

## Curricular Vitae

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### COLIN PROUSE NZCSC (CHEM)

The writer is a building consultant and building materials scientist specialising in the field of applied protective coatings, exterior cladding systems and weathertightness of buildings.

Over the past 11+ years he has offered specialist building maintenance management systems and preventative maintenance planning software. Recently the writer established the Building Element Assessment Laboratory Limited (BEAL) for the appraisal of building products and provision of advice to manufacturers and importers. The writer's early experience extends from the development of QA test methods, to Research & Development to Risk Management planning and implementation, and to the planning and implementation of training of staff.

#### **Qualifications:**

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New Zealand Certificate in Science majoring in Chemistry in 1969 at the Auckland Technical Institute. Certificate in Industrial and Commercial Photography, also from the Auckland Technical Institute. The writer completed the first of a two year course for the post graduate Diploma in Business and Industrial Administration from the Auckland University's School of Engineering.

#### **Early work experience:**

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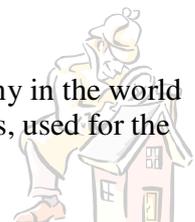
Early work experience included the development of QA processes for the manufacture of gypsum based plaster, used for the manufacture of Gib plasterboards, and later the development of 'rapid' non-ferrous metal assay techniques including the use of Atomic Absorption Spectroscopy to confirm compliance with international specifications, for exporting ingots;

As laboratory manager, development of methods for the QA of incoming purpose-made paper, carton-board, wax and adhesive materials used for the manufacture of packaging products, as well as carrying out full scale trials of new materials required for new packaging products used for exporting (frozen eels, wine and fresh apples);

As a senior research chemist based in Melbourne, development of new range of offset printing inks, and the co-development of new resins as the basis of new ink systems;

As a technical representative to the largest scientific supply company in New Zealand, responsible for introducing state of the art QA procedures for the dairy and meat export companies. Training received included the use of analytical instruments and procedures including GC, HPLC, TFEP, to improve the efficacy of world-class medical and industrial research projects being carried out by Universities and Research Institutes;

As a technical representative for the largest chemical research and development company in the world (BASF AG), received specialist training in the use of pigments additives and surfactants, used for the



manufacture of paints and coatings. Travel to receive this training included overseas trips to Australia and Germany;

As manager of a New Zealand based industrial coatings application company, received extensive training in the application of both industrial and decorative coatings using brush, roller, pin roller, hopper gun, pressurised texture gun, air atomisation spray, HVLP and airless methods;

During this time he received training from ICI on the exterior refurbishment requirements of Housing New Zealand when employed by ICI as a project assessor, and later training in the preparation and application of industrial floor coatings by a speciality industrial floor coatings manufacturer.

Summary of practical experience with coatings & specialised products includes –

- Preparation and application of a wide range of decorative type coatings to a full range of substrates, including all types of remediation work;
- Preparation and application of industrial coatings to a full range of substrates, including metal, plastic, glass, and timber substrates;
- Preparation and application of high finish (lacquer type) coatings to a wide range of substrates;
- Preparation and application of a range of ‘anti-graffiti’ coatings;
- Preparation and application of a range of textured coating systems over fibre-cement and other cladding substrates;
- Preparation and application of a wide range of liquid applied membranes over a range of floor or deck substrates;
- Preparation and application of concrete repair products, including the repair of spalling concrete, leakage and hydrostatic water problems;
- The preparation and application of specialist protective coatings and preservatives for the restoration of historic stone and masonry buildings (Parliament buildings, Auckland Town Hall, Dunedin Town Hall, Oamaru’s National Bank and others).

### **Consulting work experience:**

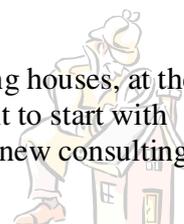
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In 1994 the writer formed a partnership specialising in the development of planned maintenance systems for managers of large property portfolios. This led to an initial contract with the Property Manager responsible for the ‘Civic Centre buildings’ in Wellington, and then to the Property Manager of the Wellington City Council responsible for the maintenance of 2,400 rental units. These projects lasted several years and involved the development and supply of maintenance software that enabled the managers to optimise short to long term maintenance expenditure and budgets.

These projects then led to a contract with Otago University to carry out a condition survey and implement a long term preventative maintenance programme for the exterior of the Wellington School Of Medicine buildings, based in Wellington. The success of this project then led to the partnership providing advice for the long-term maintenance of School Of Medicine buildings based in Auckland, Christchurch and Dunedin.

Numerous other maintenance advice and project management contracts were entered into for commercial and industrial properties throughout the Wellington region.

In 1999 the writer was invited by a large building consulting practice to look into leaking houses, at the beginning of what is now called the leaky home syndrome. The projects were infrequent to start with but became more frequent with the passage of time. Eventually the writer established a new consulting



practice to deal with the flood of work which increased with the advent of the Weathertight Homes Resolution Act in 2003.

Since then the writer has completed over two hundred investigations or consulting jobs, mainly for home owners.

The writer has been engaged as an expert witness by the courts – as well as by building consulting firms involving coating disputes.

The writer has been employed by clients to provide expert opinion in several large value claim cases.

### **Cladding Appraisal experience:**

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In 2004 from a public suggestion of the chief executive of BRANZ, the writer formed the Building Element Assessment Laboratory Limited (BEAL™) to carry out appraisals of cladding, roofing, window and membrane systems used on houses. Prior to the formation of BEAL, a SWOT analysis of other building product appraisers indicated an opportunity to provide a competitive service.

With the passage of the new Building Act 2004, manufacturers soon became aware of the need to have their building product officially recognised and the enquiries received by BEAL from both Australian and New Zealand companies has grown steadily.

One of the most significant findings after establishing BEAL, was the absence of useful Performance Standards against which building products and systems could be judged. As a result the writer established – at his own expense – the Building Quality Institute ( [www.bqi.org.nz](http://www.bqi.org.nz) ). The purpose of this organisation was to provide transparent ‘interim performance standards’, for the public and building industry to comment on, available from an easy to use web site. This has meant many hours of careful research into developing new test methods or collating existing test methods that are most appropriate to evaluating building products used in the New Zealand environment. This is seen by the writer as a key issue when considering the establishment of the ‘scheme rules’ for Product Certification under the new Building Act. The writer spends a considerable amount of time discussing current and upcoming issues with many members of the Department of Building and Housing.

In 2005 the writer attended the Leaky Buildings Symposium in Auckland organised by Prof Duffy of the Department of Chemical & Materials Engineering, University of Auckland. The key speakers were Dr. Joe Lstiburek and Prof John Straube from the USA and Canada respectively. After the proceedings concluded the writer established a dialogue with the speakers for analysing current NZ cladding design issues and providing guidelines to manufacturers. This extension of local knowledge of cladding science, manufacture and installation is ongoing.

A summary of building products appraised or being appraised by the writer include –

- Foil backed window sealing tapes (two different brands)
- Autoclaved Aerated Concrete thin panel cladding system with coated render
- Concrete-EPS composite thin panel cladding system with coated render
- Traditional EIFS cladding system with coated render
- Low Expansion single component polyurethane foam sealants
- A Thermal Break product for steel framed buildings
- A render system for use on fibre-cement and many other common substrates
- A render system for use on EIFS claddings
- A low-cost house cladding system for use by disadvantaged pacific island communities
- A innovative water-repellent concrete block wall system
- Asphalt shingles



- A range of new cladding materials manufactured in Asia - ongoing.

In order to carry out the appraisal of the above mentioned building products, BEAL has purchased a range of modern test equipment. In addition use is made of special software for modelling and curve prediction, especially for such tests as Water Vapour Transmission testing. Where appropriate testing is carried out in an specialist IANZ-accredited laboratory located in Auckland.

While BEAL has at present a limit on in-house resources, it has the capacity of its competitors by utilising the expertise of other specialists located throughout the country, as well as in Australia and the UK!

For example an arrangement has been entered into, to have certain coating tests carried out in an accredited laboratory in Melbourne. This access to local and overseas expertise ensures clients are well served while ensuring quality assessments and tests are used to show compliance with the relevant Building Code.

With years of practical experience of developing tests methods, combined with the many years of experience in designing and implementing modern building maintenance methods, the writer has the necessary knowledge and the capability for the analysis and provision of advice on cladding, roofing, window and membrane systems for the New Zealand environment.

### **Past and Present Professional Associations:**

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From 1979 to 1985 the writer was a member of the Oil, Colour and Chemicals Association Inc

In 1994 Colin was accepted as a full member of the Australasian Corrosion Association Inc. and received training on corrosion and its treatment.

In 2001 was accepted as a member of the New Zealand Institute of Building Surveyors Inc. but is not a current member.

Attended the 'Weathertight Training Course 2002' sponsored by the BIA, passing the examinations conducted by the NZ Institute of Building Surveyors.

In 2006 Colin was accepted as a member of the Building Officials' Institute Of New Zealand (Inc.) (roll number 4297).

### **Testimonials:**

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Testimonials from current and past clients are available on request.

