisation.'
12.11.2010	Terry Smith	Professor of Contemporary Art History and Theory University of Pittsburgh	Pittsburgh, PA, USA	'The fact that some of his murals have been lovingly preserved here is important to this legacy: it makes his work available as a material part of their everyday lives, releasing it from the relatively narrow confines of the professional world.'
18.11.2010	John Buckley	Former director of ACCA He arranged for Haring to come to Australia and for students of the Film and Television School to document Haring's time in Australia.	AUS	Buckley contacted RBA by phone. He said Keith 'was not interested in conservation.' He indicated that that some action needed to be taken and that maybe the solution was to at least apply the protective coating again ASAP and think about repainting later.
No date	Gabrielle Dalton	Gittoes & Dalton Productions Arts Curator & Film Producer	Bundeena, NSW, AUS	'This is extremely important Australian cultural heritage, and world art heritage, and has to be regarded at the highest levels with serious and urgent attention to preserve and maintain this important art asset of your city.'
No date	George Gittoes	George Gittoes Studios Artist/Filmmaker	Bundeena, NSW, AUS	'I remember when Keith did this mural and felt it was a real treasure and assumed it would be well preserved and respected as the great work of art that it is. It is a disgrace it has been allowed to deteriorate without any genuine attempt made to keep it for future generations to enjoy and marvel at.'
No date	Joanna Mendelssohn	Associate Prof., College of Fine Arts, UNSW	Paddington, AUS	'... Haring was one of the most internationally significant artists working in a public space, and Melbourne is indeed lucky to have one of his lively murals.'