Masterton Courthouse - seismic strengthening

Masterton

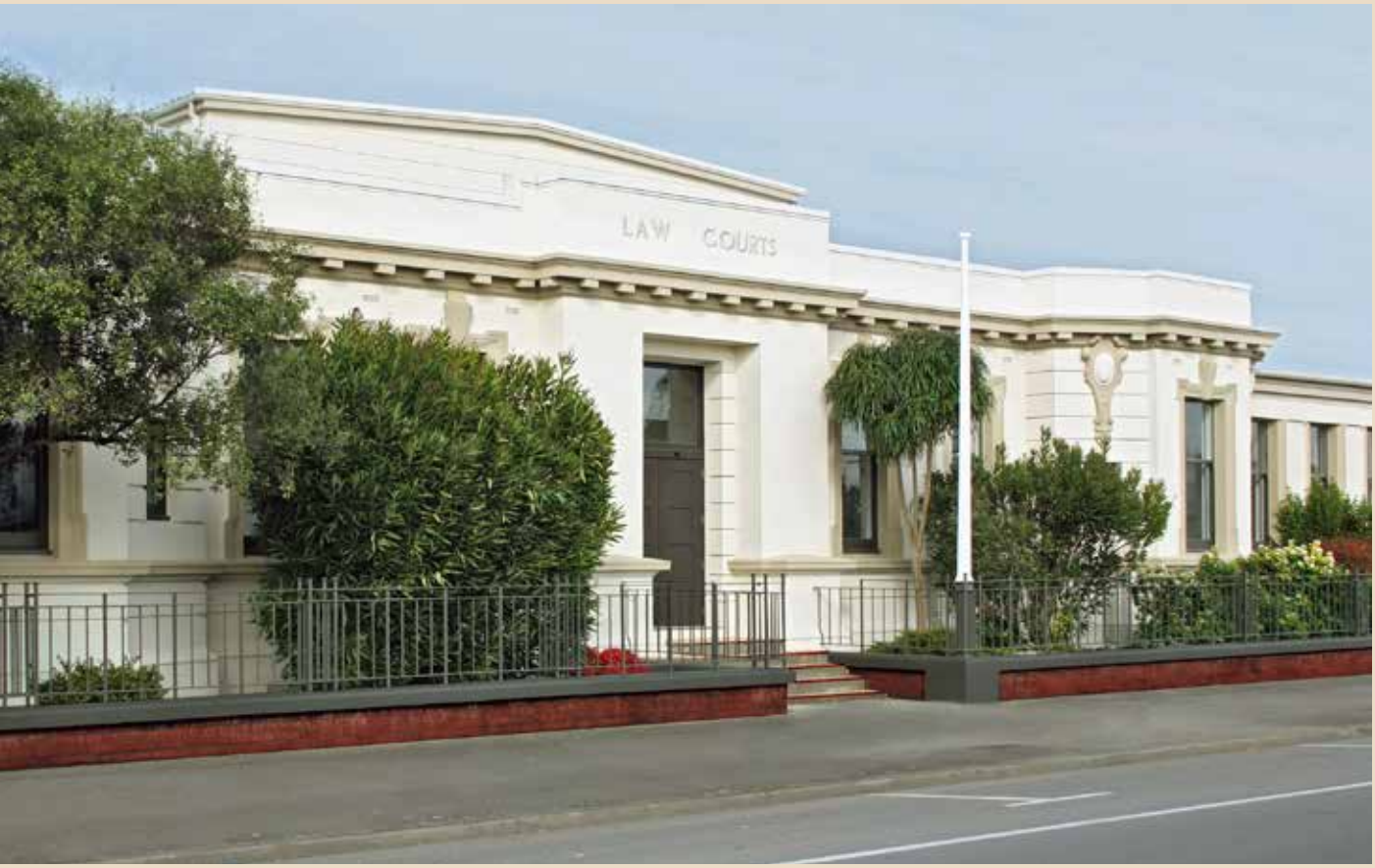
Stephenson&Turner recently completed the seismic upgrade and revamp of the Masterton District Courthouse. The building was closed suddenly in December 2011 following a seismic report that the building had the potential to collapse in a significant earthquake. Stephenson&Turner (Architects and Building Service Engineers) were engaged alongside Impact (Project Managers) and Miyamoto (Structural Engineers) to find a cost effective solution to bring the 101 year old building back to a safe working environment.

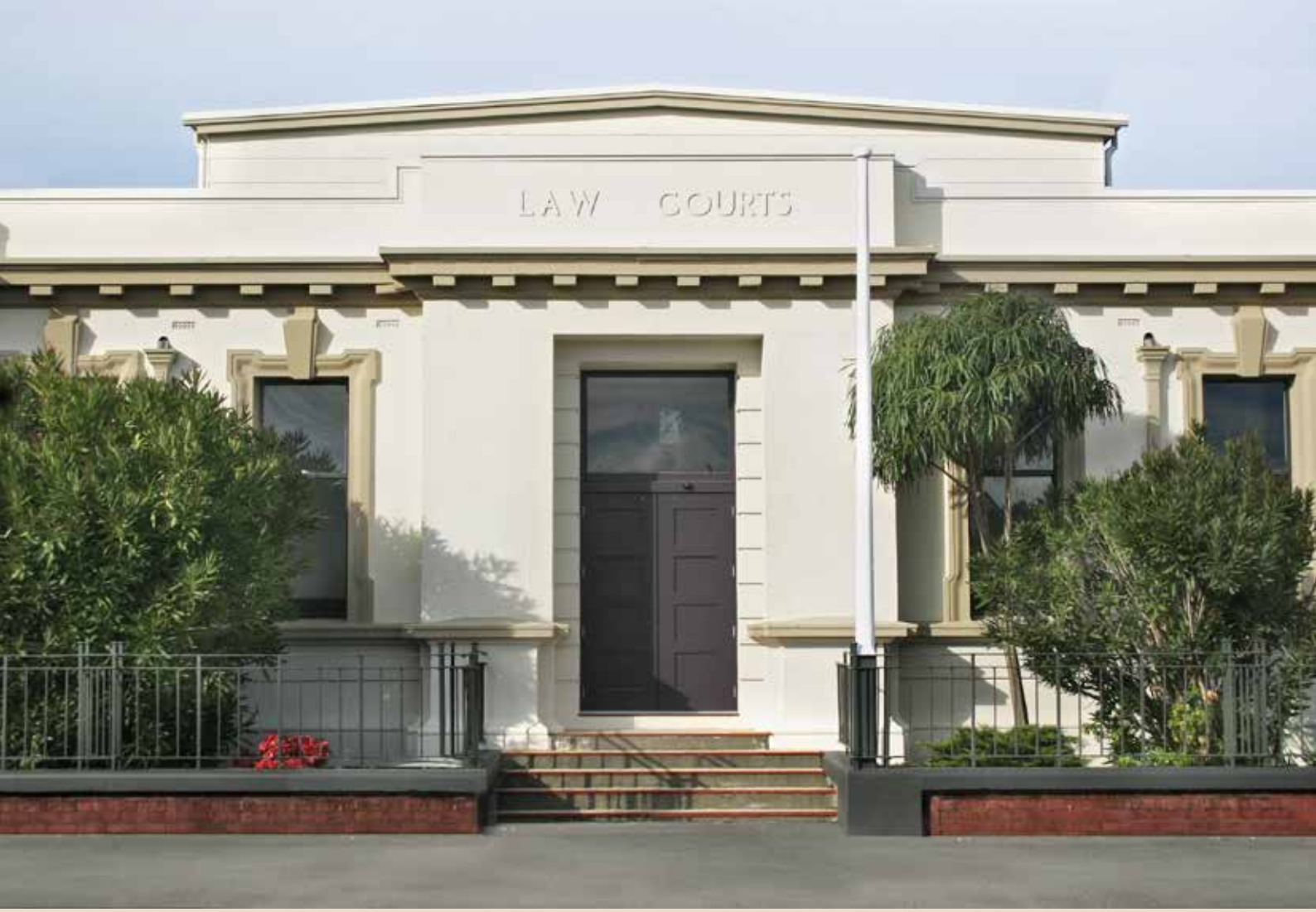
The solution lay in a 'FRP', Fibre-Reinforced Plastic. This system connects the individual bricks of the external masonry walls together, allowing the walls to move as one mass in the event of an earthquake. The benefit of this system is the unobtrusive finish to the building; there are no visible steel beams, no giant columns and no cross-bracing blocking windows. This meant the original character of the building was able to still be accentuated.

While the building was under construction, they took this opportunity to re-plan the internal layout, creating a more cohesive flow amidst the maze of secure corridors.

Additional public waiting areas with more accessible public counters and facilities were provided along with a single point of entry and screening station to enhance security, secure interview rooms for lawyers to meet with clients, and enhanced internet connectivity allowing Audio Visual Links to be used in court. This will allow prisoners to appear remotely in court from prison. New ceilings, flooring and painting gave the interior a fresh new look and feel and the upgraded building services provided a much need comfort boost. The roof was completely replaced and through careful detailing the project team were able to create a seismic diaphragm throughout the roof plan to help support the hard work below. To finish it off, a new external colour scheme gives a nod to the historic Oamaru Stone building facade.

"The refurbishment work will ensure that the court is better able to meet the needs of court users in the decades to come," Minister for Courts Chester Borrows said. "The Masterton team have nicknamed the move 'back to the future', which really sums up the exciting work which has been carried out on the building."

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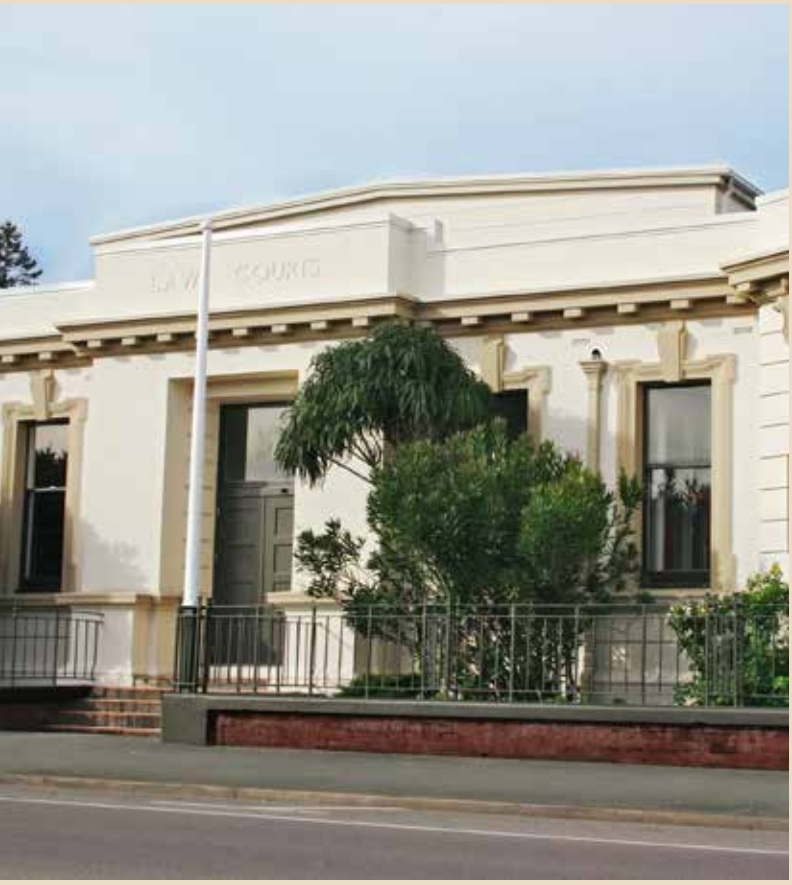
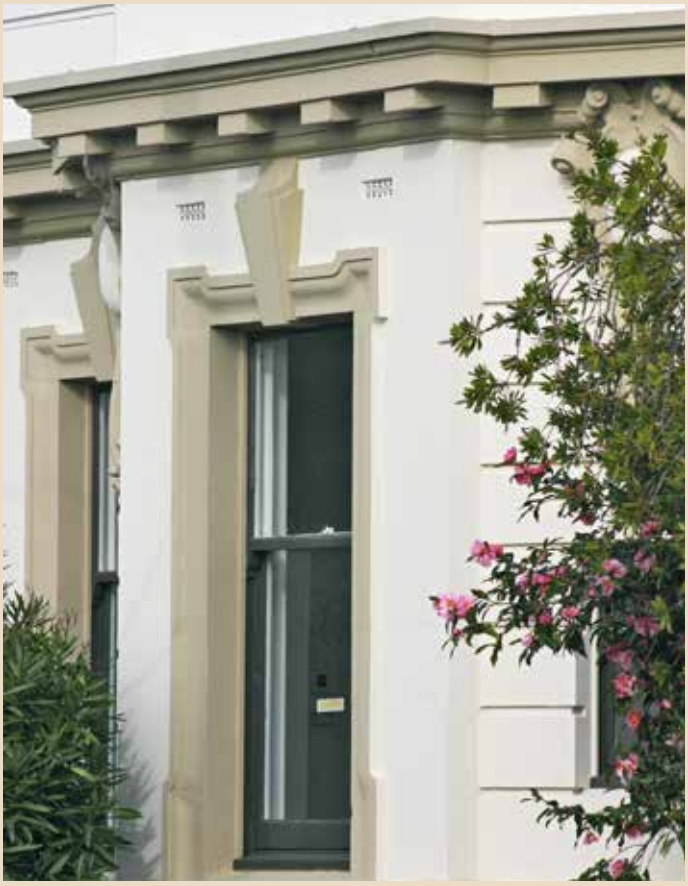
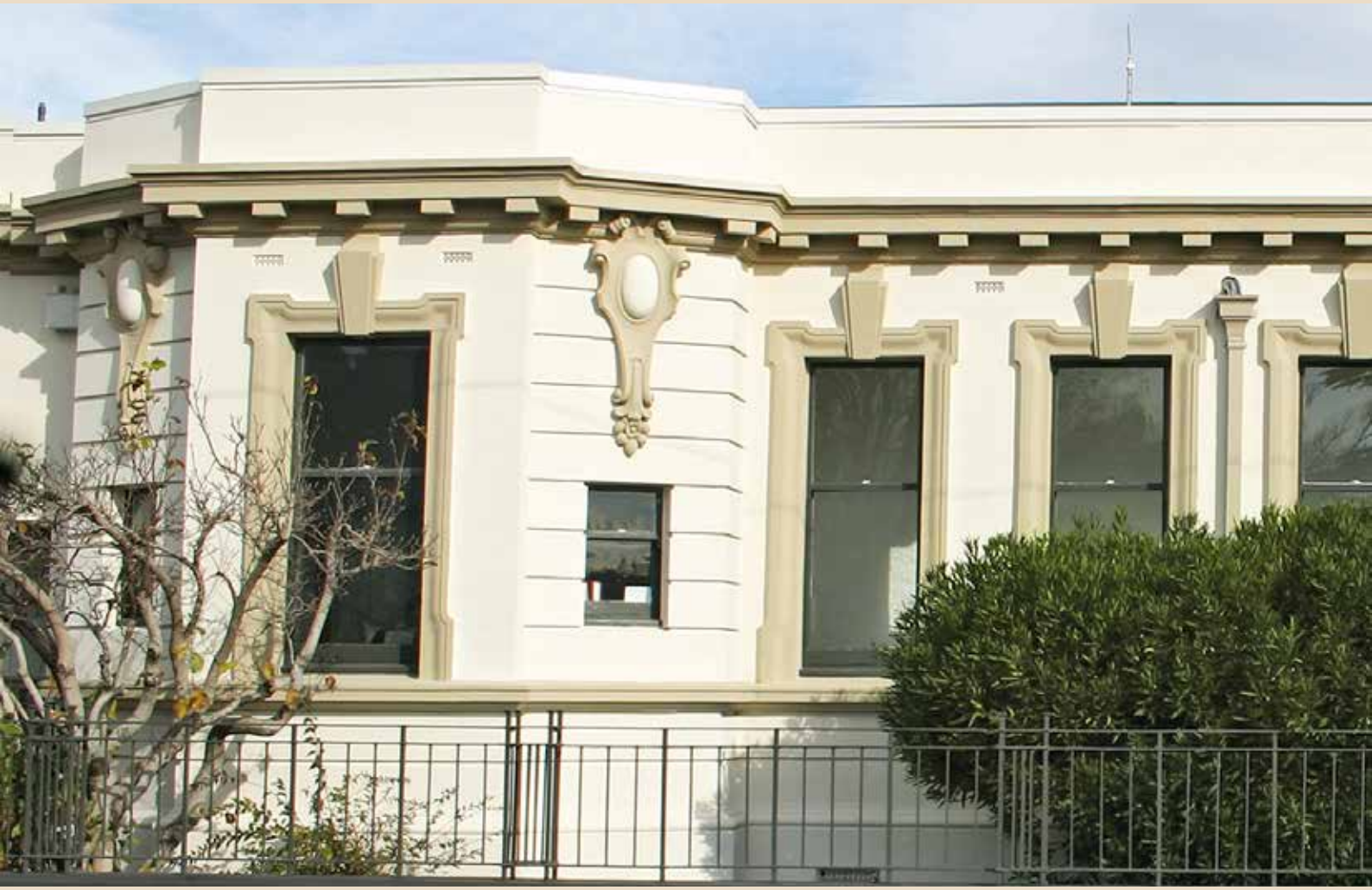






Resene Half Spanish White

Architectural specifier: Stephenson&Turner NZ Ltd www.stephensonturner.com

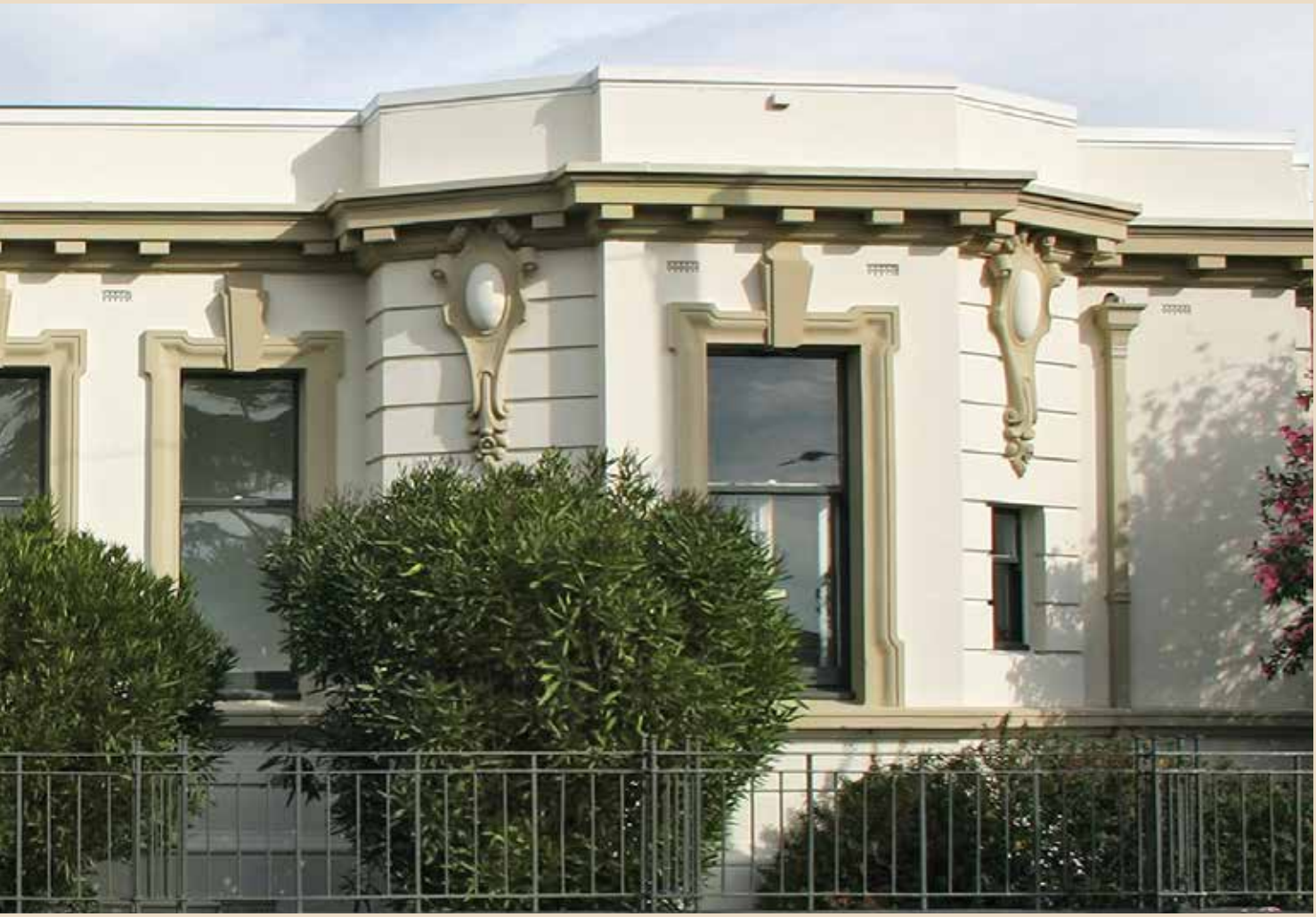
Building and painting contractor: Holmes Construction Group - Wairarapa www.holmes-construction.co.nz

Client: Ministry of Justice www.justice.govt.nz

Photographer - external: Malcolm Gardiner Stephenson&Turner NZ Ltd www.stephensonturner.com

Photographer - internal: Paul McCredie

Project manager: Impact Group www.impactgroup.co.nz



'A nod to the past'

The Masterton Courthouse was built in 1900s using Oamaru Stone as the main external façade material. Oamaru Stone was selected as a prominent building material for grand public buildings of this time and offered stone craftsmen the ability to produce ornate detailing. The finished stonework has a beautiful creamy, sandy colour, however is prone to pollution staining and surface crumbling.

The original stone at Masterton Courthouse was painted at some time unknown, for reasons unknown, but what is known is once the stone is painted, there is no going back.

When Impact and Stephenson&Turner took over the Seismic Strengthening works on the Courthouse in 2012, the external façade was represented by an awkward 'mint green' walls with 'forest green' trim and 'red' detailing; a rather dated colour scheme with very little respect to the ornate beauty of the building's past.

However, the external painting/colour scheme was not included in the scope of works of the seismic upgrade of the building and it wasn't until a year later that external colour scheme concepts became a new focus.

Multiple concepts in colour schemes were trialled, with the underlining theme behind all concepts to bring this building back to its past beauty. Sandblasting the paint back to its natural state was considered, until advice that the stone would not survive the process.

Research into the building's construction and materials of old, led the concepts towards replicating the natural Oamaru Stone colourings, while highlighting the ornate detailing of the building. The concept was to play on similar colours with differing tones, a play on shadow and light!

Resene Akaroa was the final selection for the building with its sandy, natural colouring in **Resene AquaShield** a dead flat mineral effect finish sympathetic to the age of the building. The tonal variance selected was **Resene Quarter Akaroa** for the walls and **Resene Triple Akaroa** for the trims. The balance of light and shadow was well represented through the tonal selection of the Resene Akaroa colour.

The final challenge was to select a complementary door and window joinery colour that would enhance the natural feel of the building. This decision came quickly with the help of original photographs of the building. A darker joinery colour was selected for the original building, therefore a darker joinery colour was to be selected now. The semi-gloss finish of **Resene Lustacryl** in **Resene Double Gravel** gave a strong contrast in colour to the Resene Akaroa, while maintaining earthy natural tones.