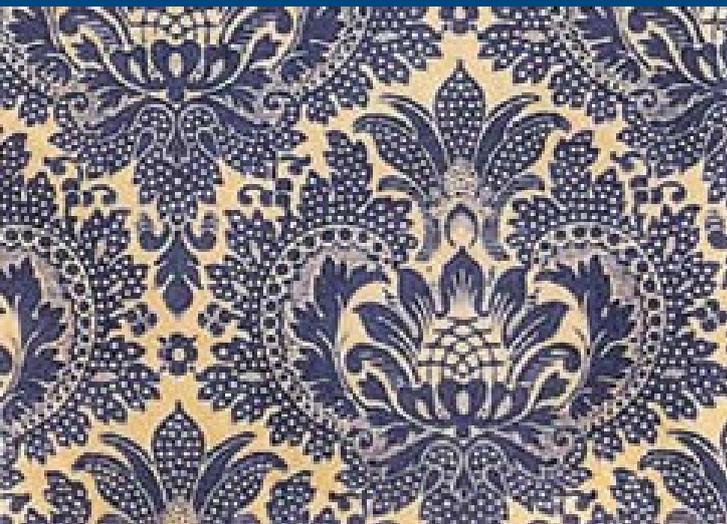




Processes and Techniques to Apply Surface Decoration to Traditional and Digital Wallpaper



Rebecca Bulcraig

National ISS Institute Overseas Fellowship

Fellowship supported by the Department
of Education, Employment and Workplace
Relations, Australian Government



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Executive Summary

Open any Australian interior magazine and you will see a feature on wallpaper. It is extremely fashionable again; it has never lost its popularity overseas, but for some reason it fell from favour in Australia sometime in the eighties. Now it is back and being used in different ways such as a one-wall feature or as a single panel as one would use a painting. It is unfortunate that such a saleable commodity is not produced here in Australia. Therein, there are businesses opportunities for the design and production of such wallpapers and training to underpin the skills and knowledge required.

Following the collapse of the industry throughout the late 1980's, many skills associated with wallpaper preservation and production have been lost. It is very unfortunate that what was once a thriving industry has, in the main, disappeared.

To the best of the Fellow's knowledge there is only one printer of wallpaper in Australia – Signature Prints in Sydney. This company obtained the archives of the deceased Florence Broadhurst. Signature Prints will contract print, but the costs are so high that it is not a viable option for a designer to have their range printed by them and expect to sell at a profit. Unfortunately, Signature Prints are not willing to share their knowledge and, in addition, there is not a specific publication on the subject.

The aim of this Fellowship was to obtain first hand practical experience of printing wallpaper. The knowledge and skills obtained overseas can now be shared with others who have an interest in the practical application of these processes. Key areas of investigation included:

- Determining various techniques used in the printing of wallpaper.
- Determining what sort of equipment is needed, the cost, and whether it can be exported.
- Identifying the type of inks and papers used with each method of printing and the suppliers of inks and other materials.
- Determining what the costs are for contract printing of wallpaper design.
- Determining strategies for marketing printed wallpaper product.
- Determining the viability and options of the printed wallpaper Supply Chain from concept to production – designer-based studio production or outsourced to a manufacturer.
- Investigating the pros and cons of digital printing versus traditional methodologies.

Given the aims of the Fellowship, Bulcraig visited two companies which would cover the spectrum of wallpaper production. These were Allyson McDermott's studio and The Surface Print Company. Bulcraig also timed her visit so that she could attend the 'International Wallpaper Conference'.

Allyson McDermott's studio specialises in the conservation and reproduction of traditionally produced wallpapers for organisations such as The National Trust, English Heritage and private clients. Bulcraig's week as an intern at McDermott's studio involved learning about how wallpapers were produced by hand. Bulcraig also observed current projects that ranged from the conservation of a 17th century Chinese hand-painted panel, preparation for a job for the National Trust, to a digitally printed wood grain effect paper which was being reproduced digitally.

The 'International Wallpaper Conference' was held over two days with a further two day visit as part of the conference to Halsingland to study 18th century wallpapers perfectly preserved in farmhouses. This was an ideal opportunity to meet the 'who's who' of the wallpaper world. The knowledge gained from talking to industry leaders, manufacturers, designers, authors, paper makers and historians answered many questions. It provided the Fellow with an insight into the wallpaper market in a very short time.

Executive Summary

Bulcraig believes that knowledge transfer is essential to ensuring future growth of the wallpaper industry in Australia. With regard to skills and knowledge acquired as a result of the Fellowship experience, Bulcraig believes that the most effective way to share the information would be via a practical workshop program. Bulcraig believes that a practical, hands on, workshop would allow for a comprehensive screen printing demonstration that would ensure participants could optimise the learning experience. Practical demonstrations provide opportunities for participants to raise questions as they are engaging with processes and techniques. It is anticipated that workshops would be, in the first instance, most useful for people who already have an established print studio, and to TAFE and University lecturers who run textile/graphics courses. Bulcraig believes that such workshops could be run in 2009 at a suitably equipped print studio or appropriate educational facility.

The Fellow will be available to speak directly with Industry Skills Councils to assist in the development/review of a training package for wallpaper design and production.

The following is a report of the Fellowship experience and detailed accounts of processes and practices. In addition, the report concludes with a series of recommendations for Government, industry, the business sector, professional associations, education and training providers and the wider community.

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Rebecca Bulcraig would like to thank the following individuals and organisations who gave generously of their time and their expertise to assist, advise and guide her throughout the Fellowship program.

Awarding Body - International Specialised Skills Institute (ISS Institute)

We know that Australia's economic future is reliant upon high level skills and knowledge, underpinned by design and innovation.

The International Specialised Skills Institute Inc (ISS Institute) is an independent, national organisation, which has a record of nearly twenty years of working with Australian industry and commerce to gain best-in-the-world skills and experience in traditional and leading-edge technology, design, innovation and management. The Institute has worked extensively with Government and non-Government organisations, firms, industry bodies, professional associations and education and training institutions.

The Patron in Chief is Sir James Gobbo AC, CVO. The ISS Institute Board of Management is Chaired by Noel Waite AO. The Board comprises Franco Fiorentini, John Iacovangelo, Lady Primrose Potter AC and David Wittner.

Through its CEO, Carolynne Bourne AM, the ISS Institute identifies and researches skill deficiencies and then meets the deficiency needs through its *Overseas Skill Acquisition Plan (Fellowship Program)*, its education and training activities, professional development events and consultancy services.

Under the Overseas Skill Acquisition Plan (Fellowship Program) Australians travel overseas or international experts travel to Australia. Participants then pass on what they have learnt through reports, education and training activities such as workshops, conferences, lectures, forums, seminars and events, therein ensuring that for each Fellowship undertaken many benefit.

As an outcome of its work, ISS Institute has gained a deep understanding of the nature and scope of a number of issues. Four clearly defined economic forces have emerged out of our nearly twenty years of research. The drivers have arisen out of research that has been induced rather than deduced and innovative, practical solutions created - it is about thinking and working differently.

A Global Perspective. 'Skills Deficiencies' + 'Skills Shortages'

Skill deficiencies address future needs. Skill shortages replicate the past and are focused on immediate needs.

Skill deficiency is where a demand for labour has not been recognised and where accredited courses are not available through Australian higher education institutions. This demand is met where skills and knowledge are acquired on-the-job, gleaned from published material, or from working and/or study overseas. This is the focus of the work of ISS Institute.

There may be individuals or firms that have these capabilities. However, individuals in the main do not share their capabilities, but rather keep the IP to themselves; and over time they retire and pass way. Firms likewise come and go. If Australia is to create, build and sustain Industries, knowledge/skills/understandings must be accessible trans-generationally through nationally accredited courses and not be reliant on individuals.

Our international competitors have these capabilities as well as the education and training infrastructure to underpin them.

Addressing skill shortages, however, is merely delivering more of what we already know and can do to meet current market demands. Australia needs to address the **dual** challenge – skill deficiencies and skill shortages.

Acknowledgments

Identifying and closing skills deficiencies is vital to long-term economic prospects in order to sustain sectors that are at risk of disappearing, not being developed or leaving our shores to be taken up by our competitors. The only prudent option is to achieve a high skill, high value-added economy in order to build a significant future in the local and international marketplace.

The Trades

The ISS Institute views the trades as the backbone of our economy. Yet, they are often unseen and, in the main, have no direct voice as to issues which are in their domain of expertise. The trades are equal, but different to professions.

The ISS Institute has the way forward through its 'Master Artisan Framework for Excellence. A New Model for Skilling the Trades', December 2004. The Federal Government, DEEWR commissioned ISS Institute to write an Australian Master Artisan School, Feasibility Plan.

In 2006, ISS Institute Inc. set up a new ISS advisory body, the **Trades Advisory Council**. Members are Ivan Deveson AO; Martin Ferguson AM, MP, Federal Labor Member for Batman; Geoff Masters, CEO, Australian Council of Educational Research; Simon McKeon, Executive Chairman, Macquarie Bank, Melbourne Office; Richard Pratt, Chairman, Visy Industries and Julius Roe, National President Australian Manufacturing Workers' Union.

Think and Work in an Holistic Approach along the Supply Chain - Collaboration and Communication

Our experience has shown that most perceive that lack of skills is the principal factor related to quality and productivity. We believe that attitudes are often the constraint to turning ideas into product and a successful business; the ability to think laterally, to work and communicate across disciplines and industry sectors, to be able to take risks and think outside the familiar, to share – to turn competitors into partners.

Australia needs to change to thinking and working holistically along the entire Supply Chain; to collaborate and communicate across industries and occupations - designers with master artisans, trades men and women, Government agencies, manufacturers, engineers, farmers, retailers, suppliers to name a few in the Chain.

'Design' has to be seen as more than 'Art' discipline – it is a fundamental economic and business tool for the 21st Century

Design is crucial to the economic future of our nation. Australia needs to understand and learn the value of design, the benefits of good design and for it to become part of everyday language, decision making and choice.

Design is as important to the child exploring the possibilities of the world, as it is to the architect developing new concepts, and as it is to the electrician placing power points or the furniture designer working with a cabinet-maker and manufacturer. As such, design is vested in every member of our community and touches every aspect of our lives.

Our holistic approach takes us to working across occupations and industry sectors and building bridges along the way. The result has been highly effective in the creation of new business, the development of existing business and the return of lost skills and knowledge to our workforce, thus creating jobs - whereby individuals gain; industry and business gain; the Australian community gains economically, educationally and culturally.

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Fellowship Sponsor

This Fellowship has been supported by the Department of Education, Employment and Workplace Relations (DEEWR), Australian Government.

The Australian Government's Department of Education, Employment and Workplace Relations (DEEWR) implements Government policies and programs to provide education and training opportunities for all Australians, to increase employment participation and to ensure fair and productive workplaces. Education, training and workforce participation are central to our goal of building a productive and socially inclusive nation, one which values diversity and provides opportunities for all Australians to build rewarding social and economic lives. Rebecca Bulcraig would like to thank them for providing funding support for this Fellowship.

Fellowship Supporters

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- **Christine Jones**, Christine Jones Interiors, Mount Pleasant, Perth, Western Australia
Email: cjinteriors@bigpond.com
- **Mary-Lyn Stratton**, Margaret River TAFE, Margaret River, Western Australia

Peak Organisations Impacted by the Fellowship

Some of the organisations are:

- Australian Institute of Architects (AIA)
- Design Institute of Australia (DIA)
- Print Council of Australia
- Master Painters Australia
- Printing Industries Association of Australia
- Printmakers Association of Western Australia (PAWA)
- Tasmanian Printmakers' Guild and other Guilds throughout Australia
- TAFEs and Universities throughout Australia

About the Fellow

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Memberships

- Embroiderers Guild Australia
- Surface Design Association
- Margaret River Artisans

Rebecca Bulcraig has been involved in the fashion industry since leaving full time education in 1981. She began her career by working in the heart of London's fashion scene, Bond Street. The training she received here has stood her in good stead throughout her working years. Bulcraig later went on to open her own boutique. During this time running her own business her interest in fabrics and print grew and in 1992 she attended a two day workshop on dying fabric. This ignited a passion which was ongoing and has led to Bulcraig setting up her own print and dye studio in Margaret River, Western Australia.

Bulcraig now supplies a number of high quality galleries in Australia with her hand printed scarves, wraps and interior accessories. Over the last few years she has become increasingly interested in wallpaper and how to print it. It was this interest that led her to applying for and subsequently being awarded the National ISS Institute Overseas Fellowship.

On return from her overseas Fellowship trip, Bulcraig has added wallpaper to her range of products to raise the profile of wallpaper in Australia. In addition to her work, Bulcraig and her husband own a 176 acre farm, so life is never dull. When she isn't in her studio she enjoys spending time with her daughters, the arts, embroidery, painting, reading and travel.

The Fellowship Program

The purpose of the Fellowship was to gain a comprehensive understanding of processes and techniques to apply surface decoration to wallpaper, both traditional and digitally. This was studied in Europe.

Aim of the Fellowship

The aim of this Fellowship was to obtain first hand practical experience of printing wallpaper. The knowledge and skills obtained overseas can now be shared with others who have an interest in the practical application of these processes. To optimise knowledge transfer, the information obtained should be incorporated into all Textile Print courses at TAFEs and Universities.

Specific Aims for Study and Development

- Determining various techniques used in the printing of wallpaper.
- Determining what sort of equipment is needed, the cost, and whether it can be exported.
- Identifying the type of inks and papers used with each method of printing and the suppliers of inks and other materials.
- Determining what the costs are for contract printing of wallpaper design.
- Determining strategies for marketing printed wallpaper product.
- Determining the viability and options of the printed wallpaper Supply Chain from concept to production – designer-based studio production or outsourced to a manufacturer.
- Investigating the pros and cons of digital printing versus traditional methodologies.

Ongoing Areas for Development

- Identify markets in Australia.
- Publish a book (printed or digitally based) on the techniques of printing wallpaper.
- Develop a module for inclusion in TAFE and University courses in printmaking and printing, textile design, etc.
- Develop a workshop format that can be delivered over a one or two-day timeframe.

The Australian Context

Wallpaper was first used in Australia by the British settlers. It has been documented as early as 1872 in a house built by Samuel Amess on Churchill Island off the coast of Victoria. David Lennie, CEO of Signature Prints believes that wallpaper in Australia “*has been [and remains] a fashion item*”. Although this was the case in many other countries, it didn’t disappear completely from the decorating options as it did here.

It is difficult to trace the history of wallpaper in Australia as much of it was used in period properties that have been destroyed or redecorated. Until the mid-nineteenth century, wallpaper was mainly imported into Australia from Britain, Canada, America, and France. There were a few manufacturers of wallpapers which included William Gutheridge circa 1851, Charles Carter 1860’s, Morrisons of Sydney in the 1920’s and Gilkes & Co. These companies have all produced quality wallpaper in Australia, but unfortunately to date, little information can be found regarding these companies.

Bulcraig has spoken with a number of people who have been involved in the wallpaper industry in Australia, such as David Miles, David Lennie, William Wilding and Paul Bramley and has developed a brief overview of the industry from the early 1970’s. William Wilding of Paper Hangings, Victoria, is part of a company specialising in the reproduction of period papers. The company was started by his mother, Barbara Wilding and Phyllis Murphy in 1986. He believes that the demise of wallpaper came about in the late 1980’s as wallpaper industries infrastructure began to collapse. The Australian Wallpaper Manufacturer closed in 1985 and once machine production of paper ceased there was nowhere to buy the necessary base materials. Industry workers, and their skills, moved on to other jobs and an influx of cheap imports saw the end of wallpaper manufacturing in Australia.

The minimalist look of the 1990’s also had a large part to play. The decorative patterns and colours of wallpaper were no longer fashionable and the popularity of wallpaper plunged. Paul Bramley, an ‘00 ISS Institute/TAFE Fellow, who is passionate about reintroducing wallpaper into Australian homes, believes that we are only just seeing the start of the decorative interiors revival here in Australia. Bramley is a painter/decorator from Central Gippsland Institute of TAFE, sponsored by the State Training Board, Victorian Government. His Fellowship focused on *Wallpaper Hanging, Restoration, Production and Reproduction Technologies*, technologies in producing and reproducing wallpaper such as digital imaging in England and USA.

The revival has been happening overseas since early 2000 and slowly wallpaper is gaining in popularity once more. Unfortunately, because we no longer have a manufacturing base here, papers are imported and remain expensive. Until they become more available to the general public they will remain an elitist item.

To develop the wallpaper industry in Australia it is important to understand the historic contexts upon which the current industry is built, for the legacies continue and influence the industry today. A case study follows which sets down these contexts.

Case Study: Wallpaper in Australia 1959-1991

In the 1970’s there was a very small group of individuals designing and producing wallpaper. The two most prominent were Florence Broadhurst and David Miles. Bulcraig has spoken to David Miles at great length and he has been kind enough to share his story of wallpaper in the 1970’s and 1980’s via telephone conversations and emails.

The beginning of Florence Broadhurst’s journey into the world of wallpaper began in 1959 when John Lang rented an old panel beating shop from Florence and her husband on the premises where their trucking business was operating. John Lang was a textile designer and printer and wanted to set up a print studio. Florence took an avid interest in what he

The Australian Context

was doing. John Lang couldn't afford to pay the rent and Florence "...*simply stepped in and took over.*" (*A Life by Design* by Siobhan O'Brien)

'Australian Hand Printed Wallpapers Pty Ltd' was registered in 1959. Florence was an astute businesswoman with an eye for colour.

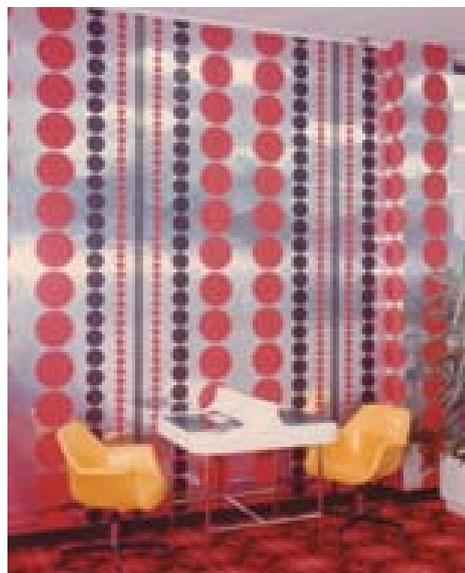
The company flourished, production went from twenty rolls per week to over two hundred. Despite the lack of originality in Florence's designs, she was innovative in her use of colour, introducing metallics and washable vinyl coating to the Australian market. These forms are still being used today.

Another person linked with Florence was David Miles. He was trained as an architectural draughtsperson and was a talented artist. David was working for a flamboyant, high society interior decorator, Merle de Boulay. He designed murals for private clients and mosaic tables. David met Florence Broadhurst in 1965 when he was only twenty years old. Merle de Boulay had sent him to Florence's studio to get some wallpaper commissioned.

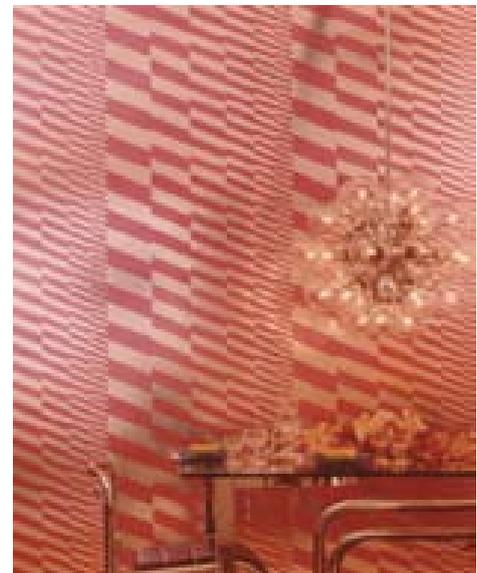
David set up his own business in 1969 and continued to render architectural drawings, mosaic tables and some design work for Florence Broadhurst. In the late 1960's Florence commissioned David to create a large mural for a restaurant in Kings Cross, Sydney. A price was agreed upon, but on completion of the design David noted that she refused to pay him the agreed price.

Following a road trip around Australia, David returned to Sydney, and decided to set up in opposition to Florence, and with his partner (whom he married in 1970) developed a range of wallpapers. They entered the market with their range named 'David Miles Handprints'. Unfortunately the venture suffered a set back when their premises was ransacked.

It took some time to recover from this, but they did with encouragement from people such as Lady Marion Hall Best and Tom Harding from Décor Associates. After some months they were ready for business. Their company benefited from an investment by Arthur G Wilson of Wilsons Fabric and Wallpapers. The Miles' retained twenty five per cent of the business and the couple were sent on a world trip to look at some of the world's best design studios.



One of David Miles' award winning handprinted wallpaper designs



Another award winning design by David Miles Handprints

The Australian Context



This photo was taken in 1973 at the David Miles Handprints wallpaper factory. It shows the design 'Scallop' being printed onto wallpaper.



This is the finished product

In 1976, after twenty six design awards and countless front covers on Australia's interior design magazines, Wilsons was bought out by James Hardie. James Hardie renamed the business Signature Prints. The Miles' felt that the business would change and decided to go their own way. They started up 'Cherie Miles Wallpapers Pty Ltd' in August 1977. In May 1979, the business was re named 'David K Miles Handprinted Wallcoverings Pty Ltd'. They traded until 1986 when the business was sold to Baresque Pty Ltd. Baresque continued to produce the Miles' designs until they closed the screen printing side of the business. Production ceased in August 1991.

The Australian Context



David Miles being presented with an award for Design Excellence

"We eventually closed the screenprints business and ceased production in August 1991. I do recall that the Peppers job at Terrigal was one of the last projects and that it went for a considerable time – probably during 1990 and 1991.

I am sure you will recall that 1991 was the depths of the recession – and I decided that it was a good time to do a major renovation to the building in Mountain Street. We ended up leasing and fitting out large areas of it (including what had been Handprints) to Channel 10 News, Sport, etc. Eventually we got approval for a redevelopment of the whole site and then sold it off.

As to the remains of the business some went to Lancefield in Victoria where it is still used to this day by Russell Carlton in making our samples. These activities have evolved well over the years and we are very proud of the quality and quantity of what is now produced.

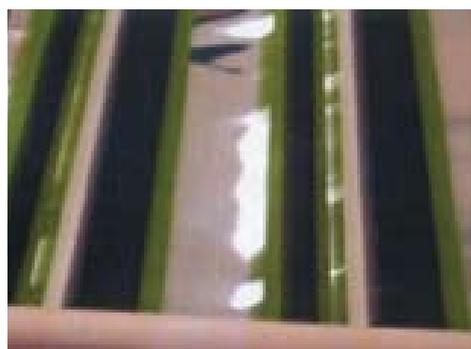
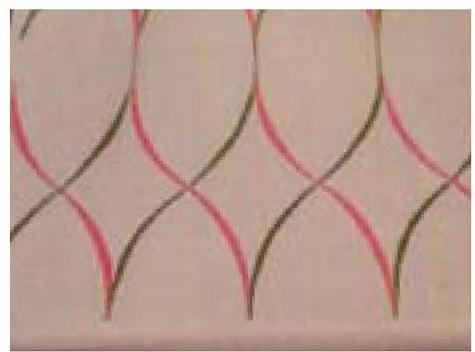
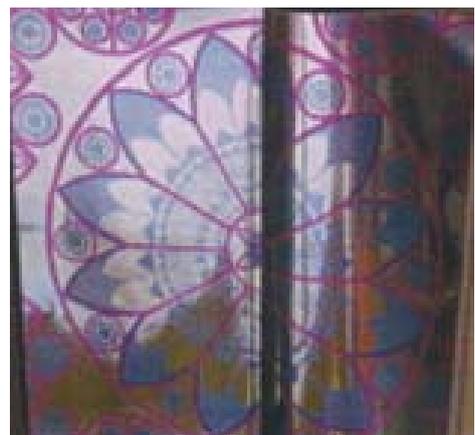
I also gave a heap of stuff to David Lennie. It was tough times for him then too so some of the inks, screens and grounds may have been of some benefit."

Email from Richard Blaiklock, owner of Baresque to David Miles, September 2008.

When Florence Broadhurst died in October 1977 her son took over the running of the business. Production ceased until the company was bought by a syndicate in 1989. This syndicate included David Lennie, now CEO of Signature Prints.

The main attraction of this purchase was the library of Florence Broadhurst designs. This library had been purchased by James Hardie from the estate in 1978, a year after her death. It was through this transaction that David Miles' designs have ended up in the Signature Prints collection.

The Australian Context



The Australian Context



Florence Broadhurst has been the most documented person in the Australian wallpaper world. This is due to an aggressive marketing campaign by Signature Prints. To begin with, the campaign was launched to a European market. As the profile of Florence Broadhurst was raised overseas, the Australian market became interested in the product.

Photographs courtesy of David & Cherie Miles.

The Skills and Knowledge Gaps

Open any Australian interior magazine and you will see a feature on wallpaper. It is extremely fashionable again; it has never lost its popularity overseas, but it fell from favor in Australia during the eighties. Now it is back and being used in different ways such as a one-wall feature or as a single panel as one would use a painting.

There are no courses available in Australia where one can learn how to print wallpaper. To the best of the Fellow's knowledge there is only one printer of wallpaper in Australia – Signature Prints in Sydney. As already established in the previous case study, this company obtained the archives of the deceased Florence Broadhurst. Signature Prints will contract print, but the costs are so high that it is not a viable option for a designer to have their range printed by them and expect to sell at a profit. Unfortunately Signature Prints are not willing to share their knowledge and, in addition, there is not a specific publication on the subject.

As well as the traditional methods of printing wallpaper, such as flocking and using hand blocking, there have been huge developments in the use of digital printing. One can have their own photograph digitally reproduced as wallpaper that will fit a specific wall. These papers are available for sale in Australia; rather they are sold under a franchise and not printed in Australia, but imported from the UK. Also exists what are known as interactive wallpapers. These are papers that have been printed with a design, for example, a bunch of flowers. Supplied with the roll of paper are some removable decals that can be placed wherever one wishes on the design. These could be extra flowers, insects, and so on. It gives the customer input, thus making it interactive.

Specific Skills and Knowledge Gaps

- Technical knowledge of 'how to' print wallpaper. Learning how to use the different techniques in order that to pass this knowledge on.
- What machinery is used? Is there any equipment in Australia that could be adapted? If not, what are the costs involved to import it?
- Where can supplies of the necessary materials be sourced?
- What are the steps and costs involved in getting a wallpaper contract printed?
- How much of a niche market is digital printing?

These objectives were addressed by:

- A one week's internship with Allyson McDermott, who produces her own range of wallpapers. These are produced in her studio by both traditional and digital methods. www.allysonmcdermott.co.uk
- A two-day visit to The Surface Print Company Ltd in Lancashire. This is a fourth generation company that contract prints for many of the major players in the wallpaper industry, such as, Designers Guild, Osborne and Little, Colefax and Fowler and Zoffany. Their factory has all of the machinery and expertise needed to meet bulk production. www.surfaceprint.com
- Attending the International Wallpaper Conference in Stockholm, Sweden.

The Skills and Knowledge Gaps

Current Education and Training

On searching the National Training Information Service (NTIS) it is apparent that there is no specific course in Australia on printing wallpaper. This demonstrates that there is a need for such a course to be made available in view of the current demand for papered walls.

By providing students with an opportunity to study the technicalities of printing wallpaper, they will be in at the grass roots of the wallpaper industry in Australia.

In lieu of a specific course being established, a module could be included in to the following courses:

- Visual Arts, Craft and Design Training Package
- Printmaking
- Advanced Diploma of Arts
- Advanced Diploma of Art and Design

The International Experience

Given the aims of the Fellowship Bulcraig decided to visit two companies which would cover the spectrum of wallpaper production. These were Allyson McDermott's studio and The Surface Print Company. Bulcraig also timed her visit so that she could attend the International Wallpaper Conference.



Allyson McDermott's Studio



Hand blocked wallpapers printed with blocks carved from pear wood

Allyson McDermott's Studio Awre, Gloucestershire

Allyson McDermott's Studio specialises in the conservation and reproduction of traditionally produced wallpapers for organisations such as The National Trust, English Heritage and private clients. Bulcraig's week as an intern at McDermott's studio involved learning about how wallpapers were produced by hand. On the first day the Fellow was introduced to other members of staff and shown around the studio. The Fellow was shown examples of various wallpapers, where they had been produced and their methods of manufacture. These ranged from hand painted, hand blocked through to the first manufactured papers printed by mechanical means. These machines were surface print machines and gravure



Panels awaiting restoration



Digital printer

The International Experience

roller machines. Bulcraig also observed current projects that ranged from the conservation of a 17th century Chinese hand-painted panel, preparation for a job for the National Trust, to a digitally printed wood grain effect paper which was being reproduced digitally.

Bulcraig was shown the papers used in reproducing wallpapers, both machine and hand made. There are many papers available on the market and every company has their own preference. Allyson McDermott's studio favours a hand made paper produced by a small company of whose identity is their trade secret. For digital printing there are many papers on the market and a wide choice is available in Europe. Unfortunately there are no manufacturers in Australia anymore and all paper has to be imported from overseas. One of the main suppliers for wallpaper bases is Dresden Papier in Germany. Once the Fellow had gained an understanding of the way in which traditional wallpaper was produced it was time to be shown how to assemble the sheets of hand made paper. This was done by laying out six sheets of paper and applying rabbit skin glue to the edges. The sheets were stuck together with the long edges overlapping. Each overlap must face the same way so that when the paper is hung all the overlaps face the same way. Unlike modern papers which are traditionally made in ten metre lengths, this paper was intended for use above a dado rail and consequently only had to be three metres long. This process involved joining 6 sheets of paper together to make each piece. This was hung up to dry overnight.



Sheets of hand made paper stuck together with rabbit skin glue, hung to dry. Note the overlapping seams are all going in the same direction.



Paper which has just been coloured hung to dry

Once dry, it was time to 'colour the ground'. This is the term used for painting the background colour onto the paper. A traditional recipe of distemper was mixed with a natural pigment added to give the colour (a recipe for distemper can be found in the 'Attachments' section of this report). Natural pigments are used as this is what would have been used on original papers. A custom made brush made from animal bristles was used for the application process. The distemper had to be applied quickly and as each sheet was completed it was hung on a rack to dry. The following day each sheet was rolled up ready for block printing.

The International Experience



Hand carved blocks carved from bear wood. Allyson McDermott's studio has only one man who carves their blocks. He is highly skilled and it takes many hours to carve a block. An average block can cost anywhere from upwards of two thousand pounds.

The following day Bulcraig accompanied the team on a trip to a sixteenth century pub in Gloucestershire which was being renovated. A wall of old wallpaper had been discovered which was thought to be of historical interest. The paper was carefully removed by Adrian McDermott and taken back to Allyson McDermott's studio for analysis. There were many layers showing designs relevant to the centuries.



16th century pub in Gloucestershire undergoing restoration



Layers of wallpaper being removed

The International Experience

Bulcraig was introduced to block printing and realised what an exacting and time consuming process this was. The blocks are very heavy as they are carved from pear wood, which is a very dense wood. Each block has to be covered in paint. This is done by placing it onto a felt pad which is covered in paint. It has to be completely covered with just the right amount of paint in order to give a clean print. The felt helps even out the paint coverage and allows just the right amount of paint to go onto the wooden block. The block is then lined up with the edge of the paper and pressure is applied by means of a weight which is cantilevered down onto the top of the block. Printing is an art and much practice is needed to get a good print. A 'strike off' of the design took place. This involved using three different blocks, one for each colour. It is necessary to do this to test both the colours and the repeat of the design. The repeat is measured (a repeat of a design is the measurement from where one element of the design starts to where it starts again). Once this is done, production can begin. Just a few metres of paper takes many hours to produce.

Bulcraig was also shown how flocking was implemented. Originally pure wool was cut into minute pieces, approximately 1mm long and put into a box. The paper was block printed with glue and fed through a slot in the flocking box. The box was shook up and down so that the fragments of wool adhered to the glue. Nowadays the process is done through an electro-magnetic process.

A cadmium pigment for another flocking job for the National Trust was being trialled. The samples were then compared to the original fragment of paper supplied by The National Trust for colour matching. This is done by eye.



This is a block carved digitally by laser



Fragment of original wallpaper from Temple Newsham showing the original design

The time spent at Allyson McDermott's studio was a very informative and productive week. The Fellow learnt how traditional wallpapers were produced with hand blocking techniques, how traditional flocking was carried out, how to make pieces of wallpaper from hand made sheets of paper, and how to colour the grounds ready for receiving the prints. Most importantly the Fellow had the opportunity to try techniques first hand. McDermott and her team were extremely generous with their time and knowledge.

International Wallpaper Conference Nordiska Museet, Stockholm.

This was a two-day conference with a further two-day visit as part of the conference to Halsingland to study 18th century wallpapers which were perfectly preserved in farmhouses. This was an ideal opportunity to meet the 'who's who' of the wallpaper world. The knowledge gained from talking to industry leaders, manufacturers, designers, authors, paper makers and historians answered many questions. It provided the Fellow with an insight into the wallpaper market in a very short time. As there were so many representatives from the wallpaper industry present, an overall picture was easily accessed. This ranged from the designer's perspective through to the preservation and production of wallpapers.

The International Experience

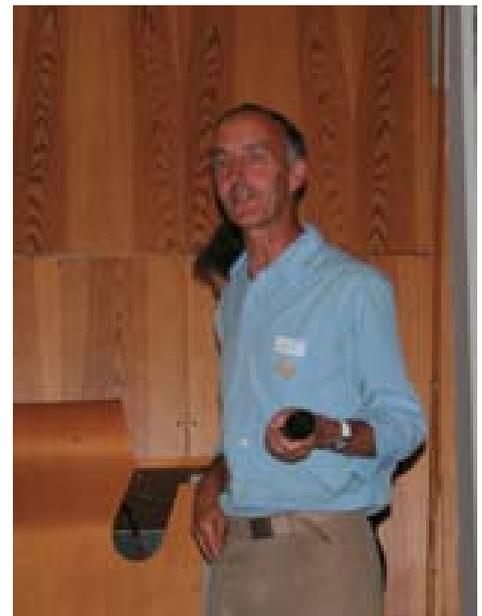
The conference was held at the Nordiska Museet (Nordic Museum) in Stockholm. A major exhibition of wallpaper coincided with the conference. Samples were selected from the museum's extensive archives with the earliest dating back to the sixteenth century. Please see the 'Attachments' chapter regarding attendees and speakers.



Group photo of conference participants



Piece of hand blocked wallpaper from the 17th century



Anthony Wells-Cole, Curator of Temple Newsham, Leeds

The International Experience

The Surface Print Company Clayton-Le-Moors, Lancashire

The Surface Print Company is family business situated in Clayton-Le-Moors in Lancashire, It contract prints wallpaper for many of the main wallpaper companies such as Designers Guild, Colefax and Fowler, Cole and Son, Osborne and Little, etc. It has a wide range of machinery, each used to produce different effects, plus a state of the art flocking machine. This means that they can produce thousands of rolls of wallpaper per minute. Bulcraig was fortunate to undertake a tour of the factory by John Mark Watson, the Managing Director. They discussed the latest trends, which were predominantly flocking.

Bulcraig saw all of the machines used to print wallpaper at work. This included flexo machines and a surface print machine. The specifications are listed under The Surface Print Company information in the 'Attachments' chapter at the end of his report. The flexo machine pushes the ink into the paper giving it a rather flat appearance whereas the surface print machine leaves a lip of colour at the edge of the print, giving it a distinctive look in line with a hand blocked print look. The designer would choose which machine they wanted their design to be printed on depending on the look they wanted to achieve.



John Mark Watson, Managing Director of The Surface Print Company holding a rubber roller which has been laser engraved. This is organised through The Surface Print Company.



A flexograph machine

Bulcraig observed how the paper was automatically rolled, labelled and packaged as it came off the machine. It was then put into boxes ready to be dispatched. All of the paint bases are made at The Surface Print Company and colours are mixed to match design work provided by each company.

The International Experience

John Mark explained how each new job had to be sampled first. This is called a 'strike off' This is a crucial time and the designers have to be present so that they can approve the colours mixed by the expert colourists at The Surface Print Company. The pigments, which are taken from a range of 12 base colours, are mixed into a base made from water, a binder and whitening. This recipe is a trade secret of The Surface Print Company.



Paper is rolled and packed into cardboard boxes Paint colours being mixed

A special area is made available to each company's designers where they can work, cater for themselves and so on. Often they are there for up to three weeks at a time.

Bulcraig observed the flocking machine in a production run. This machine runs at full capacity twenty four hours a day to keep up with the demand for flocked wallpapers.

Whilst The Surface Print Company is a large company they will produce small runs for people like Bulcraig. This is a rare find in these days of high minimums and mass production.



Glue is applied to the base paper ready to be flocked. The glue is a trade secret belonging to The Surface Print Company.



Flocked wallpaper passing through conveyor belt



Flocked wallpaper coming through ready to be checked and packed

The International Experience

Paper

When the first wallpapers were produced, only hand made paper was available. These were made in moulds and there was a maximum size limit. The majority of wallpapers were approximately fifty-seven centimetres wide. The length of the paper was determined by the height of the wall it was intended for. Wallpaper was produced to order to fit each room; it wasn't massed produced as it is today. Therefore, the length of each 'roll' was determined according to the height of the wall. To achieve the desired length the pieces of paper were joined together to make the complete piece. Bulcraig was shown how this takes place and the process is explained in the following practical section below.

Early wallpapers were made from linen and this gives the paper a character of its own. It is difficult to find machine-made papers that replicate this look, as machine-made papers tend to be very uniform in appearance. Modern papers are made from trees. The bark is removed and the fibre is pressed into a revolving thread that turns the bark into slurry. The slurry is made into a 'wood sheet'. There are companies that still make papers in the traditional way and machine-made papers that have certain 'hand-made' characteristics (they are listed under the 'Suppliers' section on page 28). Paper is made from sustainable supplies. This would be mainly pine trees grown specifically for the paper industry.

At The Surface Print Company, a wide range of paper bases are available. The paper chosen will depend on the final effect required by the customer. The latest trend in wallpaper is for non-woven bases. These differ from traditional papers in that the wall is pasted not the paper. They are much easier to hang and becoming very popular. There are two kinds: smooth and fibrous. A smooth non-woven paper basically looks and feels like normal paper and is stiff in appearance, whereas a fibrous non-woven paper is a lot rougher and is closer to looking and feeling like a fabric, floppy in appearance.



Various qualities of paper in raw states

The International Experience

When Allyson McDermott's studio is given a commission to recreate an historic paper the first job is to analyse what the original paper was made from. A suitable paper is then chosen which will replicate the original. If the job is to be printed digitally a suitable machine-made paper is selected. A roll of paper from the paper mill is 65 inches (1.65m) wide, possibly as long as 22,000 ft (6,706m), and weighs approximately one ton. Once sold to a printer, each paper roll is cut into sub-rolls, which are either 520mm or 685mm wide by 3,048m long. Wallpapers are now printed on ten metre rolls. The paper is taken from 307,000 metre rolls that are sourced from France, Belgium, Germany and the Netherlands. The most popular papers are non-woven papers. As previously mentioned, this is where the wall is pasted rather than the paper.

Inks and Paint

The choice of inks is dependent upon the desired result. Allyson McDermott's Studio uses hand made paints based on traditional recipes. Traditionally distemper was used to both 'stain' the paper and print on it. This process is still used, although acrylic is added to make it easier to handle. Distemper is traditionally made from water, rabbit skin glue and a pigment to colour it. This marks very easily and is not practical in most modern day living situations. Thus the addition of acrylic makes it less liable to marking.

Allyson McDermott's Studio uses the traditional method of hand mixed distemper paints to 'ground' their papers. Ground is the traditional name for a base coat of paint on the paper. This has to be applied in one application as a distinct line is left if the paint dries. The paper is laid onto the table and the distemper is applied with a round, short haired brush. The paint is applied to a section in long, horizontal strokes and then gone over with small, circular movements. This produces an even 'ground'. It is then hung on racks to dry. Once dry the paper is hand rolled to await the next process.

The Surface Print Company also make their own base paint to which pigments are added to give the desired colour. A twelve-colour pigment range is used that gives them limitless colour possibilities. They also use mica, metallic and pearlescent inks to give different effects to the paper. A specialised colour mixer matches the colours to those in the designer's artwork. The client is on-site when this part of the process is done to ensure that they are happy with the colours. For a large job, clients can be on-site for up to three weeks. The Surface Print Company provides a lounge area, work area, kitchen, etc to accommodate their clients whilst this process takes place.

The base is made in a Greaves high-speed mixer. It mixes water, China clay and various binders into a thick, heavy solids mix for coating and printing the paper. The Surface Print Company use three air knife coating lines and a Miller Shallcross machine, which are used for applying the base colour to the paper. The chosen colour is put into a trough. The paper passes through on a roller and is saturated with colour. As it passes up through the machine, the excess is blown off. It then passes through a gas powered dryer box and is re-rolled ready for the print process.

The International Experience



Paper passes through the flexographic machine



Paper on conveyor belt ready to be coloured

Techniques and Machinery

Making the Base Paper

This is the technique used for making sheets or rolls of traditionally produced wallpaper. Sheets of hand made paper are laid out and rabbit skin glue is applied to one long edge of the paper. These are then stuck together, making sure that the overlaps are all facing the same way. The finished pieces are hung up to dry.

Hand Blocking

This process is the forerunner of surface printing. Traditionally, blocks are carved from pear wood with a pine backing. This is an extremely skilled profession. Two of the main reproduction companies sometimes use digitally cut blocks. The choice depends on the design, the budget and whether it is appropriate. One block is carved for each colour used. The repeat is marked with two pins on the block.



Close up view of hand carved pear wood block.



Original printing block and inking up box.

A registration line is drawn onto the paper and the first section is laid onto the print table. The pad is inked up. This is a matter of personal choice, but traditionally felt is used. The block is laid onto the ink and rotated a few times to ensure even coverage. The block is laid onto the paper, placing the nails on the registration line. Pressure is applied, which can be done in various ways. The simplest way is by placing a wooden bridge on top of the block and levering down on a piece of wood. It all depends on the block and design. It is difficult

The International Experience

to give exact instructions as external conditions affect the inks and prints. Sampling is essential prior to a print run and even then problems can occur. Touch ups are necessary and it has to be remembered that it is a hand made process and as such, irregularities will occur. This gives a hand blocked paper its character and charm. Furthermore it should be noted that the paper will be displayed on a wall and will be viewed at a distance.

Hand blocking is a very time consuming and labour intensive technique as everything is done by hand and papers produced in this way are in limited demand and command high prices.



Examples of 16th century wallpaper from the Nordiska Museet archives

Screen Printing

Stencils for each colour present in the design are created on silk mesh screens using a photographic process. A photographic negative is made of the pattern and placed on top of the screen, which has been coated with light sensitive emulsion. It is exposed to a very bright light and the emulsion hardens in the areas not covered by the negative, forming a stencil. It is then washed out and dried. The repeat of the design is marked on the print table and the paper is attached to it with masking tape on the edges. The screen is placed at the first registration mark and the ink is applied by a squeegee. This forces it through the areas where there is no emulsion and the pattern is applied to the paper. The screen is moved along the paper to the next registration mark, printed, and so on. Before the next colour is applied, the ink must dry.

This method results in a thick, opaque, evenly printed layer of ink on the paper. The number of colours that can be used in the screen printing process are limitless, but the high cost of hand printing and the time involved limits the number of colours used in patterns. Many designer/makers use this method to print their papers.

Flexographic Printing

'Flexo', as it is known in the industry is an updated version of surface printing. It was developed around 1900 and uses rubber rollers. The rollers are engraved with a raised image to transfer the inks to the paper.

The International Experience



Close up of laser engraved roller



Flexographic machine showing different rollers printing the individual colours of the design onto the paper



Close up of the individual rollers on a flexographic machine



A surface print machine

Surface Print Machine Printing

Surface printing is the oldest automated printing method still in use today. Surface print machines lay down very heavy amounts of ink. The ink 'creeps' as it hits the paper, so the images aren't quite as crisp as with other printing methods. The images have a 'lip' of colour at the bottom edge and it has a more hand printed look to it than papers printed with other mechanical methods. The design is laser engraved onto rubber that is attached around a metal roller. One roller is used for each colour. These are mounted onto the machine. The ink lies in the valleys or on the raised part of the rubber pattern and as it turns around the ink is pressed onto the paper. Many surface print machines can print up to 12 colours.

Flocking

Flocking is a process whereby a design is printed with an adhesive then sprinkled with very small bits of chopped wool, silk, cotton, and in modern production, viscose. Methods can be either traditional or modern as explained on the following page.

The International Experience

Traditionally, the paper was printed with an adhesive and put into a flocking box. These varied in design, but the basic idea was the same. The paper was put into a box and the lid shut. The bottom of the box was made of canvas or hessian and this was beaten in an upward direction with sticks. This made the flock airborne so that when it landed it stuck to the glue. Flocking is a very messy job and care needs to be taken to avoid inhaling the particles of flock. In its simplest form, flock can be sprinkled directly onto the paper through a sieve and the paper shaken to remove the excess. There are very few commercial wallpaper printers offering a flocking service. John Mark Watson, Managing Director of The Surface Print Company has custom built their flocking machine.



A surface print machine is used to print the paper with adhesive



It then passes into the flocking box



An electro-magnetic field charges the air and the flock is pushed onto the adhesive



The paper continues on the conveyor belt, where it passes under a vacuum that sucks off excess flock



It then travels over rollers that vibrate, these make sure that nothing is left on the paper before it continues through to the packaging stage



Every new batch is edge matched to ensure even coverage of the flock

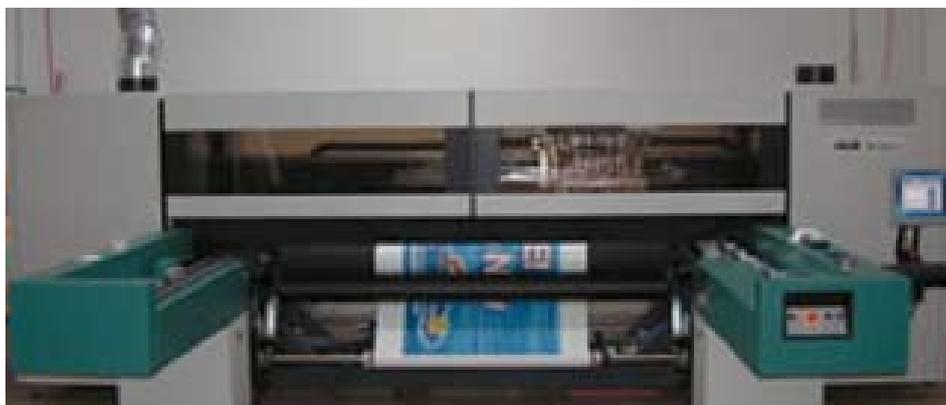


It is then cut into ten metre rolls, packed and labelled, ready for distribution. The flocking machine currently runs twenty-four hours a day due to the popularity of flocked wallpaper.

The International Experience

Digital Printing

The demand for digitally printed wallpaper is growing. Many companies are offering wallpapers for both domestic and commercial settings and the majority operate via the internet. They have designs of their own which customers can choose from or they can print from customers' photographs, or turn their ideas into a design. It is a simple process for the customer – they can send their image via email or post a hard copy. A sample can be produced to make sure colours match the original artwork, photograph etc. Payment can be made online and then the paper is posted out. Wallpaper for domestic use is printed onto a non woven paper – the wall is pasted rather than the paper.



A wide format digital printer

Commercial wall coverings are printed on a Digimura substrate which is manufactured by Muraspec. Digimura is a commercial wide width fabric backed vinyl wall covering printing base that has been specifically developed for digital printing. It is Class 0 and 1 fire resistant to BS476 standards. It is also lightfast, washable and impact resistant. This is ideal for retail space, exhibitions, corporate use, nightclubs, bars, schools and hotels.

The advantages of digital printing are that no stock has to be held and the wallpaper can be made to order at a significantly lower price than that of a normal custom made paper. Traditional wallpaper manufacturing is limited by the circumference of the roller, the size of the block or silk screen. With digital printing, customers can have complex designs with no pattern repeats. For example, they can have a photograph of their child, dog or wedding made into wallpaper. In the main the general public are not aware of what can be done with digital technology as it is an emerging market. Only with extensive marketing will this type of wallpaper printing become mainstream. The main drawback of digitally printed wallpaper is that it lacks the characteristics of papers printed with more traditional methods.

The International Experience

Suppliers

Hand Made Paper

Sanny Holm

Framste Gard, Hallesjo
84064 Kalarne, Sweden
Phone: +46-696-42160
Email: sanny@sanny.se
Web: www.Handpappersbruket.se

Inks

Australian Screen Printing Supplies

1/42 Tennant Street, Welshpool, WA 6106
Phone: (08) 9355 0381
Email: info@screenprintingsupplies.com.au

Fujifilm Sericol

Orders/Enquiries
Phone: 1300 650 504
Fax: 1300 650 512
Web: www.sericol.com.au
Email: orders.Australia@fujifilmsericol.com
Technical Help
Hotline: 1300 135 35
Email: terry.skidmore@fujifilmsericol.com

Screen Printing Supplies

Australian Screen Printing Supplies

1/42 Tennant Street, Welshpool WA 6106
Phone: (08) 9355 0381
Email: info@screenprintingsupplies.com.au

Wallpaper Printers

The Surface Print Company

Broadley Mill, Hill Street
Clayton Le Moors
Lancashire BB

The Art Of Wallpaper

Unit 3, Robert Harvey Way
Long Stratton
Norfolk NR15 2FD

Costs for Contract Printed Wallpaper

The Surface Print Company

Each roller costs \$1,151- \$1,249 per colour for a surface print machine and \$1,080 to produce. Then there is a strike off charge of \$477 (see price list from The Surface Print Company in 'Attachments' chapter).

Allyson McDermott's Studio

Allyson's wallpapers are currently custom made and each job is quoted accordingly.

Digital Printing

Commercial Wallpaper

Expect to pay from \$108 per square metre (Digimura substrate is 1.25m wide).

Domestic Use Wallpaper

Expect to pay from \$300 per ten metre roll in Australia due to import charges.

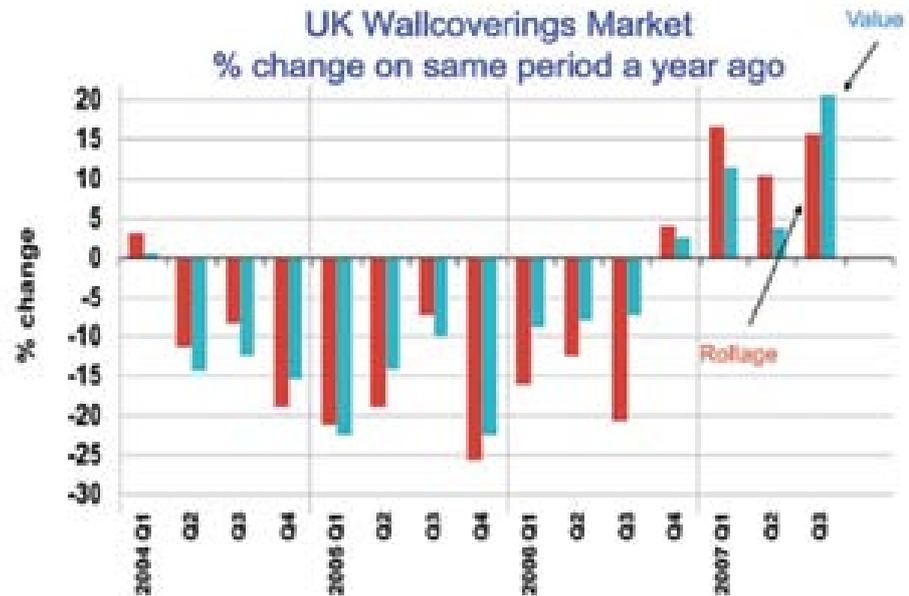
Summary

There are many different techniques of applying surface decoration to paper. It is dependent upon the desired look and effect and the budget available.

It is possible for a designer/maker to produce his or her own 'one-off' papers in a small studio space on a small budget. In this case, improvisation is necessary unless there is a large budget to buy the necessary machinery. To have a block hand carved is very expensive, they start at approximately \$6,000. Even digitally cut blocks are expensive, starting at \$1,600. Screen printing is the best option as screens are relatively inexpensive compared to a block. One screen could be made and processed for as little as \$150, depending on the size. To have ones own design contract printed is expensive and there are minimum volumes.

The International Experience

To set up a factory would involve significant expense. The machines at The Surface Print Company are originals and one would have to be custom built. However, a Belgian company recently had one built that cost approximately \$4.3 million AUD. Flexographic machines are more readily available, they can cost between \$1.4 and \$3.5 million and would have to be imported. The market for wallpaper has always been large in the UK, USA and Europe. The chart below shows the rise in popularity in the last year.



BCF Wallcoverings Sector Statistics Q3 2007

Wallpaper is slowly gaining in popularity in Australia. It is widely seen in interior decoration magazines, but unfortunately it is still not widely available. As there are no large manufacturers of wallpaper in Australia, it means that it has to be imported from overseas, making it quite expensive. The average cost per roll starts at approximately \$200. The only way the Fellow can see this changing is if a more mainstream chain of shops such as Freedom or IKEA start stocking it. This will be dependent upon how fashionable wallpaper becomes here.

Wallpaper was popular until the 1980's, but saw a decline with the minimalist look. This coupled with the fact that Australia does not have a large number of period houses that suit the more traditional designs. However, with the way in which wallpaper is being used now, particularly in contemporary architectural settings, Bulcraig believes that there is a market for it on Australia.

It is worth noting that there is still a strong demand for wallpaper in New Zealand and there are wallpaper manufacturers thriving there.

Knowledge Transfer: Applying the Outcomes

Bulcraig believes that knowledge transfer is essential to ensuring future growth of the wallpaper industry in Australia. As established previously in the report, many skills have been lost as a consequence of the collapse of the industry throughout the late 1980's.

With regard to skills and knowledge acquired as a result of the ISS Institute Fellowship experience, Bulcraig believes that the most effective way to share the information would be via a practical workshop program. Bulcraig believes that a practical, hands on, workshop would allow for a comprehensive screen printing demonstration that would ensure participants could optimise the learning experience. Practical demonstrations provide opportunities for participants to raise questions as they are engaging with processes and techniques.

It is anticipated that workshops would be, in the first instance, most useful for people who already have an established print studio, and to TAFE and University lecturers who run textile/graphics courses.

Bulcraig believes that such workshops could be run in 2009 at a suitably equipped print studio or appropriate educational facility.

Recommendations

Government

Federal

Concurrently, along with the aforementioned workshops, it is proposed that a curriculum be developed for inclusion into appropriate nationally accredited training packages related to:

- Designing/creating images for printing onto wallpaper such as textile and graphic artists/designers.
- Production methodologies – equipment and materials for one-off and large scale production runs.
- Hanging skills for tradespeople, particularly painter/decorators, who will be installing the wallpapers into various architectural contexts such as plaster surfaces, concrete or fibre board.
- Knowledge of wallpapers so those informing clients of choices to add to wall surfaces such as interior decorators.

The Federal Government should be encouraged to fund grants for research and development auspiced through various organisations such as ISS Institute and The Screen Printing and Graphic Imaging Association of Australia (SGIAA) to further develop the industry sector.

Wallpaper producers could be included in AusIndustry showcases in overseas export shows.

State

The Department of the Arts should be encouraged to support this art form and fund programs which Local Government can administer.

Industry

Industry considerations:

- Build reputation to make wallpaper visible in Australia. This could be done by using wallpaper in public buildings, spaces, ambassadors' residencies overseas, etc.
- Competitions could be run for TAFE/University students to design wallpaper to be installed in a particular building.
- Mainstreaming wallpaper as a decorative medium. This could be done by more use on DIY TV shows, more features in mainstream women's magazines, etc. The best result would be to see wallpaper for sale in a large DIY chain, such as Bunnings or Mitre 10, or homeware stores such as IKEA or Freedom.

Professional Associations

The Screen Printing and Graphic Imaging Association of Australia (SGIAA) could run a monthly feature on wallpaper printing techniques. It could be included as a category in their annual awards.

To leverage off existing capabilities, a search could be conducted for individuals who previously worked in the wallpaper industry in Australia. They could be made available to offer support and advice for those wishing to start up their own business, particularly Master Paper Hangers. This would encourage those already printing on fabrics, and other fields of printing onto paper or fabric, to branch out into printing onto wallpaper.

Recommendations

Education and Training

The Fellow recommends that a unit specifically on wallpaper printing be included in all textile and printmaking courses. This would encourage a new generation of designers to produce their own ranges of wallpaper – refer to previous page.

Wallpaper should be reintroduced into the design and cultural consciousness through TAFEs, Universities and the community.

Community

Wallpaper should be visible to the general public, thus raising the profile of wallpaper and consequently making it a part of 'normal' decoration. This could be utilised in places such as libraries, museums, hospitals and so on.

Wallpaper could be part of the topic for a Community Arts Network Project, such as CANWA in Western Australia. Perhaps a piece of wallpaper could be installed in a community building.

Attachments

Attachments Contents

The Surface Print Company

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Attachments



MACHINE PROFILE

1 x 12 colour Surface Print Machine

1 x 10 colour Surface Print Machine (Parts available to make 12 colour)

1 x 8 colour Surfex Print Machine
(Unique combination of 2 colour Flexo in register with 6 colour Surface)

1 x 4 colour Surface Print Machine

1 x 6 colour Flexographic Machine with in-line single gravure
(Standard engraving 85 lines per inch, trim widths available 520mm and 685mm (27 inch) – side join)

2 x 6 colour Mini Flexographic Machine

3 x Air Knife Coating Lines

3 x Fraston Wallpaper Winding Frames

2 x Ceco Wallpaper Wrapping Machines

3 x Verivide Day Light Colour Matching Boxes

Fully equipped customer room and Strike-off Facilities

*1 x 2 colour
Mock Machine*

JMW/CC/415b

Attachments

THE SURFACE PRINT COMPANY LTD

ROLLER CIRCUMFERENCE UPDATE – 2007

Please find below information regarding Surface Print Company for your records regarding specs for Flexo machine, Surface/Surflex machine and Flock Machine.

Flexo Machine

6 colour with in-line single gravure

Trim widths available 520mm and 685mm (27 inch) - side join

Circ. sizes possible :

<u>Circ. Size</u>		<u>Stations/Gears</u>
380mm	-	1
420mm	-	6
460mm	-	6
480mm	-	6
530mm	-	6
550mm	-	6
610mm	-	6
640mm	-	6
700mm	-	6
720mm	-	6
760mm	-	6

Surface Print Machine

12 colour

Trim width 20½" (520.7mm) - side join

Circ. Sizes possible:-

16½"	19½"	
16½"	20½"	
17½"	20½"	
17½"	21½"	
18½"	24½"	
		NEW SIZE 28½"
		ONLY 2 STATIONS

Attachments

Surflex Machine

2-colour Flexo, 5-colour Surface in-register. Flexo stations always 1 and 2 first stations.

Two sizes – Circ. – Flexo + Surface

21" - 21½"

24" - 24½"

Surflex trim width 20½" (520.7mm) - side trim.

Flock Machine

Trim width 20½" (520.7mm)

Circ. Sizes possible:-

53cm	21"	2 Colour
61cm	24"	2 Colour
72cm	28½"	Only 1 Colour

JOHN MARK WATSON
MANAGING DIRECTOR

JMWcc622

Attachments

SURFACE PRINT CONTRACT PRICE LIST

1 JANUARY 2007

QUANTITY	1-4 COLS	5-8 COLS	9-12 COLS
250 Rolls	£4.77	£5.27	£5.99
500 Rolls	£4.58	£5.08	£5.73
750 Rolls	£4.44	£4.97	£5.57
1000 Rolls	£4.33	£4.83	£5.36

THE ABOVE PRICE INCLUDES

1. Surface, Surfex & Flexographic Printing on Air Knife Grounds.
2. Paper 120gsm - completed roll after coating approximately 150gsm.
3. Ground coating in white or tinted grounds - dark grounds 40 pence per roll extra.
4. Printing.
5. Matt washable after coating.
6. Winding, wrapping and cartoning in plain brown cartons.
7. All rollers/labels supplied and paid for by the customer.
8. A charge of £195 will be made per design for Proofing Rollers prior to strike off.
9. Price ex-works.
10. Settlement – 30 days from date of invoice.

Attachments

FLEXOGRAPHIC PRINTING PRICES

JANUARY 2007

QUANTITY	1 & 2 COLS	3 & 4 COLS	5 & 6 COLS
250 Rolls	£4.32	£4.75	£5.17
500 Rolls	£3.36	£3.74	£4.17
750 Rolls	£3.23	£3.60	£4.04
1000 Rolls	£3.13	£3.51	£3.90

THE ABOVE PRICE INCLUDES

1. Paper 150gsm – Cresta D.
2. Gravure Pad or Grounded Paper – dark ground 40 pence per roll extra.
3. Printing.
4. Matt washable coating.
5. Winding, wrapping and cartoning in plain brown cartons.
6. All rollers/labels supplied and paid for by the customer.
7. A charge of £195 will be made per design for Proofing Rollers prior to strike off.
8. Price ex-works.
9. Settlement – 30 days from date of invoice.

TUM/00060A

International Wallpaper Conference

In Stockholm, 14-17 June 2007

Part 1 Talks and discussions



Thursday 14/6

10.00 Registration, coffee/tea.

10.30 Address of welcome, Elisabet Hidemark,
Former Curator of Collections, Nordiska Museet.

10.45 Visit to the exhibition *Wallpaper, Wallpaper!*

11.30–12.00 Dr. Bernard Jacquet
Curator of the Museum of Wallpaper, France.
Wallpaper and industrialization of decoration: the birth of the "décor" ca 1800.

12.10–12.40 Véronique de La Hougue
Curator in Chief, in charge of the collections
of the Département des papiers peints in
the Musée des Arts décoratifs, Paris.
*About 6000 digitalized wallpapers from
the collections of the Département des
papiers peints in the Musée des Arts
décoratifs of Paris.*

13.00 Lunch in the museum restaurant

14.00–14.30 Elisabet Hidemark
Former Curator of Collections, Nordiska museet.
*Johan Norman – Discovery of an 18th Century
Swedish Paper-stainer.*

14.30–14.50 Ursula Sjöberg
The Royal Collections.
*Adam Petter Holmberg – paper-stainer in
Stockholm – and the Etruscan style.*

15.00–15.15 Clare Taylor
Associate Lecturer, The Open University,
Witney, Oxon.
*Chinese wallpapers and English imitations
in 18th Century Britain.*

15.20–15.40 Treve S. Rosoman
Curator, English Heritage, UK.
French Scenic papers in UK.

15.50–16.10 Igor Kiselev
Museum Historical Wallpaper in the Cultural
Context, USA.
*Specific Features of the Russian Biedermeier
period Wallpaper.*

16.20–16.30 Refreshments

16.30–16.50 Jan Braenne
Research Scientist/Paintings Conservator,
NIKU – Norwegian Institute for Cultural
Heritage Research.
*Early 18th Century Flocked Wallpapers
in Norway. Discovery, examination,
conservation and restoration.*

17.00–17.20 Mary Schoeser
Senior Research Fellow, Central Saint Martins
College of Art & Design, University of the Arts,
London.
Wallpaper research for Danson House.

17.30–17.50 Julian J. Self
Advisor to the building of Bath Museum.
*Changing rooms and Sharing Options – an
interactive visual history of wallpapers in
the Building of Bath Museum.*

Attachments

Friday 15/6

09.00–09.30 [Anthony Wells-Cole](#)
Senior Curator, Temple Newsam House,
Leeds Museums and Galleries, UK.
*Maids & Mistresses: Papering an English
Country House 1700–1900.*

09.40–10.10 [Christine Woods](#)
Curator (Wallpapers), The Whitworth Art
Gallery, The University of Manchester.
*Marketing Magic: the rise and fall of sanitary
wallpapers.*

10.20–10.30 Refreshments

10.30–10.50 [Jérémie Cerman](#)
University of Paris 1, Panthéon, Sorbonne,
Paris.
*Art Nouveau wallpapers' diffusions
throughout Europe.*

11.00–11.20 [Ingela Broström](#)
County administrative board of Gävleborg.
Wallpaper in the farmhouses in Hälsingland.

11.30 Lunch in the museum restaurant

12.30 Bus to Drottningholm Court Theatre.
Departure from the main entrance of Nordiska
Museet.

13.00 Tour of the Theatre and its many rooms
still hung with 18th-century wallpaper.

15.00 (approx) Walk through the Palace park
(ca 15 min) to the Chinese Pavilion. Visit to the
Pavillion.

16.30 (approx) Reception in the garden of
Canton no 1. Canton is a model manufacturing
village from the mid 18th Century near the
Chinese Pavilion (10 minutes' walk).

Public transport from Drottningholm, buses leaves
from Canton to Brännplan. Underground from
Brännplan to Odenplan/Stockholm Central.
(Remember to buy bus tickets in advance!)

Attachments

International Wallpaper Conference

in Stockholm, 14-17 June 2007

Part 2 Excursion to Hälsingland province



Attachments

Saturday 16/6

8.00 Departure by bus from Hotel Oden, Karibergsvägen 24, Stockholm

10.00–11.00 Örbyhus Castle, Örbyhus
Historic house with French wallpapers
from the 1820s

12.00–13.00 Lunch at Gävle Concert Hall

14.30–15.30 Per-Ols i Långbro, Trönö
Art Nouveau wallpapers, ca 1910
Coffee break

16.00–16.30 Hägers i Björntomta, Rengsjö
Wallpapers and decorative wallpaintings
from ca 1850

16.30–17.00 Rengsjö open-air museum
Wallpapers and decorative paintings from
1845

18.00 Checking-in at Orbaden Conference
Hotel

19.00 Dinner at Orbaden

Sunday 17/6

08.00 Departure from Orbaden

08.30–09.00 Hans-Ers i Ångsäter, Ljusdal
Wallpapers from ca 1800

09.00–09.30 Lars-Johans i Ångsäter, Ljusdal
Wallpaper by Johan Norman ca 1800
Peep-show wallpaper, ca 1850

09.30–10.00 Coffee break

11.00–11.45 Norrgården i Flatmo, Forsa
Wallpaper and stencilled decorative paintings
from 1846 and 1858

12.00 Lunch på Ystegården i Hillsta, Forsa
Borders by Adam Petter Holmberg, ca 1800

13.00 Departure for Stockholm-Arlanda

ca 16.30 Arrival at Arlanda

ca 17.30 Arrival at Stockholm Central Station

Attachments

International Wallpaper Conference

In Stockholm, 14-17 June 2007

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Attachments

Recipe: Distemper

- 10 kilos whiting
- 4.5 litres water
- Powder colours or universal stainers
- Hot rabbit skin glues or PVA

Sift the whiting into the water until a peak appears above the surface. Leave to soak overnight. The following day discard the top 5 cms of clear water Add 5-10% of glue by volume. Tint with powder colour or universal stainers mixed with water.