Appendix Three: Heritage Assessment Report - John Oultram Heritage and Design

Record Number: 2013/308221

## 3M BUILDING 950 PACIFIC HIGHWAY, PYMBLE HERITAGE ASSESSMENT



Prepared by:

John Oultram Heritage & Design Level 2, 386 New South Head Road, Double Bay, NSW 2028

Tel: (02) 9327 2748 heriagedesign@bigpond.com

Prepared for:

Ku-ring-gai Council

October 2013

© John Oultram Heritage & Design

## 1.0 INTRODUCTION

#### 1.1 THE BRIEF

The following report has been prepared to provide a heritage assessment of the existing building at 950 Pacific Highway, Pymble, NSW known as the former 3M Building. The report has been prepared on behalf of Ku-ring-gai Council, the local authority for the area.

#### 1.2 THE STUDY AREA

The study area is Lot 1 in DP718718 at Pymble, parish of Gordon, County of Cumberland. (Figure 1.1)



Figure 1.1 The Study Area

Source: Google Maps & National Trust of Australia (NSW)

#### 1.3 LIMITATIONS AND TERMS

The report only addresses the European significance of the place. The terms *fabric, conservation, maintenance, preservation, restoration, reconstruction, adaptation, compatible use and cultural significance* used in this report are as defined in the Australia ICOMOS *Burra Charter.* 

#### 1.4 METHODOLOGY

This report was prepared in accordance with the *NSW Heritage Manual* "Statements of Heritage Impact", "Assessing Heritage Significance Guidelines". The philosophy adopted is that guided by the Australia ICOMOS Burra Charter 1999.

#### 1.5 AUTHORS AND ACKNOWLEDGMENTS

This report, including all diagrams and photographs, was prepared by John Oultram of John Oultram Heritage & Design, unless otherwise noted. John Oultram Heritage & Design was established in 1998 and is on the NSW Heritage Office list of heritage consultants.

We would to thank Noni Boyd of the Australian Institute of Architects for her assistance in researching the architects for the property.

## 2.0 HISTORICAL SUMMARY

#### 2.1 EARLY DEVELOPMENT

The early development of the site has not been researched in detail but it is clear from the prior titles for the site that the area was a collection of land holdings owned by various individuals and companies. The land was originally part of portion 417 granted to Henry Henry in 1821.

Previous owners included:

OWNER	TITLE	TITLE REF
John Eaton Pty Limited	Lot 10A	Vol. 8067 Fol. 227
Northside Properties	Lot 1 in FP 303813	Vol. 10250, Fol. 37
Robert John Lukey		Vol. 1277 Fol. 107
Noel Kirkham	Part Lot 2 of Section 2 in DP	Vol. 8102 Fol. 200

Robert Lukey was the Secretary of the Australian Gas Light Company (AGL) and the aerial view of the property from 1943 (Figure 2.1) shows a gasometer on the site. The company's land holding was one acre and was purchased in 1899.



Figure 2.1 Aerial view of the site in 1943

Source: RTA, From the Skies CD Rom

2.2 MINNESOTA MINING AND MANUFACTURING AUSTRALIA PTY LIMITED (3M)

The Minnesota Mining and Manufacturing Company was formed in 1902 in the town of Two Harbors, Minnesota by the five businessmen, Henry S. Bryan, Hermon W. Cable, John Dwan, William A McGonagle and Dr. J. Danley Budd. The company aimed to mine a mineral deposit for grinding wheel abrasives.

After initial failure, the company prospered and moved to St. Paul in 1916. The company produced a number of product innovations that saw the production of waterproof sandpaper, masking tape (that was marketed under the Scotch label) and cellophane tape.

During World War II the company diverted to defence materials but continued to develop new products including magnetic sound recording tape, Scotchguard fabric protector and the Thermo Fax copying process. The company later expanded into medical and dental products and later pharmaceuticals, radiology and energy controls. By 1965 its worldwide sales had reached \$1billion.

The company's management principles were developed by William L. McKnight who served as chairman of the board from 1949 to 1966 and who encouraged his staff to delegate responsibility and encourage personal initiative. The company now employs 88,000 people and has annual turnover of \$30bilion dollars.

The company expanded to Australia in 1952 and was based at St. Mary's in Sydney. In 1966 it announced an expansion of its facilities there and the construction of a new headquarters at Pymble. The Managing Director of the time, H. B. Kosanke indicated that the company was to spend 775,000 pounds on the new headquarters.

The company took options on various parcels of land at the corner of Ryde Road and the Pacific Highway as the site of the new offices. The offices were completed in 1968 when 3M had over 1200 employees in Australia and sold 28 products<sup>1</sup>.

#### 2.3 3M BUILDING

Following the purchase of land at Pymble, the 3M Company engaged architects Hanson Todd and Partners to prepare plans for the development of the site. The preliminary plans showed two rectangular buildings on the site close to the junction of the Pacific Highway and Ryde Road with car parking to the south west and an access drive from Bridge Road. According to Bill Firth, who worked for Hanson Todd, the design was rejected by 3M and the company proposed an alternative plan with three buildings, one curved with blocks each side. This seems to have been the plan developed by the architects though the origin of the alternative proposal is not known.



Figure 2.2 Preliminary Site Plans by Hanson Todd and Partners dated 4<sup>th</sup> February 1964 Drawing 479 S1

Source: Ku-ring-gai Council

<sup>&</sup>lt;sup>1</sup> Rimington Colin, *3M Australia*, Sid Harta Publishing 2013

Development applications were lodged with Council in February 1965 (DA65/1947 and DA65/18) for the alternative plan that also included the development of three administration blocks to the south of the site. It was envisaged that the buildings would be built in stages. At that stage the 3M Company was looking for preliminary approval of the project with the full design to be submitted later.

The site was then zoned as a Residential District under the County of Cumberland Planning Scheme and part Special Business (Services Establishments) 3D and part Residential 2(b) under the Local Planning Scheme. There was opposition to the plan from the State Planning Authority and local residents. There were also issues with site access and it was eventually agreed that the access be by the handle of land connecting the site to Bridge Street<sup>2</sup>.

After long negotiations and lobbying of the Minister for Local Government by 3M, the proposal were eventually approved by the State Planning Authority and Council with conditions attached regarding vehicle access, parking and a 60 foot setback from the two main roads.

A second development application was submitted by Hanson Todd and Partners showing the preliminary plans for the site and, following approval, a detailed Building Application was submitted in 1967 (BA67/292) nominating Robert Wall and Sons as builders. Only the curved tower was built at this time along with the car parking to the centre of the site and the circular entrance drive.

The floor plans for the original building are held in Council archives and show a five storey building with a rooftop plant room. The main entrance was to the south under an open porte-cochere with a reception area and offices to the ground floor with a central core of lifts and stairwells, lavatories and kitchens. There were plant rooms at the roof and ground floor and a loading dock to the south with an escape passage and stairs to the rear. To the south east was a single storey transformer and switch room that was set partly in the ground. There was a second stair to the south east that formed a solid block on the side elevation.

The upper floors repeated the pattern of the ground floor and were divided into perimeter offices and open plan work areas. There was a Dining Room to the first floor. The roof top plant room was inset from the main elevations with a wide roof deck all round.

<sup>&</sup>lt;sup>2</sup> Ku-ring-gai council planning file 2013/185632



GROUND FLOOR PLAN



FIRST FLOOR PLAN

Figure 2.3 Floor plans of the Proposed Administration Offices for the 3M Company by Hanson Todd and Partners Drawings 479 2 & 3

Source: Ku-ring-gai Council

The lighting engineer for the building was Graeme Burslem Gwilliam (1936-) who won an award for his work at 3M.



Figure 2.4 Early view to the main foyer

Source: Rimington Colin, 3M Australia, p. 30

#### 2.4 LATER DEVELOPMENT

The southern portion of the site was later redeveloped for three additional office buildings and the development applications (DA895/85 and 1013/85) included for the construction of the two office buildings each side of the main headquarters. The drawings were prepared by architects Devine Erby Mazlin. The two blocks adjacent to the main office building did not proceed but the other three buildings were completed but did not form part of the 3M operations.



Figure 2.5 Plans for the proposed redevelopment of the site dated 1984 and prepared by Devine Erby Mazlin

Source: Ku-ring-gai Council DA895/85

In 1987 plans were lodged for the construction of the multi-level car park to the south of the building (DA1350/87) that were also prepared by Devine Erby Mazlin.

The interior of the buildings were the subject of a "Total Internal Refurbishment" that was submitted to Council in 1989. The design was prepared by architects Davenport Campbell and included the provision of a new, glazed wind lock under the front porte-cochere. The drawings included a scope of works:

- Demolition of all interior partitions and finishes
- The removal of all ceiling systems and services outside of the building core
- Removal of asbestos
- Installation of new ceiling systems including thermal detectors, loudspeakers, lighting and air conditioning
- New carpet
- Minor modification of the fire stairs
- Disabled toilet facilities

The lavatories at each level may have been refurbished at this time. The plans retained much of the internal layout of offices and open plan areas though the entry foyer was enclosed and the central halls altered. Some office and store areas were cleared and new offices added at each level.



Figure 2.6 Ground floor plan of the Proposed Total Refurbishment by architects Davenport Campbell dated 1989

Source: Ku Ring Gai Council DA2055/89

3M relocated their headquarters to Ryde in 2011 and the building was sold in 2012. It is currently vacant.

#### 2.5 HANSON TODD AND PARTNERS

Hanson Todd and Partners was established in 1964 by Albert Henry Alfred Hanson (1914-1978) and Lionel Milton Todd (?-1979).

Albert Hanson was born in 1914 in Bathurst. He entered the Faculty of Architecture at Sydney University in 1933 and graduated in 1938. He married Marjorie Leighton in the same year and they lived in the ACT. In 1944 Hanson won first prize in a housing competition conducted by the NSW Housing Commission for moderately priced housing. The runner up was the firm of Peddle Thorp and Walker.

By 1945 Hanson had moved to Sydney and ran a practice from his home in Coogee. Over the following two years a large portion of his work was for the Ryde Council Housing Scheme and the NSW Housing Commission. In the same year he built a house for himself in Illeroy Avenue, Killara that won the John Sulman Medal for architecture.

In 1954 Hanson was elected a councillor on the NSW Chapter of the Royal Australian Institute of Architects and was later president of the NSW Chapter. Hanson was originally a partner with Spencer Hanson and Partners but later joined in partnership with Lionel Todd. Their works include a major refurbishment of the Rex Vowells Theatre at the University of Sydney (1969)

Less is known of Lionel Todd though he is well known as part of the three architects (along with David Littlemore and Peter Hall) who took over the commission, under the government architect E. H. Farmer, for the Sydney Opera House after Joern Utzon had resigned in 1966. Todd was responsible for the management of the contract documents.

Todd later formed the practice of Todd Redacliff, Stockley and Johnson (1974) and Todd & Associates<sup>3</sup>.

<sup>3</sup> AIA Biographical Information

## 3.0 PHYSICAL DESCRIPTION

An inspection of the property was carried out by John Oultram in October 2013 to ascertain its layout, condition and intactness from its original construction. The current plans are shown in Figures 3.1 & 3.2.

#### 3.1 EXTERIOR

The 3M Building is a five storey building with a rooftop plant room set to the north east corner of a large, landscaped site that fronts the Pacific Highway and Ryde Road with a battle axe type access road from Bridge Street,

The building is curved in plan to the front and rear with orthogonal sides forming a segmental plan. The building is concrete framed with concrete floors. At the ground floor the front and west façades are divided with columns faced in black granite and white marble with aluminium framed glazing between. The rear façade is set partly into the ground and is faced at the ground floor in exposed aggregate panels. To the east is a single storey plant room with a flat terrace above with concrete balusters. To the front is a single storey concrete porte-cochere with a glazed entry lobby and a canted roof.

At the upper levels the facade is divided by exposed aggregate columns with exposed aggregate spandrel panels with aluminium framed glazing. The east façade is plainer with a projecting stair well in plain panels.

There is a rendered masonry plant room to the flat roof that is inset all round from the lower facades.

#### 3.2 INTERIORS

The general plan of the building is cellular and open plan offices set around a central core that is divided into two with a double lift and stair well to the west and lavatories and services rooms to the east. The core has a solid partition to the south forming a hall partly framed with storage cabinets.

The main entrance is at the ground floor and is a double bay with plasterboard walls and ceiling with inset features and a reception desk. At the rear of the ground floor is a plant room with a passage to an external access stair. There is a loading dock to the east with new concrete block walls to the exterior.

The plans vary at each level but the spaces are generally divided into various sized office spaces with some open plan elements. The partitions are generally modern, aluminium framed, glazed partitions with solid core doors. The building has gridded acoustic ceilings with integral light fittings and air conditioning outlets. There is a computer room to the first floor with a raised floor and steps and ramps to the adjoining spaces. Many of the offices retain their timber furniture and many of the spaces are fitted out with low height, acoustic partitions.

The main stair in finished in terrazzo with rendered masonry walls and a steel balustrade. The second fire stair is plainer with a concrete stair. The bathrooms and kitchens are generally later with tiled floors and walls and plasterboard ceilings with laminate stalls and sink hobs. The lavatories were originally wash down type but some have been replaced with cisterns. The lavatory at the ground at the loading dock floor appears original with tiled walls and floors.

The roof level plant room is accessed by the main stair and has a variety of air conditioning and other plant.

#### 3.3 GROUNDS

The building is set in expansive grounds that are heavily landscaped. The site is below the level of the main roads and is partly terraced to the north and east with concrete, interlocking retaining walls. The site is relatively level but slopes from the north west where there is a large area of lawn. To the front of the building is a circular entrance drive with central lawn and feature tree. There is at grade, asphalt car parking to the south of the building with steel entrance gates at the end of the access road from Bridge Road.

To the south of the site is a two storey car park structure that is set partly below ground and is an unusual structure with steel and concrete columns, steel beams and a flat concrete deck. There are sloping access drives both ends. There is a narrow void to the north of the car park supported on a concrete block retaining wall with trees to a central planter.

The site is dotted with mature trees, mainly Eucalypt species, and there are extensive planting of azaleas and other shrubs to the front of the building.

There are lines of trees to the south and west boundaries. The terraced areas to the north and east are laid to lawn with perimeter trees and shrub plantings. There is a large 3M sign to the south east of the building facing Ryde Road.

3.4 ENVIRONS

The site is bounded to the north and east by the Pacific Highway and Lane Cove Road. To the west, fronting Bridge Road, and to the south, is a series of three to four storey office buildings. The latter share the access road from Bridge Road.

Figures 3.3 - 3.17

## GROUND FLOOR



Figure 3.1 3M Building Current Plans

Source: Bunnings Group Limited



Figure 3.2 3M Building Current Plans

Source: Bunnings Group Limited



Figure 3.3 3M Building, Pymble Front elevation



Figure 3.4 3M Building, Pymble

Rear elevation



Figure 3.5 3M Building, Pymble

West elevation



Figure 3.6 3M Building, Pymble South elevation



Figure 3.7 3M Building, Pymble orte cochere



Figure 3.8 3M Building, Pymble

Ground floor detail to the west elevation



Figure 3.9 3M Building, Pymble

Ground floor detail to the rear elevation



Figure 3.10 3M Building, Pymble Typical office floor



Figure 3.11 3M Building, Pymble Central core

JOHN OULTRAM HERITAGE & DESIGN

HERITAGE ASSESSMENT



Figure 3.12 3M Building, Pymble

**Reception Area** 



Figure 3.13 3M Building, Pymble Main stair



Figure 3.14 3M Building, Pymble Original lavatory to the ground floor



Figure 3.15 3M Building, Pymble Site view looking south



Figure 3.16 3M Building, Pymble Site view looking south east



Figure 3.17 3M Building, Pymble

Site view looking west

## 4.0 HERITAGE LISTINGS AND CONTROLS

#### 4.1 NON STATUTORY LISTING

#### 4.1.1 National Trust

The property is classified on the Register of the National Trust of Australia (NSW). The listing has no statutory implications for development at the place but is widely regarded as an authoritative indication of significance.

#### 4.1.2 Australian Institute of Architects

The building is not listed on the Australian Institute of Architects (AIA) list of Nationally Significant 20<sup>th</sup> Century Architecture but is currently being considered for inclusion of the Register of Significant Architecture in NSW. A listing sheet has not yet been prepared.

4.1.3 The Twentieth Century Heritage Society of NSW Inc.

The building has been identified by the Society as being worthy of protection as an item of cultural heritage.<sup>4</sup>

#### 4.2 STATUTORY LISTINGS

4.3 HERITAGE BRANCH OF THE NSW OFFICE OF ENVIRONMENT AND HERITAGE

## State Heritage Register

Under the Heritage Act 1977 (as amended), the Heritage Branch of the NSW Office of Environment and Heritage administers and maintains the State Heritage Register (SHR), a register of items and places that are considered to have heritage significance at a state level. The subject property is not listed on the State Heritage Register.

#### State Heritage Inventory

The Heritage Branch also compiles the State Heritage Inventory, a collated database of all places listed on statutory heritage lists, including Local Environmental Plans. The subject property is not listed on the Inventory.

#### 4.4 LOCAL AUTHORITY

The local authority for the area is Ku-ring-gai Council. The property is not listed as a heritage item in Schedule 7 Parts 1 and 2 of the *Ku-ring-gai Planning Scheme Ordinance* (as amended) (KPSO) and is not within a conservation area. The property is outside of the local centres identified in the *Ku-ring-gai Local Environmental Plan (Local Centres) 2012.* 

The property is within the Pymble Business Park and would be the subject of the provisions of the *Ku-ring-gai Local Environmental Plan 219 (Pymble Business Park)*. This LEP does not contain any heritage provisions.

Council has prepared a Draft Ku-ring-gai Local Environmental Plan 2012 but the heritage status of the property has not been changed in this document.

<sup>&</sup>lt;sup>4</sup> Letter to Ku-ring-gai Council dated 6<sup>th</sup> August 2013

## 5.0 DISCUSSION OF SIGNIFICANCE

#### 5.1 HISTORIC SIGNIFICANCE

5.1.1 3m Building

The 3M Building is an interesting example of a late Twentieth Century office building that was constructed c.1967 for the 3M (Minnesota Mining and Manufacturing) Company as their Sydney headquarters.

The 3M Company was founded in the Two Harbors, Minnesota in 1902 and through a series of technical inventions relating to sticking tapes and fabric protectors became a successful and innovative global business that later diversified into many fields including medical and pharmaceutical products. The company remains a very large corporation that employs 88,000 people worldwide and has an annual turnover of \$30 billion dollars.

The Company was established in Australia in 1952 and set up a manufacturing plant at St. Mary's in Sydney. In 1966 the Company announced its intention to construct a new headquarters at Pymble and the company took options on various lots at the corner of The Pacific Highway and Ryde Road for this purpose.

The reasons for the selection of the site are not clear. Rimington notes that the site was large enough and cheap enough for their requirements and had definite advertising value<sup>5</sup>. The land was held in a variety of parcels and was not zoned for commercial use and the

proposals were opposed by the planning authorities and local residents on this basis, though Council eventually approved the development. The site had been previously used for a gasworks and may have been heavily contaminated though his may not have been such an important consideration in the 1960s as it is now.



Figure 5.1 M.R 139 Ryde Road intersection to the State Highway Pymble

The gasometer can be seen to the left

Source: State Library of NSW Government Printing Office 1-01487

<sup>&</sup>lt;sup>5</sup> Rimington Colin, op. cit. p. 31

3M engaged architects Hanson Todd to prepare designs for the site. The initial plan for two towers was rejected by the company and an alternative plan for three buildings with a curved building flanked by two towers each side. Only the curved building was constructed and the site relandscaped into a park like setting. The building was constructed by builders Robert Wall & Sons. The development marked the establishment of the NSW headquarters of a major, international company in Sydney in the manner of AMP at Circular Quay and MLC at Miller Street, North Sydney. The building represents the desire of the company to have a substantial, purpose designed office complex and provide high quality office space for its staff in the park like, landscaped setting.

Major development proposals were prepared for the site in 1985 that included the two flanking towers to the original building and three additional office buildings to the south of the site. Only the latter were built. The designs were prepared by architects Devine Erby Mazlin.

Major alterations were carried out to the interiors of the building c.1989 to designs prepared by architects Davenport Campbell. The works include a new glazed porch under the front porte-cochere.

3M left the site in 2011 to move to new headquarters at Ryde and the building was sold in 2012.



Figure 5.2 View of the site in 1986

The development of the southern section of the site appears to be in progress. Source: RTA Ref 19860501PB030 5.1.2 High Rise Development in Ku-ring-gai

The development would have been rare in Pymble at that time as, prior to the war, the area had been zoned residential and commercial development was limited to the main commercial centres along the railway line.

Up till 1951 20<sup>th</sup> Century planning in NSW was governed by the Local Government Act 1919 that extended a range of discretionary powers to Councils in subdivision and development matters though this did not lead to the widespread introduction of planning controls. Ku-ring- gai introduced planning controls in 1921 and established the first Residential District in 1924. Council opposed applications for multi-storey residential units but, under pressure from the Minister for Local Government expanded their Residential zones to allow apartment

development in selected areas<sup>6</sup>. The local planning controls also covered areas for Local Light Industry.

<sup>&</sup>lt;sup>6</sup> Paul Davies Pty Limited, *Ku-ring-gai Town Centres Heritage Conservation Area Review*, September 2008, p.23

The Local Government Act was amended in 1945 under the Local Government (Town and Country Planning) Amendment Act that enabled councils to prepare comprehensive planning schemes. Few local Councils took the opportunity afforded, only four by 1963. Ku- ring-gai developed planning controls under these provisions but it took more than twenty years to formalise these under the Ku-ring-gai Planning Scheme Ordinance (KPSO) in 1971<sup>7</sup>.

Under the Act, a middle tier of government was introduced, the Cumberland County Council, to oversee preparation and implementation of Sydney's first metropolitan plan. Released in 1948 (but not gazetted till 1951) the County of Cumberland Planning Scheme was a comprehensive expression of public policy that introduced land use zoning, suburban employment zones, open space acquisitions and a green belt to Sydney.





Figure 5.3 County of Cumberland Planning Scheme Maps

The illustration to the right shows the subject site. The red areas (including the 3M site) are marked as Living Areas with purple being Industrial

The Plan anticipated the residential expansion of the suburbs (including in Ku-ring-gai) to decentralise the population away from central Sydney and the establishment of District Centres in areas of population growth. On the north shore, three centres were identified; Hornsby, Chatswood and North Sydney.

The site at Pymble was zoned as a Residential District under the County of Cumberland Planning Scheme and part Special Business (Services Establishments) 3D and part Residential 2(b) under the Local Planning Scheme. The original proposals were opposed by the State Planning Authority on the grounds that they would cause a traffic hazard on the

main highways, were unsuitable to the locality and would set an undesirable precedent<sup>8</sup>.

The Cumberland County Council was largely a failure and after its demise in 1963 responsibility for planning matters passed to the State Planning Authority. The Authority reviewed the Cumberland Planning Scheme and developed the Sydney Regional Outline Plan that reinforced the concept of District Centres. Larger scale commercial development was concentrated in these centres and the 3M building would have been an early example of a large commercial development outside of the District Centres.

<sup>&</sup>lt;sup>7</sup> Paul Davies Pty Limited, op. cit.

<sup>&</sup>lt;sup>8</sup> Ku-ring-gai Council planning file 20123/185632

#### 5.2 AESTHETIC SIGNIFICANCE

The 3M Building is an example of a late Twentieth Century International style building set in park like grounds. It was a purposed designed headquarters for the company in the manner of similar headquarters such as the MLC (Mutual Life & Citizens Assurance Company) Centre (1957/58) at Miller Street, North Sydney designed by Bates Smart McCutcheon and the AMP Building (1961) at Circular Quay designed by Peddle Thorp and Walker.

The Post War austerity conditions in Australia limited development in Sydney to the residential sector where there were some significant developments in the use of the International style particularly by architect Harry Seidler on the north shore. The Rose Seidler house was constructed in 1948 and a house at Turramurra in 1953. There was also some interesting high-rise residential development including the Stanhill Apartments in Melbourne (1942-50), designed by Frederick Romburg, and 17 Wylde Street, Potts Point (1950) that was designed by Aaron Bolot. The latter is of interest as it was a curved design and may have been one of the earliest International style buildings in Sydney to adopt this form.

	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
	The state of the s
and the second se	set in
Contraction of the second s	
The second se	
	5-13N
	1-42
	It'll shares a merit

Figure 5.4 View of the design of 17 Wylde Street by Aaron Bolot

The final design was not as sleek

Building and Engineering, 24th May 1948

J.M Freeland notes in the book on Australian Architecture:

It was a full decade after the end of the war before conditions were right for the re- commencing of other then domestic and industrial buildings. From 1955, however the gates opened and Australian building embarked on the greatest period of expansion in the country's history.

The major developments were concentrated in the Sydney CBD. Development in the city centre was restricted to 100 feet but the height limit was broken by the construction of the AMP Building (1962) at Circular Quay that was designed by Peddle Thorp and Walker. There was less development on the North Shore that was concentrated in the District Centres of North Sydney and Chatswood.



Figure 5.5 The MLC building in Miller Street, North Sydney by Max Dupain (1957) and a view to North Sydney dated 1962 showing high rise development concentrated in its CBD

Source: North Sydney Library Ref PF1679 & PF299

The design of the new towers was commonly in the form of curtain wall facades or concrete framed facades with solid spandrels. The fully glazed curtain wall was not responsive to the harsh, Sydney environment and some buildings provide sunshading in the form of concrete panels as at Stephenson and Turner's IBM Building (1963). The use precast concrete panels with exposed aggregate also became common in the 1960s<sup>9</sup>.

Freeland also noted that many of the architects working after the war had little experience with the high rise form and their "first fruits were often slick and not very sensible".

The 3M Building was designed by architects Hanson Todd and Partners that had been established in 1964. Albert Hansom (1914-1978) was fifty by that stage. Prior to this, Hanson appears to have worked largely in the residential field including public housing developments at Ryde. Hanson won the Sulman medal for his own house in Killara in 1945. Less is known of the Lionel Todd who is better remembered for his role in the detailed construction of the Opera House following the resignation of Joern Utzon in 1966.

Only one reference was found to another of their office developmentss, a building at East Circular Quay that has now been demolished.

It is not clear why 3M selected the practice as the partnership was formed in the same year as their appointment (though may have been established to carry out the design). The architect's original design for the layout of the building showed two, linked rectangular buildings set to the north east of the site with access and car parking.



Figure 5.6 Preliminary Site Plans by Hanson Todd and Partners dated 4<sup>th</sup> February 1964 Drawing 479 S1

Source: Ku Ring Gai Council

<sup>&</sup>lt;sup>9</sup> Freeland, J. M. Architecture in Australia, Penguin Books 1968, p. 302

The plan was reputedly rejected by 3M and a revised design prepared showing three buildings with a curved, central tower. It is not clear if 3M pointed the architects to a particular exemplar that they wished to follow or whether the architects altered the design themselves in response to the Company's comments. In their initial submissions to Council the Company noted:

The project is very important to the company and for that reason we have called for assistance from our parent company in the U.S.A. in the form of engineering and architectural advice<sup>10</sup>.

The revised design could have been influenced by more local examples and there were some examples of modern, curved, high rise forms in Sydney at that time the most prominent being the AMP building at Circular Quay (1961) and 17 Wylde Street at Potts Point (1950).





The plan shows the building as built with the circular drive and car parking to the south

Source: Ku Ring Gai Council

The design was an interesting response to the site with the building nestled into the site slope to the two major roads and the remainder landscaped. The circular drive and curved retaining walls reinforced the built form and provided an axial focus for the main entry point. The building curves embrace rather than dominate the well-landscaped site and the overall composition of built form and landscaping is remarkably successful.

The building used well-known technology of concrete framing and precast panels and used exposed aggregate finishes that would have been common at the time. The vertical emphasis of the exposed concrete fins is limited by the height and the building does not have the vertical drama of the AMP building.

<sup>&</sup>lt;sup>10</sup> Ku-ring-gai Council planning file 2013/185632 Letter dated 2<sup>nd</sup> February 1965

The exterior of the building is very intact with only small changes apparent in the front entry and the loading dock. The interiors adopted the common form of a central core with office spaces all round. The early photograph (Figure 2.3) shows little the original internal detail though it was common for architects to use the highest quality materials, particularly in a show case headquarters. The foyer furniture appears to be of bespoke design. The interiors were heavily altered c. 1989 when all of the interior finishes were replaced. Only one lavatory and the stairs appear intact. The current finishes are not of a high order and could be found in any period of office from the 1980s onwards.

The site was heavily landscaped with lawns, Eucalypts and exotics with extensive use of low level plantings of azaleas. The landscaping gives a park like setting that was the intent of the original design and this has been retained despite the later construction of the car park (c.1987) and the buildings to the south and west (c.1985).

The lighting designer for the project was Graeme Burslem Gwilliam who won an award for the project.

#### 5.3 SOCIAL

The place would have some special associations for former employees of the Company and particularly those employed at the site. The building marked the formal establishment of the 3M Company headquarters in Australia.

#### 5.4 TECHNICAL/SCIENTIFIC

There appear to have been previous structures on the site including the former AGL gasworks (See Figure 5.1) and the site may have some archaeological potential. The gasholder was to the south of the site and may be outside of the current lot boundary to the

3M complex. The level of development and any site remediation may preclude there being any underground remains.

#### 5.5 INTACTNESS AND RARITY

The exterior of the building is very intact but the interiors have been heavily altered. There is little evidence of the original, internal detail (apart from the stair wells) as this was comprehensively replaced in 1989. The extant detail to the stairs and one ground floor lavatory is not distinctive and uses materials (terrazzo and larger format tiles) common at the time.

The landscape setting is partly as is when built and the later development of the car park structure has had a limited impact on the park like setting of the building. The planning submissions at the time of development make it clear that it was intended to create a park like setting for the new headquarters although the plans clearly allow for additional buildings that would have taken over a fair portion of the site. As built, the building is successfully integrated into the landscape with the curved façade forming a focus for the landscaping that is reinforced by the retaining structures to the rear.

Though further research is required to confirm this, the building is likely the first International style, high rise building in Ku-ring-gai.

#### 5.6 COMPARATIVE ANALYSIS

The 3M building is not a seminal work in terms of its style, layout, detail or construction methods that had become commonplace at the time. The building would have been a first in the local area as there was little commercial development of this scale in Ku-ring-gai. It is not clear of the building had any influence on similar developments on the North Shore.

The building is not identified in any heritage listings and is not identified in Richard Apperley's book *A Pictorial Guide to Identifying Australian Architecture*. Hanson and Todd are not identified as being key practitioners of the style. The lack of information on their other work makes an assessment of their comparative significance difficult. Todd would have been completely occupied by his role managing the contract documents for the Sydney Opera house following his appointment to the architectural team for the building in 1966.

The building is in the International style that was promoted after the Second World War by architects such as Harry Seidler and that became popular for high rise buildings.

Most of the larger commercial buildings seen in Sydney from its time adopted a rectangular form, particularly in the gridded layouts of the main CBDs. Comparable development in Sydney includes:

BUIDING	ARCHITECT	DATE
17 Wylde Street	Aaron Bolot	1950
Qantas House	Rudder Littlemore and Rudder	1957
AMP Building	Peddle Thorp and Walker	1961
Australia Square	Harry Seidler	1964/1967

The 1950s saw a considerable expansion of tall office buildings in Australia that reflected the selfconfident stance of a nation emerging from war time austerity and the desire of large companies to provide a high quality headquarters reflecting their economic success.

Compared with these buildings, the 3M building could not be regarded as a seminal piece of work but is a well detailed, International style building that is representative of 1960s architectural trends.



#### 5.6.1 17 Wylde Street

Figure 5.8 17 Wylde Street as completed in mid 1951

Source: Building and Engineering, September 1951

17 Wylde Street is a ten storey, International style apartment building was a ground breaking development adopting an unusual curved plan. The building was designed by Aaron Bolot who produced several buildings for the same client (a housing cooperative). Bolot's style was quite eclectic and the building is in marked contrast to his other work.

The building is held in very high regard for the quality of its design and is listed on the Australian Institute of Architects Register of Nationally Significant 20<sup>th</sup> Century Architecture and the Sydney Local Environment Plan 2012.

### 5.6.2 Former Qantas House



Qantas House is a twelve storey building in the International style that was constructed between 1955 and 1957 as the headquarters of Qantas Empire Airways. It was opened in 1957 by the prime minister of the day, Robert Menzies. It was designed by architects Rudder Littlemore and Rudder. It is notable for its curved plan form, its early use of curtain wall façade system and its well resolved detailing to its interiors.

#### 5.6.3 AMP Building



Figure 5.7 AMP Building, Circular Quay 1962

Source: Dictionary of Sydney

The AMP building is regarded as a seminal building in the development of Sydney as it was the first high rise office building to break the 100 foot height limit and set the pattern of high rise building in the CBD. It is 25 storey tower with a multi-storey podium supported on expressed columns with a glazed infill. It has a vertical emphasis from its external fins and has a curved form that is reflected in the 3M building. It was also built for a major company as its Australian headquarters. It is not regarded as a building of the highest order architecturally but is listed as a heritage item in the Sydney Local Environment Plan 2012.

The building may have been influential in the design of the 3M building as it has some similarities in terms of detailing at the ground floor, the main elevations with their vertical fins and the blank side walls.

### 5.6.4 Australia Square



Australia Square is regarded as one of the most outstanding examples of late Twentieth Century International style architecture in Australia. It established new principles of design and construction through its distinctive cylindrical form and the use of structurally shaped reinforced concrete. It is also notable for being an innovative development of a city block where parcels were amalgamated to achieve the site. The main plaza is regarded as one of the most successful civic spaces in Australia.

The building was designed by Harry Seidler and won the Sulman medal and Civic Design Award in 1967.

It would seem likely that the architects for the 3M building, Hanson and Todd, would have been fully aware of these precedents and other high rise developments that were appearing in Sydney and their work at 3M certainly is reflective of contemporary design trends. The fact that the 3M building was not recognized at the time as being of particular significance (e.g. lack of awards and appearance in contemporary publications) is indicative that the building was a follower rather than a setter of trends.

## 6.0 ASSESSMENT OF SIGNIFICANCE

## 6.1 CRITERIA FOR ASSESSMENT

The Heritage Office of New South Wales has issued guidelines as part of the NSW Heritage Manual regarding the assessment of heritage significance.

An item will be considered to be of State (or) local significance if, in the opinion of the Heritage Council of NSW, it meets one or more of the following criteria.

Criterio	An item is important in the course, or pattern, of NSW's cultural or natural
n (a)	history (or the cultural or natural history of the local area)
	The 3M Building is an example of a late Twentieth Century office building
	that was
	constructed c.1967 for the 3M (Minnesota Mining and Manufacturing)
	The building was constructed on the site of the former Pymble Gas works
	that was
	The building is an early example of a high rise company headquarters in Ku-
	ring-
	Local Significance
Criterio	An item has strong or special associations with the life or works of a person,
n (b)	or group of persons, of importance in NSW's cultural or natural history (or
	the cultural
	The building is strongly associated with the 3M (Minnesota Mining and
	Manufacturing) Company that was established in Two Harbors Minnesota in
	1902 and that has grown into an influential and innovative company with
	offices and plants worldwide
	The building was a landmark development for the company reflecting their
[	corporate strength and remained as their headquarters for over forty years
	The building is associated with the architects Hanson Todd and Partners
	Local Significance
Criterio	An item is important in demonstrating aesthetic characteristics and/or a high
n (c)	degree of creative or technical achievement in NSW (or the local area)
	The 3M Building is an example of a late Twentieth Century office building in
	the
	International style that forms the focus for the expansive landscaped
	The building is a well-known local landmark set on a prominent site at the
	junction
	The building was designed by architects Hanson Todd and Partners
	Local Significance
Criterio	The item has strong or special association with a particular community or
n (d)	cultural group in NSW (or the local area) for social or spiritual reasons
	The place may have special associations for a former employees and
	those
	Local Significance
Criterio	An item has the potential to yield information that will contribute to an
n (e)	understanding of NSW's cultural or natural history (or the cultural or natural
	history of the local area)
	The archaeological potential of the site is moderate
	Local Significance
Criterio	An item possesses uncommon, rare or endangered aspects of NSW's
n (f)	cultural or
	Is rare locally as being an early example of a high rise office building in the
	International style with an unusual curved design
	Local Significance

Criterio	An item is important in demonstrating the principal characteristics of a class
n (g)	of
107	NSW's
	Cultural or natural places; or
	The property is a good, and relatively intact, example of a five storey, late
	Twentieth Century, International style office building with associated
	Does not meet the criterion at a State level
	(or a class of the local area's:
	Cultural or natural places; or
	Cultural or natural environments)
	The property is a good, and relatively intact, example of a five storey, late
	Twentieth Century, International style office building with associated
	Historically Representative Locally
	Aesthetically Representative Locally
	Socially Significant Locally
	Technically Significant Locally (Archaeology) Rare Locally

#### 6.2 STATEMENT OF SIGNIFICANCE

The 3M Building is an interesting and locally rare example of a late Twentieth Century office building in the International style that was constructed c.1967 for the 3M (Minnesota Mining and Manufacturing) Company as their Sydney headquarters. The building is an early example of a high rise company headquarters in Ku-ring-gai in an area that was zoned for residential development. The building was designed by architects Hanson Todd and Partners on the site of the former Pymble Gas works that was established by the Australian Gas Light Company in 1888. The building is intact externally but has been altered internally and is set in a well-landscaped site that retains much of the original setting of the building. The building represents the establishment of the 3M Company in Australia was a landmark development for the company reflecting their corporate strength and remained as their headquarters for over forty years. It is likely to have special associations for former employees and is a local landmark.

The building is of high significance locally.

## 7.0 SUMMARY AND RECOMMENDATIONS

In summary we consider that the 3M building:

- Cannot not be considered to be an architecturally important at a citywide level
- Is a well designed and relatively intact, representative example of the International style
- Retains its original landscaped setting that is unusual for a building of this style
- Is an important building in Ku-ring-gai as it was likely the first high-rise, International style building in the LGA
- Has important historical connections with the 3M Company
- Represents the beginnings of the Post War, large scale, commercial development in the LGA

In heritage terms, we consider that the building meets the Heritage Branch criteria for listing as a heritage item in the Draft Ku-ring-gai Local Environment Plan 2013.

JOHN OULTRAM

# Appendix Four: Draft Heritage Listing Sheet – John Oultram Heritage and Design

Record Number: 2013/308218

8.0 APPENDI	X B - SHI LIST	ING SHEET FOR FOR	MER 3M BUILD	ING	
		ITEM DETAI	LS		
Name of Item	Former 3M Build	ing			
Other Name/s Former Name/s					
item type					
(if known) Item group					
(if known) Item category (if known)					
Area, Group, or Collection Name	Heritage item				
Street number	950				
Street name	Pacifo Highway				
Suburb/town	Pymble Postcode 2073				
Local Government Area/s	Ku-ring-gai Municipal Council				
Property description	Muit storey office i	puilding in landscaped grounds			
Location - Lat/long	Latitude		Longitude		
Location - AMG (if no street address)	Zone	Easting		Northing	
Owner	Bunnings (former o	owner the 3M Company)			
Current use	Commercial				
Former Use	Commercial				
Statement of significance	International style their Sydney head in an area that wa and Partners on t Company in 1888, site that retains m Company in Austr	an interesting and locally ra that was constructed a 1967 if quarters. The building is on as a zoned for residential develop he site of the former Pymble The building is intact external who of the original setting of the alia was a landmark devation alia was a landmark devation and a the setting of the alia was a landmark devation and the setting of the alia was a landmark devation and the setting of the setting of the alia was a landmark devation and the setting of the setting of the alia was a landmark devation and the setting of the setting of the alia was a landmark devation and the setting of the setting of the alia was a landmark devation and the setting of the setting of the alia setting of the alia setting of the alia setting of t	in the 3M (Minnesota dy example of a high iment. The building is Gas works that was y but has been altered building. The buildin ment for the compan	Mining and Manufa rise company headq vas designed by arc established by the linternally and is set g represents the est y reflecting their co	cturing) Company as uarters in Ku-ring-gai hitetts Hanson Todd Australian Gas Light in a well-landscaped abishment of the 3M rporate strength and
Level of Significance		State 🗌		Local X	

JOHN OULTRAM HERITAGE & DESIGN

HERITAGE ASSESSMENT

		DES	CRIPTION			
Designer	Hanson Toda and P	<sup>3</sup> ाजस्थाऽ				
Builder/ maker	Roten Wall & Sons					
Physical Description			ang with a reation plant Highway and Ryde Road (			
	is concrete transdu faced in black grant into the ground and	with concrete floors te and white mark is foced at the grou toe above with con	int and rear with orthogona At the ground door the th With auminium tranted g and floor in exposed aggreg onete ballisters. To the from	ont and west foçal Jazing between Jate ponets. To the	des are divided wate The rear foçade is s e east is a single star	oo'umnis et porty ey plant
	with aluminium boar	ed glazing. The a	á by exposeá aggregate co ast façade is prainer with a troat that is inset all round	projecting star we	lin plain panels. Th	
	with a double lift an	a stair well to the v	kar and open plan offices s best and levataries and set ly framed with statage caba	vices rooms to the		
	partitions are gener	oliy modem, olumi	ed into various sized office r/um framed, glozed parts ght fittings and or condition	cons with solid co		
	pipiner with a cond	ete start. The ba s wich lanninate sta	th rendered masonay waks throoms and kitchens are ills and sink holds. The far ins.	generally later wit	h tiled floors and w	sils and
	roads and is party to level but slopes from entrance drive with	irraced to the north the north west wh central form and f	ds that are heavily landso I and East with concrete, in are there is a large area of Eature tree. There is at g end of the access road fro	teriociong retaining 'lawr. To the Bor yade, asphalt car	y walls. The site is n It of the building is a	Kobeely circular
			cor pork soucture. The sit a of azaleas and other sites			boolypt
Physical condition and Archaeological potential	Good condition		ormer AGL gas works)			
Construction years	Start year	1967	Finish year	1968	Circa	
Modifications and dates	1985 – Development 1987 – Tow level cor 1989 – Total internal	\$2. <del>\$</del>	1	l	I	<u> </u>
Further comments	The building is largel	y misci is its extern	al elevations			

JOHN OULTRAM HER/TAGE & DESIGN

### HERITAGE ASSESSMENT

	HISTORY
Historical notes	Development of the 3M site The site was a collection of Iand Haldings owned by various individuals and companies. The land was orginally part of portion 417 granted to Herry Herry in 1821. Part of the site was owned by the Australian Gas Light Company (AGL) from 1899 and was a gas works.
	38 Building The Sim building was built as the headquarters of the Minnesola Mining and Vanufacturing Company (3V). The company was formed in 1902 in the town of Two Harbors. Minnesola. The company expanded to Australia in 1952 and was based at St. Mary's in Sydray. In 1966 it announced an expansion of its factors there and the construction of a new Headquarters at Pymble. The company tock options on various parcels of land at the comer of Ryve Root and the PaceRe Highway as the at of the rew proces. The official screek of land at the when 3M had over 1200 employees in Australia and sold 28 products.
	The SV Compony engaged prohibits Kanson Todd and Parners to prepare plans for the development of the site. Development applications were ledged with Council in February 1965 (DA651147 and DA65116) that included the development of three administration blocks to the south of the sole. There was opposition to the plan form the State Planning Authority and locair residents. After negotations and lobbing of the Visiter for local Governmentky 3M, the proposal were eventually approved by the State Planning Authority and Council.
	A second development opplication was submitted by Hanson Todd and Partners showing the preliminary plans for the site and, following approval, a detailed Building Application was submitted in 1967 (3A67/292) nominating Robert Wall and Sons as builders. The Tighting engineer for the building was Graenie Bursleim Gw20am (1936-) who wan an award for his work at 3V.
	The southern porton of the site was later redeveloped for three additional office buildings and the development applications (DA99585 and 101383) individed for the construction of the two office buildings each side of the main headquarters, in 1937 plans were lodged for the construction of the multi-evel car park to the south of the building (DA1350/87) that were prepared by Devine Erby Maxim.
	The interor of the buildings were the subject of a "foral internal Refluitishment" that was submitted to Council in 1989: The design was prepared by architects Davenport Campbe?
	Hanson Todd & Partners The practoe was established in 1964 by Alfred Hanson (1914-1978) and Lionel Vilton Todd (2-1979).
	Abert Hanson was barr in 1914 in Banurst. He entered the Facuary of Architecture at Sydney University in 1933 and graduated in 1936. By 1945 Hanson had incread to Sydney and over the following two years a large parton of his work was for the Ryde Council Housing Scheme and the NSW Housing Commasition. In the same year he built a house for Hinselfin Nercy Avenue, Killara that won the John Sulman Medal for architecture
	Eone: Todd blough is well known as part of the three prohitects (along with David Littlemore and Peter Hall) who took over the commission, under the government architect E. H. Farmer, for the Sydney Opens House after Joem Uttorn had resigned in 1986. Todd later formed the practice of Todd Reddolff, Stockey and Johnson (1974) and Todd & Associate <sup>12</sup>

National	3. Developing toost, regional and rational economies
historical theme	4. Building settements, towns and oldes
C4-4-	3. Developing tood, regional and national economies - Commerce
State	4. Sunting sedements, towns and oldes - Utilities
State	

<sup>11</sup> Rimington Colin, 3M Australia, Sid Harta Publishing 2013 <sup>15</sup> AlA Sizgraphical Information

JOHN OULTRAM HERITAGE'S DESIGN

Historical	APPLICATION OF CRITERIA The 3V Building is an example of a law Twenteth Century office tudiing that was constructed c.1967 for the Sh
significance	(Manesola Maning and Manufaculting) Company as their System Recidulates
SHR criteria (a)	
(,	The building was constructed on the site of the former Pyrible Gas works that was established by the Australian
	Gas Light Company in 1888.
	The kultaing is an early example of a high-real company heakquarters in Kul-ring-gal in an area shat was zoned f residential development
Historical	The building is strongly associated with the 3M (Minnesota Mining and Manufacturing) Company that was
association	established in Two Harkors Minnesota in 1902 and that has grown into an influential and innovative company with
significance SHR criteria (p)	offices and plants worldwide. The building was a landmark development for the company reflecting their corporal strength and remained as their headquarters for over forty years.
COLUMNO (M)	
	The building is associated with the architects Hanson Todd and Partners
Aesthetic	The SM Building is on example of a late Twendeth Century office building in the international style that forms the focus for the expansive lands caped arounds that were designed to consulement the building. The building is a
significance	i locus for the exponsive lanascapea grounds in at were designed to complement we building. The building is a wel-known local landmark set on a prominent site at the junction of two main locals through the suburk. The
SHR onteria (c)	kulding was designed by architeots Hanson Todd and Paraters
Social significance	The place may have special associations for a former employees and those associated with SV and is a week-
ShiR critena (d)	finown landmark in the local area
Technical/Research	The site has some archaeological potential as the site of the Fymilie gas works
significance	
SHR criteria (e)	
Rarity	The building is rare locally as being an early example of a kigh rise office building in the international spile with a
SHR critena (I)	unusus: curied design
Representativeness	Representative significance is a good, and relatively intact, example of a five storey, late Twenter's Century
SHR criteria (g)	International style office hulding with associated landscaping
Integrity	High level of integrity externally

4.5. -	HERITAGE LISTINGS
Heritage listing/s	National Trust of Australia (NSW) Register
	The building is currently being considered for inclusion in the Auspalian Instatute of Architeats (A/A) Register of Significant Architecture in NSW

JOHN OULTRAM HERITAGE & DESIGN

#### HERITAGE ASSESSMENT

	INFORMATION SOURCES Include conservation and/or management plans and other heritage studies.				
Туре	Author/Client	Title	Year	Repository	
Type Book	Rimington, Colin	3M Australia	2013		

RECOMMENDATIONS				
	Council should proceed to include the building and grounds as a heritage item in Schedule 5 of the Draft Ku-ring- gal Local Environment Plan 2013			

	SOURCE OF THIS INFORMATION			
Name of study or report	3M Building, 950 Pacific Highway, Pymble - Heritage Assessment	Year of s or report		2013
Item number in study or report				
Author of study or report	John Oultram Heritage & Design			
Inspected by	John Oultram			
NSW Heritage Manua	l guidelines used?	Yes X		No 🗌
This form completed by	John Oultram	Date	2013	

JOHN OULTRAM HERITAGE & DESIGN

HERITAGE ASSESSMENT

## IMAGES - 1 per page

Image caption	Figure 1: Site plan				
Image year		Image by	National Trust	Image copyright holder	National Trust



JOHN OULTRAM HERITAGE & DESIGN

HERITAGE ASSESSMENT

IMAGES - 1 per page

Image caption	Figure 2: Aerial view o	f the site in 1943			
Image year	1943	រំ៣age by	Cepartment of Main Roads	lmage copyright holder	RTA



JOHN OULTRAM HERITAGE & DESIGN

HERITAGE ASSESSMENT

### IMAGES - 1 per page

Image caption	Figure 3: Front elevation						
	2013	Image by	John Oultram	Image copyright holder	John Oultram Heritage & Design		



JOHN OULTRAM HERITAGE & DESIGN

## HERITAGE ASSESSMENT

IMAGES - 1 per page

Image caption	Figure 4: West elevaton						
image year	2013	image by	John Oultram		John Oultram Heritage & Design		



JOHN OULTRAM HERITAGE & DESIGN

### HERITAGE ASSESSMENT

		IMAGE	S - 1 per page		
Image caption	Figure 5: East e	levatori			
Image year	2013	Image by	John Coltam	image copyright	Joke Quitom Heritoge & Besign



JOHN OULTRAM HERITAGE & DESIGN