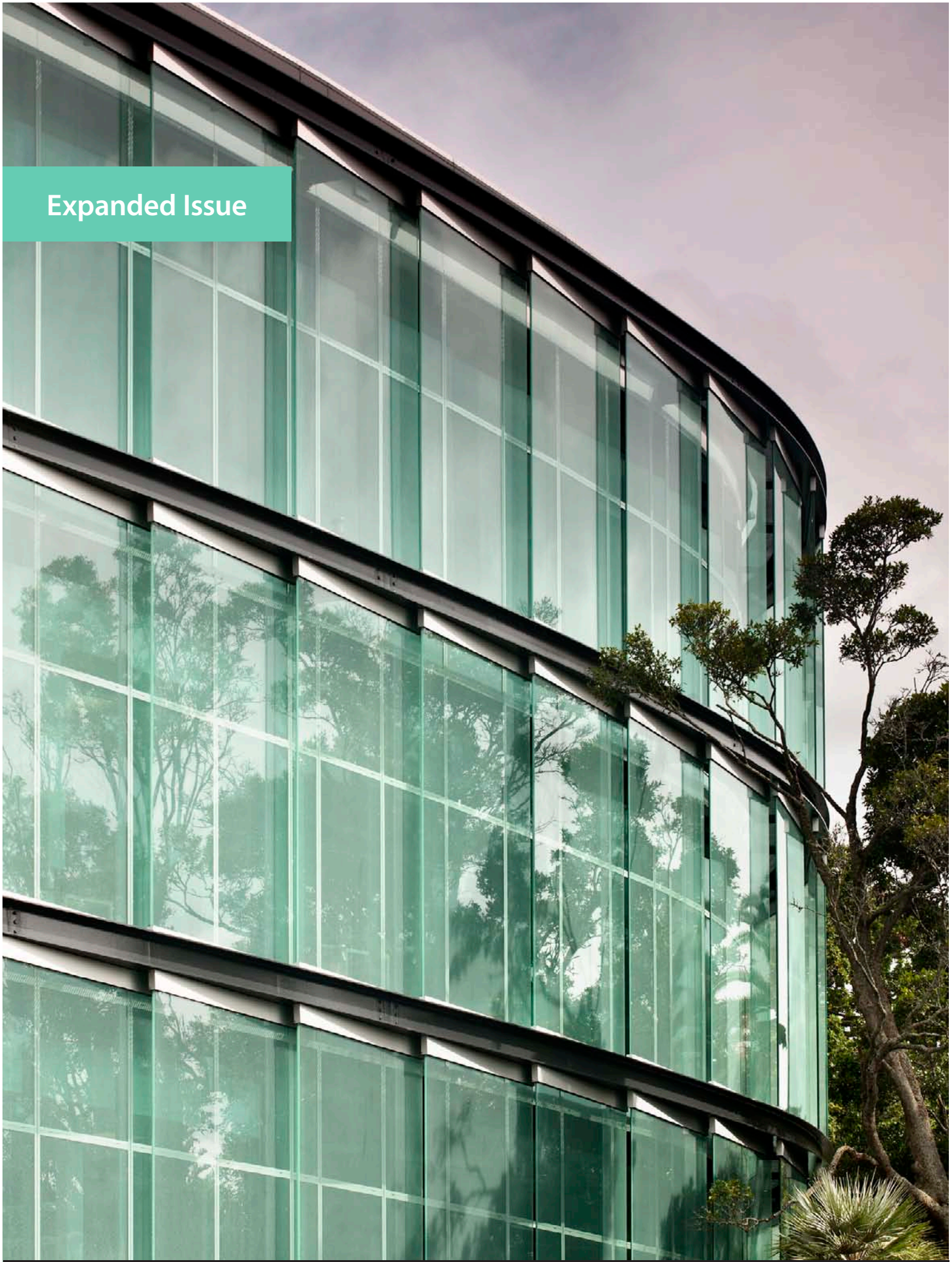


Expanded Issue

OUTLINES

STEPHENSON &TURNER

WINTER 2011

S&T'S GROWTH & DEVELOPMENT CONTINUES

S&T has recently welcomed four new Principals to the our team of passionate and experienced individuals. They are:

Tymen Tolsma *(Auckland, Architecture)*
Bernd Gundermann *(Auckland, Architecture)*
Murray Robertson *(Wellington, Architecture)*
Glen Wright *(Wellington, Engineering)*

Alan Seelye, a Principal of the firm for 21 years, has now stepped into a Consulting Architect role and continues his career-long involvement in medical and research planning and other related projects.

WHAT IS BIM?

Would you take notice if we told you that according to global research*, BIM (building information modelling) offers:

- 7 per cent reduction in project time;
- 10 per cent saving of the contract value through clash detection;
- 40 per cent elimination of unbudgeted change;
- 80 per cent reduction in the time taken to generate a cost estimate, with cost estimation accuracy within 3 per cent; and
- Savings to owners of up to 9%, with an average of 5.5%?

Well we did. Our S&T Revit Cloud (refer to story) is at the front end of our drive to deliver the results promised by BIM.

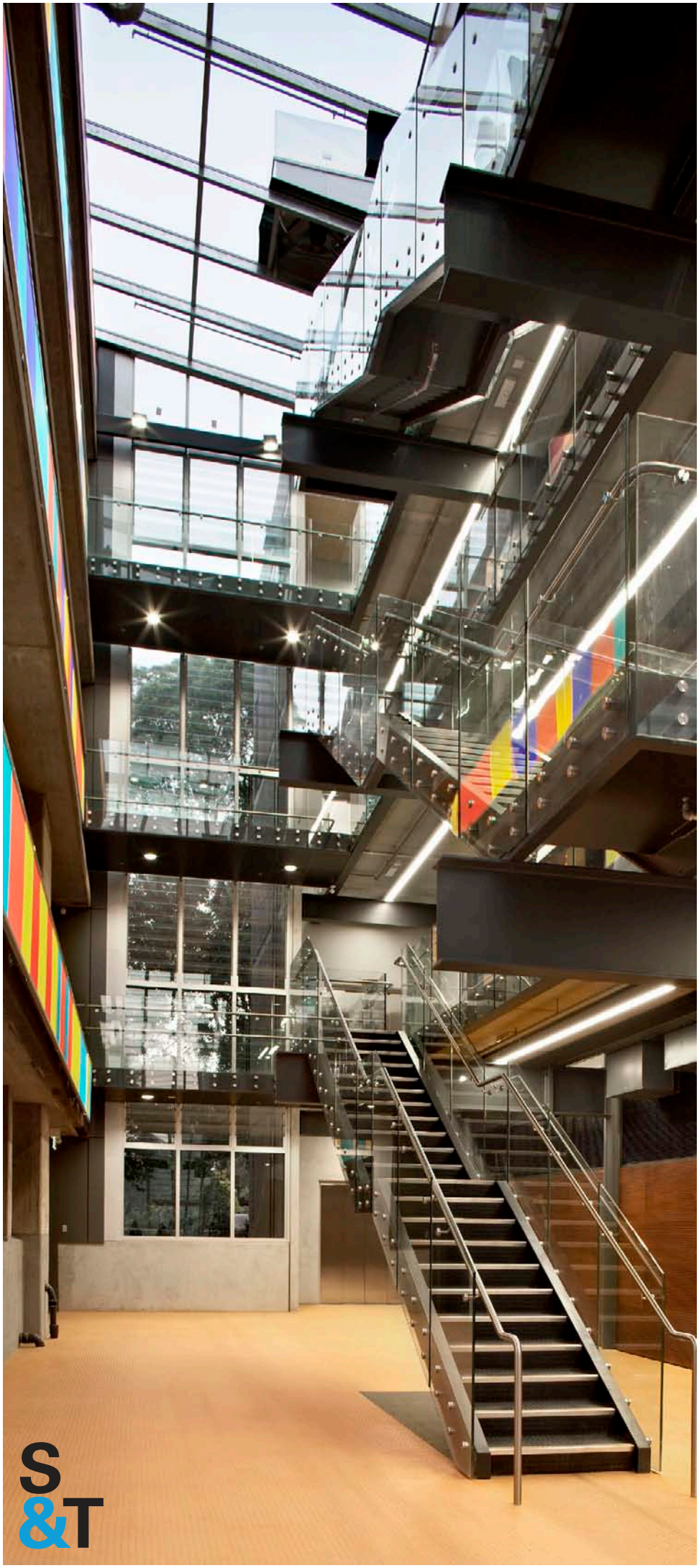
OUTLINES WINTER 2011

This edition of Outlines presents some of our most fascinating and satisfying recent projects, the latest technology and a wake-up call for all – something for everyone.

With a new leadership team, significant advances in design approach and a recovering economy, S&T is well prepared for a period of growth and challenge. We trust your own prospects are equally optimistic. Enjoy this winter 2011 edition of Outlines.

Murray Pugh
STEPHENSON & TURNER
CHIEF EXECUTIVE

**Stanford University Centre for Integrated Facility Engineering 2007, Australian Government Department of Innovation Industry Science and Research 2010.*



Expanded Article

WIN-WIN FOR BIOTECHNOLOGY

The University of Auckland has cemented its place as a leader in bioscience and biotechnology research with the opening of a new state-of-the-art building extension, designed by Stephenson&Turner.

Officially opened by Prime Minister John Key on 19 April, the extension to the University's Thomas Building has enabled the formation of an integrated home for the School of Biological Sciences and the Institute for Innovation in Biotechnology. The latter is an exciting new 'incubator' that brings academics and industry together to share infrastructure, high-tech facilities and expertise.

The extension provides the Thomas Building with more than 4800 extra square metres of research space and room for up to 160 additional scientists, industry staff and graduate students. Comprising mainly laboratories, open-plan write-up spaces and research offices, it links to the original building with a soaring four-storey, glass-clad atrium. This dramatic structure serves to maximise natural light and ventilation, while also encouraging social and professional interactions on its many levels of bridges, balconies and stairways.

Heightening the impact, the atrium features massive concrete spandrels overlaid with horizontal bands of backlit coloured panels – each colour inspired by DNA sequence mapping. This 'colour coding' of yellow, red, blue and green is also used for visual icons in the workspaces and to link different areas, in materials such as carpet.

THREE DESIGN DIRECTIONS

The building's exterior also features some architectural surprises.

To the east is the busy thoroughfare of Symonds Street, home to a number of other University buildings designed along modern, minimalistic lines. Complementing this, the extension's exterior features a curved façade of overlapping solar-glass sheets, fronting an inner sealed and glazed wall.

It's an approach that changes as you round the corner at the northern end. Here the exterior responds to the building's use as a centre of biotechnological research with a 'living' wall of ivy. Linking the two design approaches – both structurally and aesthetically – are horizontal steel 'bands' exposed at ceiling height in precast concrete panels.

Walk further around the building to the west and you enter the lush, park-like environment associated with nearby Old Government House. Here the building's exterior has a softer, more relaxing and contemplative feel – perfect for those who look out to the view from the research offices sited along it. With windows that can be opened to the fresh air, it also provides a natural link with the field in which they work.

A FINISHING TOUCH

The Institute for Innovation in Biotechnology is the first of its type in New Zealand. Supported through the Government's 'Partnerships for Excellence' scheme, it aims to build on New Zealand's success in the biotechnology arena by creating 'win-win' relationships between academia and business.

Initiatives like these dovetail neatly with S&T's commitment to creating inspirational, environmentally sustainable solutions. We're aiming to achieve a 4 Green Star Rating for this project, which will make it the first extension to achieve this standard in New Zealand.

For more information, please contact Tymen Tolsma *at* 09 914 5072.

STEPHENSON &TURNER

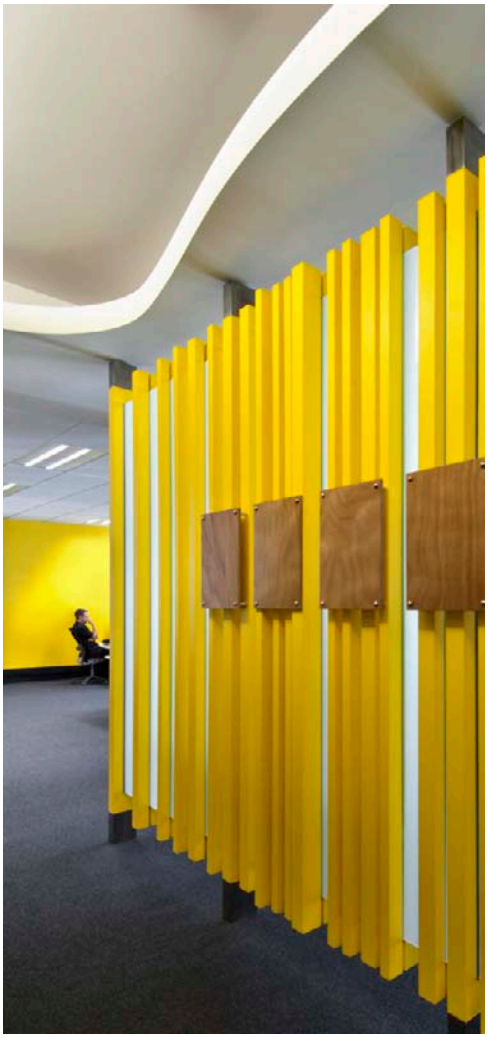
PROJECT:
BIOSCIENCES CENTRE EXTENSION

LOCATION:
AUCKLAND

CLIENT:
UNIVERSITY OF AUCKLAND

SERVICES:
ARCHITECTURE, LABORATORY PLANNING & BUILDING SERVICES ENGINEERING

Expanded Article



PROJECT:
INTERGEN HEADQUARTERS FITOUT

LOCATION:
WELLINGTON

CLIENT:
INTERGEN

SERVICES:
INTERIOR DESIGN

HISTORIC TO MODERN

The terms 'hi-tech' and 'historic' don't often make natural partners, but they do for globally successful IT company Intergen, which has made an historic building its Wellington home. So much so that when the company began to outgrow its two floors of space, it simply extended its lease to another floor – and invested in a new fit-out to boot.

Intergen House, located in Lambton Quay, was originally known as Massey House and is well-known in the architectural community. Designed by leading architects Ernst Plischke and Cedric Firth and completed in 1957, it was the first curtain-walled high-rise office building in New Zealand. Today, it's registered on the Council's Historic Register as well as a Category I with the NZ Historic Places Trust historic place, which means that some alterations and renovations are required to meet stringent preservation criteria.

Intergen wanted its new 900-square-metre space to reflect its brand – a factor already incorporated in its existing premises with the use of the vibrant 'Intergen Yellow'. Stephenson&Turner's interior fitout design (developed in consultation with Intergen's representative DOW Group) does just that, with the yellow gleaming on feature walls and screen dividers, and complemented elsewhere with neutral off-whites and greys.

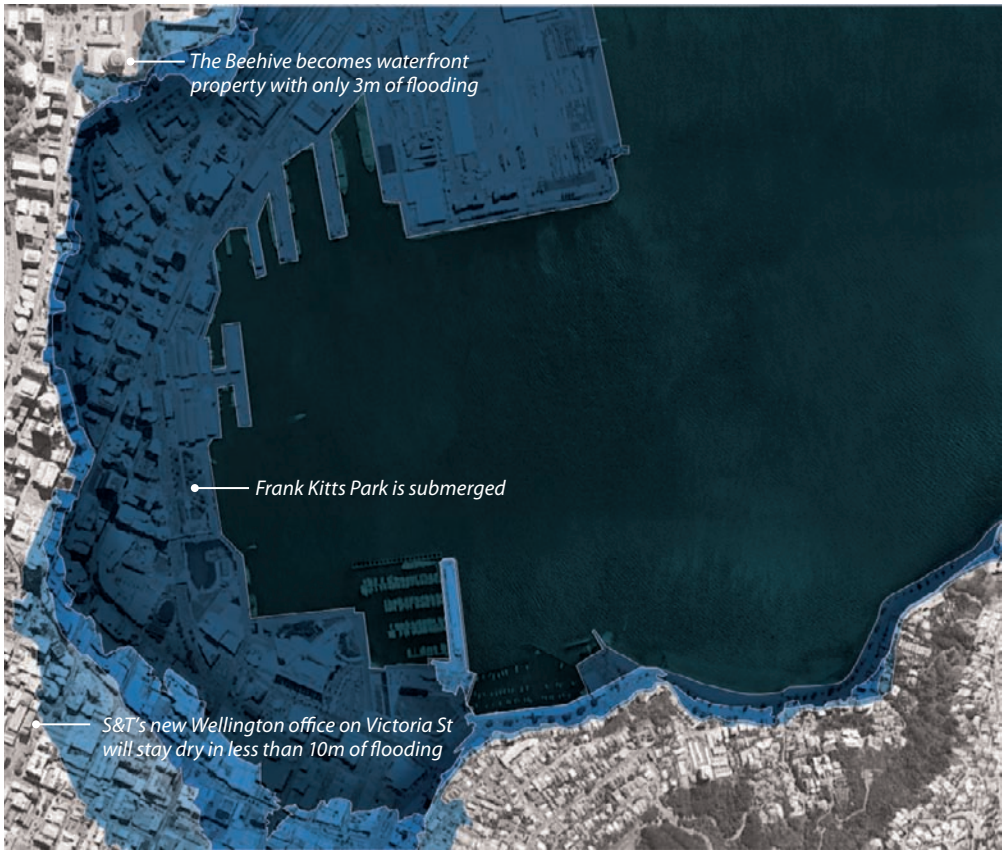
Preservation considerations were vital in refurbishing the toilets and corridors. S&T's review of these areas showed that unfortunately the toilets' existing mosaic floor tiles (buried under layers of vinyl and more 'modern' tiles) were beyond restoration, but partitions and sanitary features were left in place and painted-over wall tiles stripped back to their original condition. Careful lighting and new mirrors and basins combine to give the areas a fresh new look, while new showers and lockers meet the needs of fitness-focused staff.

In the corridors, painted-over wall panels have been restored to their former plywood-veneer glory, while stairwells have been refurbished and re-lit and balustrades repaired and reglazed.

The refurbishment has been more than skin deep. The old and unresponsive mechanical ventilation system has been brought into the 21st century. Additional heaters have been installed along the south walls, thermostats have been repositioned to improve temperature control, and a modern air-conditioning system (using existing but defunct outdoor unit locations to retain the rooftop appearance) now protects occupants from the heat of the western sun.

For more information, please contact **John Ercolano** *at* **04 894 4718**.

STEPHENSON &TURNER



George Czerniak captured dramatic photos which appeared in the national newspapers of the view of Tamaki Drive, Auckland, in January. This "king tide" was estimated at 3.5m in height.

3 metres
5 metres
10 metres

STEPHENSON &TURNER

MEETING THE COASTAL CHALLENGE

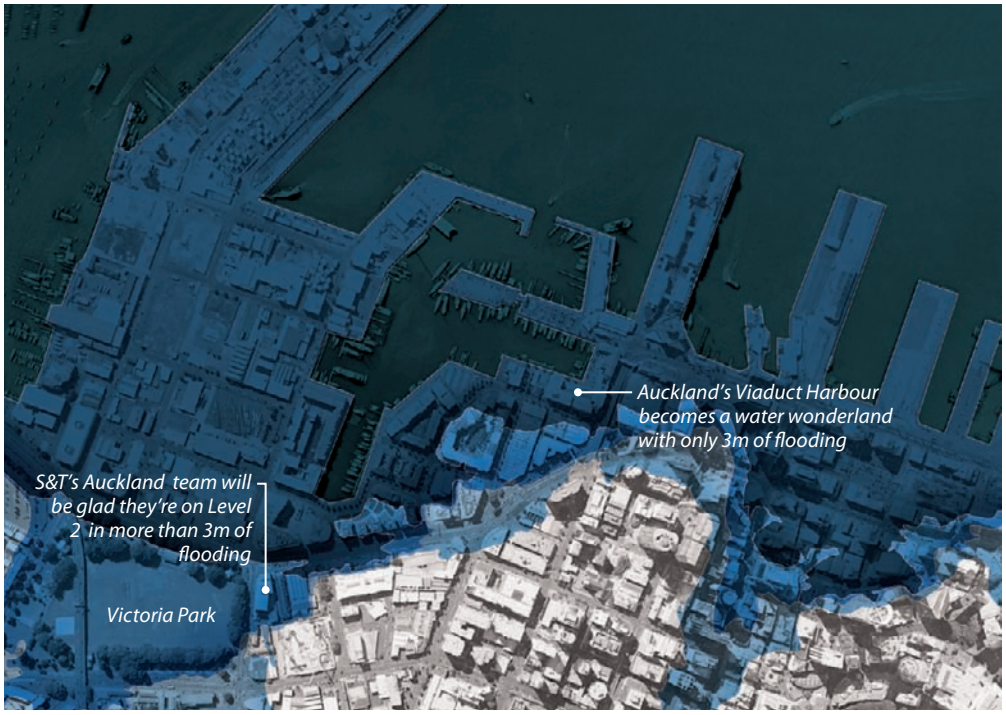
The devastating earthquakes in Christchurch and Japan have reminded us all of the fragility of our built environment – and the importance of designing resilient buildings and landscapes, particularly those located on and around our coastlines.

With offices in the harbour cities of Auckland and Wellington, Stephenson&Turner is acutely aware of the wake-up call the earthquakes have delivered. We understand the implications of climate change and welcome the opportunity to challenge the old norms – to use our expertise as architects, engineers and urban designers to create solutions that work in harmony with our environment.

As a first step, we've begun examining the concept of 'coastal defence' for New Zealand. It's already being discussed overseas, with some great ideas emerging. For example, a team of engineers, architects, landscape architects, planners and students at Princeton University's school of architecture have suggested an innovative, locally differentiated approach for the New York/New Jersey Upper Bay*.

The group's coastal planning strategy is designed to mitigate the potential damage from storms while providing new ground for recreation, ecologies, agriculture and urban development. Using 'soft infrastructure', which rethinks the thresholds of water, land and city, it includes:

- an archipelago of islands and reefs along the shallow shoals, which dampens powerful storm currents while encouraging new estuarine habitats
- a revitalised waterfront in which a broad, porous, fingered coastline combines marshes, parks and piers for recreation and community development
- a new zoning that recognises potential impact areas with the aim of increasing their resilience to potential natural disasters.



Work like this inspires us to see our waterfronts in a new light, offering opportunities to enhance the biodiversity of estuarine habitats while providing working and living spaces that protect us against the worst that Mother Nature can throw our way.

We are witnesses of a mind-shift towards a new approach of engaging with the natural environment. Smart but soft solutions will replace systems that were built on the beliefs of the superiority of man. Images like those of Japanese engineers groping in the darkness of the control room in the Fukushima Nuclear Power Plant ultimately challenge the illusion of our ability to control natural forces. Architects' and engineers' visionary ideas will help to forge new pathways to reduce the impact of looming threats like global warming, overpopulation, and pollution.

We welcome your thoughts and ideas on how we can create environments for the future. *Contact* **Bernd Gundermann** *at* **09 914 6093**.

**Nordenson/Seavitt/Yarinsky, On the Water/ Palisade Bay, Ostfildern/New York 2010*

Expanded Article

ACADEMIC ACHIEVEMENT

Two years ago Stephenson&Turner developed a ground-breaking 'master plan' for Upper Hutt College. Today this exciting new learning environment is starting to take shape, with a $20 million construction project that aims to deliver a 'centre of education excellence'.

Change is urgently needed. The existing college buildings are tightly packed together, the spaces around them make for notoriously unpleasant wind tunnels, and vehicle access-ways pose a number of hazards for students, teachers and visitors alike.

In stark contrast, the master plan creates a 21st century experience founded on modern urban design principles. It recognises that the college's external spaces are just as important as the interior, creating a 'learning street' that integrates courtyards and other outside areas with the college's key functions and facilities.

At its heart is a central, triangular public courtyard and two smaller triangular spaces, with 'active edges' along which are located the administration offices, a new Sports Centre (recently completed as stage 1 of the project) and a new Creative Arts Centre with a terrace over the central space that can double as a stage. At the end of this terrace is the café, the focal point of the main public space. The wharenui, previously on the college's periphery, will be centrally located – and a new road will take school buses off the busy thoroughfare outside and meet most of the college's parking needs.

All the new buildings are highly economical, precast structures with simple, mono-pitch rooflines that extend over the public space to create covered walkways. Computer-simulated modelling has ensured they'll be well insulated to create a comfortable learning and teaching environment, with large windows facing the courtyard to capture the best of the natural light.

Stage 2 of the project is about to start, comprising the construction of three new buildings and alterations to the remaining existing structure. With a requirement to keep a set number of classrooms and laboratories operational at all times, the work will take place in 10 stages. Completion is expected in 2014, providing all who use the college with a place of which they can be justly proud.

For more information, please contact Murray Robertson *at* 04 894 4717.

PROJECT:
UPPER HUTT COLLEGE REDEVELOPMENT

CLIENT:
UPPER HUTT COLLEGE

LOCATION:
UPPER HUTT, WELLINGTON

SERVICES:
MASTER PLANNING, ARCHITECTURE
& BUILDING SERVICES ENGINEERING

STEPHENSON &TURNER

Expanded Article

NEW HOUSING FOR OLD

More than 60 Auckland families are now enjoying the benefits of modern, comfortable homes with the completion of a major Housing New Zealand Corporation (HNZC) development at Ernie Pinches Street, Mt Roskill.

Under construction since December 2009, the development involved building 45 new houses, relocating, refurbishing and modernising 23 more, building new roading and other infrastructure and creating two new urban parks. The aim: to make better use of the 2.8-hectare site (originally a 1950s' housing estate) while maintaining the character of the existing architecture and environment.

The new houses – both semi-detached and stand-alone – range from two-bedroom units to six-bedroom family homes. Linking them all is a simplicity of form, with open-plan living and indoor-outdoor spaces that reflect today's urban lifestyle, while meeting HNZC's requirement for cost-effective, appropriate design.

The new development has successfully integrated the old and the new, with enhancements that include space efficiencies, improved air circulation, better use of natural lighting, greater energy efficiency and more privacy for the residents. Building materials and colour schemes are also more suited to purpose to reduce the demand for maintenance.

The Ernie Pinches Street development is the result of five years of teamwork between Stephenson&Turner and HNZC – a great result for both organisations, and more importantly for the people who now live there.

For more information, please contact **Paul Raven** *at* **09 920 9506**.

STEPHENSON &TURNER

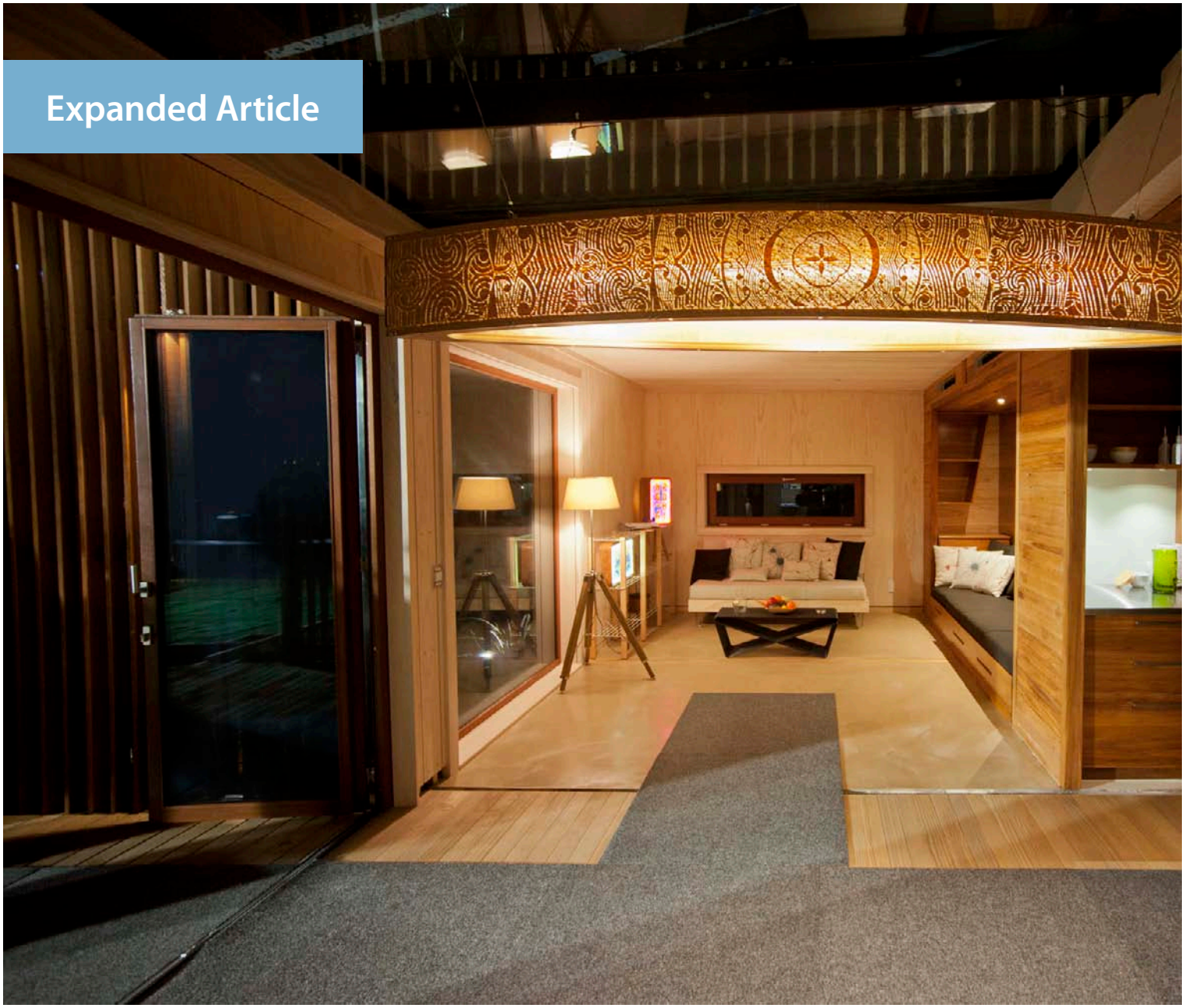
PROJECT:
ERNIE PINCHES HOUSING REDEVELOPMENT

LOCATION:
MOUNT ROSKILL, AUCKLAND

CLIENT:
HOUSING NEW ZEALAND CORPORATION

SERVICES:
ARCHITECTURE, BUILDING SERVICES & PROJECT MANAGEMENT

Expanded Article



NZ FIRSTLIGHT HOUSE TO COMPETE IN USA

Frank Kitts Park in Wellington was the place to head in May to see solar power and energy-efficient technologies in action. An "eco-bach" constructed by a student team from Victoria University was on display as a practice run for the US Department of Energy Solar Decathlon 2011. The team is one of twenty teams competing in this prestigious, worldwide event. The house will be packed up and shipped to the United States for the final competition taking place in Washington, D.C. later this year.

Stephenson&Turner is a proud sponsor of FirstLight. Our engineers have provided assistance with electrical engineering and have advised the students on lighting design, environmentally sustainable design and BMS integration. Specific challenges included designing a house which is compatible in both New Zealand and the United States with their differing electrical systems, codes and voltage.

The team has met these challenges with outstanding results. Watch this space for news!

"The Meridian First Light eco-house project is an opportunity to see what is possible to achieve in sustainable housing, using the latest technology and design. This prototype should inspire New Zealanders to think about the kinds of energy efficiency investments they can make when building or renovating that will make a difference to their on-going energy bills, and their impact on the environment." – Mike Underhill, CE of the Energy Efficiency and Conservation Authority (EECA)

For more information on FirstLight or how you can make use of similar energy-efficient design, please contact **Michael Warwick** *at* **04 894 4711**.

STEPHENSON &TURNER

TAKING 3D MODELLING TO THE CLOUD

Imagine being able to view and interact with a fully functional, computer-generated 3D model of your next building project – then presenting it on your iPad or laptop to your colleagues, board of directors, banker, potential tenants and others?

Now you can, because Stephenson&Turner has developed a cloud-based technology to deliver 'Autodesk® Revit®' – an innovative approach to delivering the market-leading building information modelling (BIM) solution – to the end user.

One of the great things about Stephenson&Turner's use of Autodesk Revit software is that it's internet ('cloud') based, so access isn't limited to individual workstations. Instead, you can access building models from any internet-connected device, whether it's a computer, a laptop, an iPad or a mobile phone. The software is housed in the S&T data centre, so access is both secure and reliable – and it's available 24 hours a day.

The benefits continue. Compared with its more traditional workstation-based counterparts, this cloud-based solution enables faster processing times, more stable computing sessions and the ability to generate larger and more complex files. It's also completely scalable to meet the processing requirements of larger and multiple concurrent Revit modelling teams.

"Stephenson&Turner's development of cloud-based Revit has been a positive game changer for the company and has completely redefined the company's thinking and approach to the delivery of Revit to its project teams. Stephenson&Turner are in the process of developing the next version of this technology to ensure that it maintains a leading edge through the use of cloud-based technology to underpin its BIM capabilities." – Des Pudney, Chief Information Officer

S&T's Revit Cloud has been operating for a year, with immediate and tangible benefits for our business and our clients. *For more information on how our BIM strategies and Autodesk Revit could help your next building project, please contact our BIM Manager,* Anthony Van Kan at 09 914 5056.

STEPHENSON&TURNER
ARCHITECTS AND ENGINEERS

Stephenson&Turner NZ Limited (S&T) is a progressive multi-disciplinary, design-led architecture and building services engineering practice. The company takes an holistic approach with an integrated, total building focus to create inspirational, environmentally sustainable solutions.

For more information on our full range of services please visit **www.stephensonturner.com** or contact these offices:

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STEPHENSON &TURNER ARCHITECTS ENGINEERS

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