

SYDNEY 'TRIG' SURVEY

The Historian, the Archivist & the Conservator



A project to create a digital version of the 1865 Trigonometrical Survey is nearing completion. The 'Trig' Survey is a set of plans showing Sydney from Redfern north to Port Jackson, and from Elizabeth Bay to Pyrmont — the original boundaries of the City of Sydney. City Historian Shirley Fitzgerald, City of Sydney Archivist Mark Stevens and State Records Conservator Emily O'Reilly contribute to this account of the historical background, project scale and conservation processes involved in the project

'Snapshot' of Sydney

These plans were begun in 1854, around the time of the gold rushes. People were arriving in Sydney in large numbers, resulting in a good deal of chaotic and unplanned growth in the town. Quite suddenly things like the state of the water supply, sewerage and street alignments seemed more urgent than they had before. The government decided to sack the City Council and appoint three commissioners to whip the place into shape. These plans were part of that.

As an historical record they provide us with a fantastic ground plan of Sydney in the 1860s: the outlines of buildings, the size of things, the shape of things. The drainage and pipe lines might appear as just lines on a map, but they tell us much about the state of the city, its public health, the good places to live and the bad.

These plans do not cover all of Sydney, but they cover the majority of places in the 1860s. The city was geographically small—a 'walking' city with most of its suburban growth still to come. The economic explosion of the so-called 'long boom', which lasted from the 1860s to the economic crash of the 1890s, was only just beginning. And so these plans give us a good snapshot of the place at the start of the process which would create Victorian Sydney with its miles of terrace houses, served by trains and trams.

Shirley Fitzgerald

↗ Detail of Globe Street on The Rocks plan



Towards a Cartographic History

The Trigonometrical Survey plans were created by the Engineer's Department of Sydney Council under the supervision of the City Surveyor. The survey was transferred to the Archives Office of NSW in May 1974 from the Metropolitan Water Sewerage and Drainage Board.

The project will create a digital version of the Trig Survey, initially available on CD-ROM and later online. The City of Sydney Archives is coordinating the project with State Records, and financial support has been provided by the Department of Information Technology and Management, Sydney Water, the Historic Houses Trust of NSW, Godden Mackay Logan (heritage consultants) and Tropmans (architects). Digitisation work has been contracted to the Department of Land & Property Information.

The project has taken two years to come to fruition, mainly because of the time necessary to conserve and prepare the plans for digitisation. Once the survey has been successfully digitised and made accessible, attention will turn to similar work on other historical plans of Sydney. In the long term we aim to make available a digital cartographic history of the city.

Mark Stevens

DIGITAL IMAGE: DEPARTMENT OF LAND & PROPERTY INFORMATION



↑ Patent stamp on the verso of one plan



↑ Detail of plan after varnish removal

Preparing & Preserving

The plans are up to three metres long and average one metre wide. They were initially drawn with coloured inks and wash in-fills for the buildings and the edge of the harbour. The sections are to a scale of 40 feet to one inch, and the buildings are colour coded to indicate the construction material.

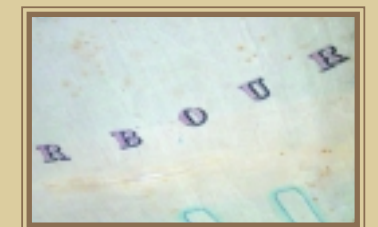
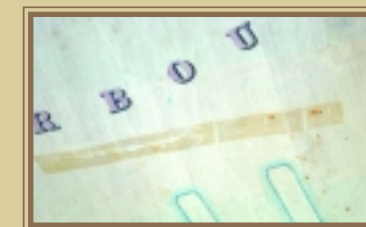
All 56 plans have been executed on a specially treated cloth. On close inspection, a patents stamp was found on the verso of one, reading: 'By Her Majesty's Royal letters Patent, The Vellum Cloth, Dowse Patent'. From this information a copy of the specification was obtained from the British Library. The patent is GB11329 of 1846; it was granted to 'Charles Dowse, of Camden Town, in the County of Middlesex, Gentleman' as a 'Manufacture of Fabrics applicable as Substitutes for paper'.

Originally the plans were attached to and rolled around wooden dowels. Excessive rolling and unrolling has caused a weak area where the plans were attached, causing them to tear right across. At the ends, varnish from the dowel had transferred onto the plans, which over time had picked up dirt. On testing it was found that the varnish (and dirt) was easily removed by swabbing with acetone (a pure version of nail varnish remover) without causing over-cleaning or removing the inks.

PHOTOS: EMILY O'REILLY

↗ Plans before and after sticky tape removal

Many of the plans have suffered from use, which has caused tears, losses and creases. Some older repairs were carried out using similar cloth material adhered with a thick animal glue. On one, an untreated piece of cloth had been sewn on to in-fill a missing area. Some repairs had more recently been carried out using Sellotape; removal involved using the heat from a hairdryer to lift off the plastic carrier, followed by swabbing with acetone to remove the sticky residue and stain.



Due to the size of the plans it is not practical to store them flat. As they have to be stored rolled, it was decided to re-use the original dowels. Wood can and has been very damaging to the plans, so the dowels were isolated from the plans using aluminium foil and a special acid 'mopping' paper. Even the labels on the ends were washed and re-adhered. As there will now be very detailed copies of the plans to study via CD-ROM, the originals can be 'retired from service', being preserved by not being used and remaining in air-conditioned storage.

Emily O'Reilly