stone initiatives

# Thomas Baggs

Technical Officer – Finishes Evaluation Services

A geomaterials scientist with a special interest in petrology and petrography; education background in geology, geophysics and mineral geoscience; a skilled technical officer with experience across a range of prominent architectural projects.

## CONTACT

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## ABOUT

Thomas (Tom) Baggs is a geomaterials scientist with an interest in petrology and petrography, involving the detailed study of the composition and structure of rocks. He has a Bachelor of Science (Mineral Geoscience) with First Class Honours from the University of Adelaide.

Tom specialises in petrographic and mineralogical testing analyses, with a focus on the detection of asbestiform minerals and the evaluation of stone surface finishes to ensure fitness for use in high-end commercial projects. He enjoys fossicking expeditions and has a strong interest in the use of technology and computers for improvements in the testing laboratory environment.

## RELEVANT INDUSTRY EXPERIENCE

**2017–Present**
**Stone Initiatives & Materials Testing Group**
*Technical Officer – Finishes Evaluation Services*

- Quality System Manager: Development and improvement of the laboratory Quality System and delegation of quality system tasks as the laboratory.
- Development and management of laboratory ITC systems.
- Performing physical material testing to ISO/IEC 17025 quality requirements.
- Petrographic analysis, asbestiform mineral detection and the evaluation of stone surface finishes to determine fitness for purpose.
- Providing guidance to laboratory personnel in areas of special interest.
- Project management, including task delegation, material testing and comprehensive reporting.
- Scientific analysis of results, including data analysis, determination of fitness for purpose, proposal of any required additional testing, determination of failures.

## EDUCATION AND TRAINING

**2014–2016**
**The University of Adelaide**
Bachelor of Science (Mineral Geoscience) in Geology, Geophysics and Applied Geology. Graduated with First Class Honours.

**2017**
Certificate II in construction (White Card)
**2022**
NATA Quality Management in the Laboratory Course

## PUBLISHED WORK

T. Baggs, “Will crystalline silica concerns see engineered stone banned?” Stone Initiatives, October 2023.

T. Baggs, “Using petrography to evaluate dimension stone,” Stone Initiatives, January 2023.

T. Baggs, “Asbestos in dimension stone: The dangers and how to minimise risk,” Stone Initiatives, July 2021.

M. A. Williams, D. E. Kelsey, T. Baggs, M. Hand, K. L. Alessio, “Thorium distribution in the crust: Outcrop and grain-scale perspectives,” *Lithos*, Volumes 320–321, 2018, Pages 222–235, ISSN 0024-4937.

T. Baggs, *The behaviour of metamorphic apatite from mid-amphibolite to granulite facies metapelites and metapsammites: insights from the Stafford Member from the Arunta region, Australia.* Thesis (B.Sc.(Hons)), The University of Adelaide, 2017.

## T. BAGGS CONSULTANCY HIGHLIGHTS

**Queen Elizabeth Hospital Redevelopment** (Adelaide, 2023–2024)
Project description: Five-level hospital building redevelopment.
Responsibilities: Concrete moisture content testing and slip resistance testing.

**One Circular Quay** (Sydney, 2023–2024)
Project description: New luxury residential luxury apartment building overlooking Circular Quay.
Responsibilities: Testing and evaluation of stone finishes proposed for use as flooring, benchtops and vanity splashbacks within luxury apartments.

**Australian Bragg Centre** (Adelaide, 2023)
Project description: New biomedical research facility centred within the hospital/medical research complex on North Terrace, Adelaide.
Responsibilities: Slip resistance testing of surface finishes installed throughout the project.

**205 North Quay Project** (Brisbane, 2023)
Project description: New 38-storey riverside commercial tower development.
Responsibilities: Testing of physical properties of granite dimension stone intended for use within the project.

**Princes Bridge Project** (Melbourne, 2023)
Project description: Repairs and maintenance work of heritage bluestone (basalt) bridge on the Yarra River, Melbourne.
Responsibilities: Comparative petrographic analysis of bluestone basalt sources proposed for use on the project.

**469 LaTrobe Street Project** (Melbourne, 2023)
Project description: Lobby refurbishment of existing commercial building
Responsibilities: Testing of physical properties and surface finish evaluation of various dimension stone types intended for use within the project.

**Brisbane Metro Project – Recycled 'Brisbane Tuff' Stone** (Brisbane, 2023)
Project description: Use of recycled Brisbane Tuff stone as blended paving.
Responsibilities: Physical strength testing of recycled dimension stone pieces and slip/ skid resistance analyses of the stone for determining suitability for use as paving.

**Metro Tunnel Project** (Melbourne, 2022)
Project description: Metropolitan underground railway construction project.
Responsibilities: Basic physical property testing, finish evaluation and petrographic analysis and secondary mineral content analysis of stone types for use as stone finishes within Metro Tunnel.

**One Sydney Harbour** (Sydney, 2020–2021)
Project description: Residential skyscraper complex of multiple residential buildings using various stone types in luxury apartments.
Responsibilities: Testing and evaluation of stone finishes proposed for use as flooring and benchtops within apartments.

**Queens Wharf Development** (Brisbane, 2021)
Project description: Public entertainment precinct in Brisbane CBD.
Responsibilities: Testing and evaluation of stone finishes proposed for use as paving.

**Crown Resorts** (Sydney, 2018–2021)
Project description: High-rise residential building using various stone types throughout public areas and in luxury apartments.
Responsibilities: Testing and evaluation of stone finishes proposed for use as flooring, paving, cladding and benchtops in public areas of the building and within apartments. Included petrographic analysis of select stone types.

**King William Street and North Terrace Slate Pedestrian Paving** (Adelaide, 2020)
Project description: Installed Mintaro slate pavers along pedestrian walkways of King William Street and North Terrace in the Adelaide CBD.
Responsibilities: Overseeing condition survey of installed pavers.

**South Eastern Freeway Upgrade** (Crafers, 2020)
Project description: Extension of three-lane roadway of the SE freeway between Stirling and Crafers exits.
Responsibilities: Skid resistance testing of new sealed bitumen road.

**South Australian Maritime Museum**
(Port Adelaide, 2020)
Project description: Investigation into damp issues in wooden floorboards.
Responsibilities: Overseeing investigation and survey of damp in timber flooring.

**1 Castlereagh Street** (Sydney, 2020)
Project description: Office building upgrade.
Responsibilities: Evaluation of limestone, granite and trachyte for use as cladding.

**Bondi Synagogue Project** (Bondi, 2019–2020)
Project description: Cladding propose for use in ynagogue building in Bondi.
Responsibilities: Evaluation and testing of stone for use as a cladding material in synagogue house of worship.

**North – South Motorway Upgrade**
(Adelaide suburbs, 2019–2020)
Project description: Various sections of roadway upgrade between the Northern and Southern suburbs of metropolitan Adelaide co-ordinated by multiple construction companies.
Responsibilities: Slip resistance testing of surface finishes used in pedestrian areas associated with the upgrades and skid resistance testing of vehicular trafficked roadway areas.

**AIRA Residence**
(Kuala Lumpur, Malaysia, 2019–2020)
Project description: Luxury residential building.
Responsibilities: Testing and evaluation of stone finishes proposed for use as flooring and benchtops within residential apartments.

**Osborne Naval Shipbuilding Precinct**
(Port Adelaide, 2018–2021)
Project description: Construction site for new naval shipbuilding precinct.
Responsibilities: Slip testing of concrete surface finishes.

**West Side Place** (Melbourne, 2018–2020)
Project description: New apartment building and Ritz-Carlton hotel.
Responsibilities: Quality assurance testing of stone to be used as external facade.

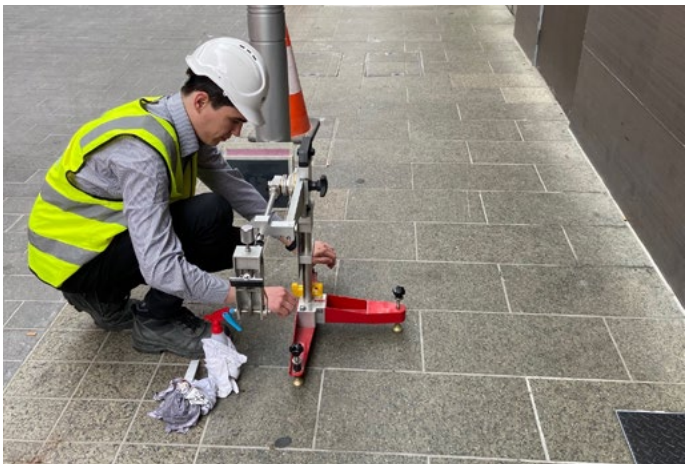
**Adelaide Festival Square Upgrade**
(Adelaide, 2019–2024)
Project description: Various natural stone paver types installed in public areas of the new Adelaide Festival Square development. New buildings with various surface finishes.
Responsibilities: Evaluation of various stone types proposed for use as pavers. Overseeing testing of stone finishes. Slip-resistance testing of various surface finishes on site.

**Westmead Hospital Redevelopment**
(Sydney, 2019)
Project description: Limestone cladding and soffits.
Responsibilities: Testing of basic physical properties of stone type, petrographic analysis of stone type to determine risks, on-site inspection of slabs and demonstration of how to identify open microcracks that may present a risk when installed.

**Melbourne Airport International Terminal Redevelopment** (Melbourne, 2019)
Project description: Investigation into deterioration of tiled finish
Responsibilities: On-site inspection and survey on tiling finish for identification of tiles exhibiting signs of deterioration or other discontinuities that may affect future performance. Investigation of cause of failure and proposal of remediation or prevention methods.

**Adelaide GPO Building** (Adelaide, 2019)
Project description: New Adelaide GPO building – used as office building.
Responsibilities: Slip resistance testing of new flooring finishes.

**Gawler Place Upgrade** (Adelaide, 2019)
Project description: Granite pavers of various formats installed in Gawler Place shared pedestrian/vehicular trafficked areas.
Responsibilities: Overseeing condition survey of installed pavers.



**Pitt St Tiffany Store** (Sydney, 2018–2019)
Project description: Testing of architecturally designed external cladding.
Responsibilities: Testing and evaluation of proposed stone supply. Petrological/petrographic analysis of blocks proposed for use.

**Atura Hotel, Adelaide Airport**
(Adelaide, 2018–2019)
Project description: Short-stay hotel accommodation adjacent to Adelaide Airport.
Responsibilities: Determination of slip resistance of several public accessible surface finishes, condition survey of concrete screed and evaluation of external paver breaking load characteristics.

**Adelaide Oval** (North Adelaide, 2018–2019)
Project description: Slip resistance testing of various new pedestrian surface finishes throughout the stadium.
Responsibilities: Slip resistance testing and consultation.

**Queen and Collins Project** (Melbourne, 2018)
Project description: Commercial and retail precinct.
Responsibilities: Evaluation of proposed stone types to be used as wall cladding.
**80 Collins Street** (Melbourne, 2018)
Project description: Luxury shopping / dining precinct and office building.
Responsibilities: Evaluation of proposed stone types to be used as facade.

**447 Collins Street** (Melbourne, 2018)
Project description: Office, residential and hotel building.
Responsibilities: Evaluation of proposed stone flooring finishes to be used in public areas.

**66 Eagle Street** (Brisbane, 2018)
Project description: Office building.
Responsibilities: Evaluation of stone type proposed for use as internal wall cladding.

**Jewel** (Gold Coast, 2017–2018)
Project description: Three-tower development including a 5-star hotel and luxury apartments using stone extensively through public areas and high-end apartments.
Responsibilities: Testing and evaluation of stone floor finishes and cladding. Petrographic analysis of stone types.

**Darling Harbour Paving Investigation**
(Sydney, 2017)
Project description: Investigation of several existing natural stone pavers installed in Darling Harbour.
Responsibilities: Design of test method to identify presence of sealer on stone and undertaking petrological examination to determine the geological and commercial stone type classification.