

Auckland's Clark Street Overbridge's rhythmic sequence of painted steel fins in Resene Roadster, Resene Monza and Resene Livewire act as a visual screen while injecting an energetic dose of colour to break-up the strong prevalence of concrete.

- Resene Roadster
- Resene Monza
- Resene Livewire

Bridging the gap

Colourful projects that span both distance and the spectrum.

There's nothing more frustrating than when you have a vision in mind for your project and you can't find materials in the colours you're after. But from cladding to ceilings, marine to machinery, automotive to architectural, industrial to interiors, engineered to exteriors, the Resene Group of companies has a coating solution to suit.

Altex Coatings, for instance, are specialists in the formulation, manufacture and specification of high performance industrial and marine protective coatings throughout the Australasian and Southern Pacific regions, including protective coating systems that cover passive fire protection as well as heavy duty flooring and trafficable coatings.

As part of the Resene Group, they're able to collaborate and provide a complete coatings system solution for your project, bringing in-house technical expertise for a seamless specification. This collaborative approach is especially advantageous when it comes to complex projects like bridges, which require coatings over a number of different substrates, including direct to metal and concrete. Given that these sorts of projects are completely exposed to the elements, what you use to protect them needs to be durable enough to withstand whatever Mother Nature can throw at them day in and day out.

Another aspect that differentiates these companies is the large range of colours on offer. Here, we share a

top tip

Get free direct technical help online for support when specifying coatings. Visit the Altex Coatings website (www.altexcoatings.com) for technical help with their products or www.resene.com/techexpert for a Resene Tech Expert. The technical team can address specific concerns around corrosion, graffiti, specific substrates, primers, undercoats and colour – which can even come down to specifying the dry time needed between coats. So it's not just coatings on offer; it's also technical service direct from the manufacturer – which is a characteristic that really sets Resene Group companies apart.

selection of inspiring bridge and bridge-like projects coloured and protected by Resene and Altex Coatings products that prove that dullness need not be the default.

Clark Street Overbridge

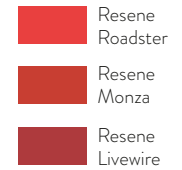
Connecting Clark Street to Great North Road over the western line rail corridor, the Clark Street Overbridge provides a handy bypass route that connects the shared space on Totara Avenue West to Auckland's transit-oriented development at New Lynn town centre. Part of a wider infrastructural and roading upgrade triggered by trenching of the transit station, the bridge provides a much-needed link for those traversing opposite sides of the rail corridor by foot.

The 300m long bridge includes a rhythmic sequence of coloured steel fins which prevent access to the electrified rail lines below and visually screen the adjacent residences. More importantly, they transform an otherwise utilitarian and familiar roading structure into an energising urban intervention and civic landmark.

Resene Armourcote 220 and Resene Uracryl 403 tinted to three key reds, Resene Roadster, Resene Monza and Resene Livewire, provide a bold contrast with the neutral concrete palette of the main bridge structure and the rich and vibrant greens of the adjacent existing and associated landscaping.

"The hues were selected as reference to the site's historical association with clay brick production,

below: The fins on Auckland's Clark Street Overbridge are painted in a trio of vibrant reds: Resene Roadster, Resene Monza and Resene Livewire.



sunsets over the Waitakere Ranges and as a celebration of movement – with a cheeky nod to the western suburbs’ love of speed and fast cars,” says Henry Crothers, Landscape Architect and Urban Designer of Architectus. “Together, the three reds provide visual complexity and a subtle pattern which enables the bridge to be experienced at both urban and intimate scales. The plant species were selected to provide a ‘green-on-green’ palette with texture and forms that complement the bridge design.”

landscape and urban design Architectus, www.architectus.co.nz

structure and road design Beca, www.becca.com

lighting LDP, www.ldp.nz

build Dempsey Wood, www.dempseywood.co.nz

metal work and painting DC Weld, www.dcweld.net.nz

images Claire Hamilton, www.clairehamilton.co.nz

Memorial Avenue Gateway Bridge

In what has now become a landmark for the area, the stunning design of the Memorial Avenue Gateway Bridge came about when Waka Kotahi NZ Transport Agency (Waka Kotahi), Christchurch City Council (CCC) and Christchurch International Airport Limited (CIAL) ran an urban design competition seeking a concept that would enhance the significance of the Memorial Avenue and Russley Road (SH1) intersection. The winning design, a collaboration between Boffa Miskell, Warren and Mahoney, Holmes Consulting Group and Traffic Design Group, was selected not only for its striking form but also its consideration of the location’s greater context.

The project team says that it was the landscape itself that provided the most powerful inspiration possible, through the Southern Alps and the braided rivers that are unique to the Canterbury Plains. By directly translating the vertical power of the Alps and the crossing of strands of rivers, the design captures the essence of Christchurch’s geography in a clear and memorable way.

The bridge design also makes a number of cultural references. Historically, the area of Canterbury where it stands was a place people passed through on the way to Puari Pā on the banks of the Ōtākaro (Avon River) to gather mahinga kai (traditional food sources) in the



wetlands and waterways of Ōtautahi. The two arches symbolise the coming together of cultures.

The coating system for the project is almost as interesting as its dynamic structure. The E~Line 379 system from Altex Coatings was specified. It has a recoatable smooth, high gloss finish that graffiti has trouble adhering to. It is the same product used on Auckland’s sound walls that line the Southern Motorway and multiple areas across state highways that are problematic for graffiti.

About a month after the bridge was finished, an Altex Coatings representative was contacted and alerted the bridge had been tagged. On inspection the black spray painted tag was able to be wiped clean with

a rag, even the Altex Coatings representative’s thumb was able to wipe away the graffiti. Bridges are natural targets for tagging, but specifying the right coating system in a high gloss finish can offer additional anti-graffiti benefits. Often, you can just go out there with a scrubbing brush and a bucket of water and it’ll come right off – which was the case with this project.

project delivery Waka Kotahi NZ Transport Agency, www.nzta.govt.nz

build McConnell Dowell/Downer Joint Venture

architects Warren and Mahoney, www.warrenandmahoney.com

engineering AECOM, www.aecom.com

arch manufacturing Eastbridge, www.eastbridge.co.nz

• **above:** Memorial Avenue Gateway Bridge in Christchurch has been coated in E~Line 379 system from Altex Coatings with a gloss white finish.



Harewood Underpass

Designed to reverse the perception of underpasses being venues for crime, the cathedral-like Harewood Underpass has been acknowledged as a defining feature in Christchurch's cycle infrastructure network – raising the profile of cycling and connecting the city with its fast growing airport precinct. The project's sculptural, textural forms and colours are vibrant, joyful and engaging; playing a key role in the legibility of the underpass as a quality piece of human-scale infrastructure in an otherwise fast moving, large scale vehicular setting.

Faceted concrete panels made from the site's recycled aggregate have been sculpturally crafted to adopt the persona of the Southern Alps – the backdrop of the Canterbury Plains. With reliefs of up to 90mm, these tactile walls create added depth, soft in appearance but with a bright finish and reflective surface that makes for a spectacle along the length of the entire passage. Marking the halfway point, a

field of bespoke natural light tubes pierce through to the roundabout above. Being set on a 15 degree angle allows the tubes to funnel natural sunlight into the tunnel over the course of the day. A central line of LED luminaires complements this feature and reinforces the linearity of the underpass. Colour is used purposefully throughout for its visual qualities; creating warmth, depth, safety and sense of place in this otherwise tough transport corridor.

Bold use of colour is seen on textured panels, and their application at intersections of the tunnel provides a human-scale by breaking the 80m covered passage into quarter-sections, acting as distance markers for pedestrians and cyclists as they make their way through. Their hues reference weather patterns seen from west to east: the fiery West Coast sunset in Resene Carpe Diem, dark stormy West Coast skies in Resene Ship Grey, the light grey Nor'west Arch over the plains in Resene Rakaia and a broad blue Canterbury sky in the east in Resene Captain Cook. These are set against the background of the 'snow'

panels painted a custom colour, dubbed Resene Jasmox White, to make the space appear larger than it is and reference the Southern Alps in the backdrop.

Each of the concrete panels received five coats: one coat of concrete sealer, two coats of coloured Resene Lumbersider low sheen waterborne paint and two coats of Resene Uracryl 402 and Resene Uracryl 403, favouring a higher sheen on internal walls. Resene Aquapel was also used as a water repellent on the concrete.

Among other awards, the project won a Resene Total Colour Maestro Nightingale Award and a Resene Total Colour Commercial Exterior Award.

specifier and colour selection Jasmox,
www.jasmox.com

build MacDow JV (McConnell Dowell and Downer joint venture) www.mcconnelldowell.com, www.downergroup.com

painting PJF Services

images Meg Back

above left and right: The western opening of the Harewood Underpass is painted Resene Carpe Diem in sharp contrast to the custom made white, dubbed Resene Jasmox White, that has been used on the textural panels. On the eastern end, Resene Captain Cook is featured.

-  Resene Carpe Diem
-  Resene Captain Cook
-  Resene Rakaia
-  Resene Ship Grey

Hatea Jetty

After being closed for several years and eventually torn down, a condemned jetty on the Hatea River has been replaced with a newer, safer and far more vibrant one. Made from solid timber, the new structure provides space for users of the Hatea Loop, a 4.2km shared path around the Hatea River, to pause and interact with the waterway.

While it had originally been designed to have a timber and mesh balustrade, Whangarei District Council opted to design a simple metal balustrade that could be painted to lift the profile of the structure given its prominent location,” explains Landscape Architect Tracey Moore. “The addition of the bespoke balustrades to the boardwalk adds colour, vibrancy and interest to an otherwise modest piece of marine infrastructure.”

The boardwalk and balustrades extend 17m out beyond the mangroves before disappearing again as the visitor approaches the entrance to the jetty. “Users walk, cycle, scoot or wheelchair onto the jetty to fish or use it as a viewing platform. It provides a visual reference from various locations around the Hatea Loop, with significant impact achieved from across the river,” says Tracey.

But it’s the Resene colours used on the project that really have gotten people talking. “Resene Neva and Resene Headlights were selected because, despite their vibrancy, the colours blend into the surrounding landscape of Gleditsia triacanthos trees, low plantings of flax and grasses.”

When viewed at a distance, or from across the river, the balustrade appears to be uniform in colour and almost glows thanks to its electric colour choices that

invite users on to the jetty. Whether they appear the same or different, opting to use Resene Black in a gloss finish on both handrails provides a strong connection between them.

Tracey says some visitors have used the jetty and haven’t even noticed the different colours, whereas others have commented on the unusual and interesting colour decision. No matter how you see it, we appreciate the choice to use exciting, eye-catching hues over more predictable options.

design and images Tracey Moore, Whangarei District Council www.wdc.govt.nz

build Steve Bowling Contracting, www.bowlinggroup.co.nz

project management Rachael Mannion, Whangarei District Council www.wdc.govt.nz

Resene
Headlights

Resene
Neva

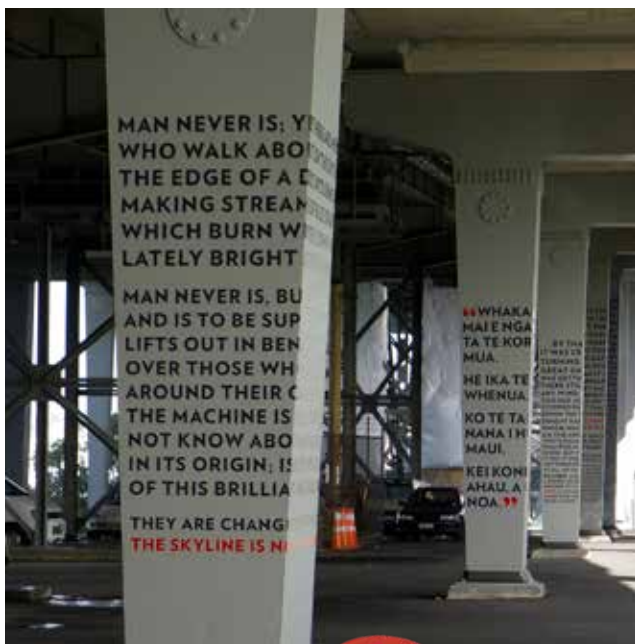
below: Hatea Jetty,
Whangarei.



Trestle Leg Series

The north side of Auckland's Harbour Bridge serves many functions: road access to local dwellings, underside bridge access for essential maintenance works to the structure and a gateway to an important reserve area, including Te Onewa Pā/Stokes Point. From this vantage point, there are expansive views of the Waitemata Harbour framed by the bridge structure overhead; a place for celebration of the natural environment as well as cultural and engineering heritage.

During the under bridge upgrades of the Princes Street area, a unique piece of public art was added. Known as the 'Trestle Leg Series', excerpts of poetry and prose were wrapped around eight of the eastern trestle legs of the west box girder. The project was a unique opportunity to showcase important literature in a publicly accessible location and celebrate writers of national significance who have local connections to Auckland/Tāmaki Makaurau and the North Shore.



above: The 'Trestle Leg Series' won a Resene Total Colour Display + Product Colour Maestro Award. It features poetry and prose in Resene Cinder and Resene Flame Red.

Resene
Flame Red

Resene
Cinder

Boffa Miskell and the NZTA project team worked with local iwi representatives and literary experts to select the appropriate writers and excerpts, and visual artist and typographer Catherine Griffiths interpreted them onto the bridge columns in a style that evokes the painted names of large ships.

The paint system and application method needed to be compatible with the bridge surface, including template application to ensure crispness of the lettering. It also needed to be extremely high performance to ensure longevity in a demanding environment that includes harsh marine conditions, public access and bridge maintenance activities. Resene Uracryl 403 was selected to withstand this demanding environment, with a gloss finish that contrasts beautifully with the matt bridge surface beneath that allows the colours to take on new life in the reflected light. Resene Cinder was used for the majority of the text, providing sharp contrast to the lighter grey of the structural steel while Resene Flame Red was used as a highlight colour to emphasise a few words from each excerpt.

The extracts of poetry wrap themselves around the steel columns with the fixed line length determining the shape and form of each, requiring the reader to move with the work, to spend time with the words, the sounds they make and the meanings that are formed. And it injects a touch of artistic flair to a structure that's far more utilitarian than it is elegant.

specifier Boffa Miskell, www.boffamiskell.co.nz

art and image Catherine Griffiths, www.catherinegriffiths.co.nz

build Total Bridge Services

painting SignRight, www.signright.co.nz; Designcraft

Victoria Bridge

Over the years, Altex Coatings has left its mark on over half a dozen bridges that span the Waikato River. The oldest of these is Hamilton's Victoria Bridge, which was first painted with Altex Coatings protective finishes in 1978. With traffic levels in excess of 27,250 vehicles per day, it was strengthened and had a new deck and handrails added in 1991. Coatings specified for both these modifications and ongoing maintenance requirements have always been Altex Coatings products.

The first and second coats on the bridge saw Altex Zinkex 100, a 90 percent zinc coating, applied as a spot primer to all exposed metal followed by a full build coat of Altex Chem~Bar 3500 primer and Altex Chem~Bar 900 as a finish coat to give a total



above: Hamilton's Victoria Bridge is coated in Altex Coatings Haze Grey.

coating thickness of 200 microns thick over existing coatings and 260 microns over bare metal. Previous inspections of the paintwork in 1989 found it to be in good condition, so the bridge extension two years later saw the successful formulation and application of an Altex Coatings modern zinc/epoxy/urethane-based coating system on the new 5520m² orthotropic deck.

The 152 metre long steel structure is a three pin arch bridge connecting the southern end of Hamilton's CBD with Hamilton East. It features a two-lane carriageway and footpath. Opened in 1910, the bridge has an Historic Places Trust classification. As Hamilton City Council engineer Cliff Boyt says, "we couldn't pull it down even if we wanted to. It's now a permanent, attractive feature of Hamilton."

Kaimataara ō Wai Manawa

It may not be a true bridge in that it doesn't cross a gap, but Kaimataara ō Wai Manawa does still make an important connection. The structure provides a valuable link between the main commercial street in Auckland's Birkenhead neighbourhood and views over Le Roys Bush Reserve and the greater Waitematā Harbour – a vista that was previously inaccessible. Now, Rangitoto, North Head, the Eastern Bays, the Harbour Bridge and the city centre are all within sight.

“The public deck is split into two levels,” explains Craig Moller of Moller Architects. “The upper-level deck provides elevated views towards the harbour while the lower deck at street level interfaces with the footpath and Birkenhead Avenue. The two levels are separated by a set of bleachers that offer casual seating, which doubles as an auditorium for any performances and activities on the lower deck, and the ramp allows for accessibility for all ages and abilities. A cafe sits at the southern edge of the public deck, activating the space, while maintaining a discrete identity that doesn't distract from those taking in the views.”

Craig says the Resene colour selections respond to the project's context, particularly the Le Roys Bush Reserve and natural environment. “The hues were chosen in consultation with Manu Whenua and the artist engaged on the project, Reuben Kirkwood. The colours for the café building's cladding, window and door openings and the steel support structure for the public deck provide a neutral backdrop, including stanchions in Resene Squall and panels and plaster walls in Resene Alabaster.”

But what's most striking is the multi-coloured painted balustrade lining the ramp on the northern edge with a series of steel fins. Eight colours were selected to reflect those found in the natural bush surroundings: Resene Go Ben, Resene Punga, Resene Putty, Resene Twister, Resene Siam, Resene Tumbleweed, Resene Twine and Resene Lichen.

A challenging element of the project was that while the site is level where it meets the street, it drops sharply down a steep bank at the other end. This also limited the directions you could access it. A large steel structure coming up from the bank provided a level platform to construct the deck and suspend it over the bush below.

While the project may have had a limited budget, the selection of simple materials and robust painted finishes has helped it to become a favourite feature of the Birkenhead streetscape. **BW**

below and left: Kaimataara ō Wai Manawa, Auckland.

| | |
|----------------|-------------------|
| Resene Putty | Resene Go Ben |
| Resene Twine | Resene Siam |
| Resene Twister | Resene Punga |
| Resene Lichen | Resene Tumbleweed |

Resene Alabaster

Resene Squall



architectural and colour specification Moller Architects, www.mollerarchitects.com

build Downer, www.downergroup.com

painting Sharp Decorating Solutions, www.sharpdecorating.co.nz (structure); Amediate Engineering, www.amediate.co.nz (balustrade)

artist Reuben Kirkwood

images Moller Architects