



Welcome to *outlines*, Stephenson&Turner's newsletter

## CONTEMPORARY LIVING AT ITS BEST

*It's hard to believe there are full building sites still available in Auckland's St Heliers Bay, but two Stephenson&Turner clients recently found one – and posed an architectural challenge!*

The long, narrow valley site dropped more than eight metres from corner to corner and on the eastern edge stood right in the way of a flood path. However, the land fell to the northwest and offered views across St Heliers bush and a distant Waitemata harbour. The clients – Steve and Lynne Reindler – sought to maximise the positives and minimise the negatives and the result, designed by S&T Director Paul Raven, achieves exactly that.

The contemporary four-bedroom, 450-square-metre pavilion house fits lengthways on the site, taking advantage of the sun and views. It centres on outdoor living spaces to the west and east that incorporate an outdoor courtyard and swimming pool, with the entry forecourt leading into open plan living on the middle, and bedrooms on the upper, floors. The ground floor has three-plus garaging to cater for the family's motoring interests, as well as a small gymnasium and a generous home theatre.

The building materials have been carefully selected to provide a quality that reflects the local built environment, while enhancing the home's modernist, timeless design. The Reindlers have the open plan, outdoors-focused living environment they were looking for, with a style and lifestyle well suited to them and their three sons.



*Client: Steve and Lynne Reindler  
Architecture: Stephenson&Turner*

## A NEW APPROACH TO PRISON DESIGN

On 8 March 2005 – almost exactly two years after construction began – Corrections Minister Paul Swain officially opened the country’s newest prison, the \$130 million Northland Region Corrections Facility (NRCF), located near Kaikohe.

The first public prison to be opened in New Zealand since 1985, NRCF heralds a new era in correctional facility design. Far from following the traditional ‘closed’ concept of unattractive, multi-storeyed, heavily barred structures featuring concrete and steel a-plenty, it takes an ‘open’ approach, with around 17 individual buildings scattered across a planted, paved and court-yarded landscape.

“Our brief from the Department of Corrections was to design a corrections facility that met international best practice standards in safety and security yet was sensitive to the environment and the needs of the people living and working there,” says S&T Director Ross Brown.

The new design reflects an approach already taken in countries such as Australia, Canada and the United States, which aims to reduce reoffending by providing an environment that encourages behavioural improvement and inmate self-responsibility. It involved extensive international research and a close working relationship with Australia’s Cox Group, one of the world’s leading specialists in planning and designing corrections facilities. Cox has a worldwide reputation for its innovative yet highly pragmatic approach to corrections architecture.

“The new-style layout offers a more humane and less aggressive environment than old-style prisons – which reflects its purpose as a place for rehabilitation, rather than just incarceration,” says Ross. “It includes modern, low-rise, new-style accommodation – in effect a ‘normal’ living environment that provides inmates



(of whom around 70% will be from the local area) with a much-improved chance of reintegration into their communities and family/whānau. Meanwhile, security remains the prime consideration, with stringent requirements governing factors such as access and safety.”

Located five kilometres from Kaikohe and built on a gently undulating 190-hectare site, NRCF can accommodate 350 minimum- to high-medium security male inmates. It includes a specialist youth unit and support services such as a visitor centre, education centre, reception facility, medical centre, employment facilities, recreation areas, kitchen, chapel, whare hui and administration block.

The design recognises that a large proportion of the population is likely to be Māori, so incorporates and reflects Māori values, beliefs and practices. These include, for example, acknowledging the importance of mountains, waterways and spiritual connection points in the landscape to local Māori communities – particularly the Ngawha Stream, which has great cultural significance for local Māori and was the focal point for much of the facility layout.



The facility’s design involved almost five years of extensive consultation with the Ngawha community, local hapū Ngati Rangi, specialist cultural design advisers (Rewi Thompson and Mike Barns) and other key stakeholders.

“The success of this project would not have been possible without the involvement of the local community,” says Ross. “It has been a long, involved and often controversial process, but a mutual commitment to achieving the best results for everyone has really paid off. We’re indebted to Ngati Rangi for their positive approach.”

The NRCF project has taken a number of years to reach completion and involved more than one million work hours in construction. The result is a modern, humane and highly secure facility designed to last – and one that, with a new philosophy and approach behind it, should achieve the Department of Corrections’ goals, for the benefit of New Zealand and New Zealanders as a whole.

*Client: Department of Corrections  
Principal Consultancy, Architecture  
and Electrical Engineering Services:  
Stephenson&Turner*



## PREPARING FOR THE FUTURE

*Auckland International Airport continues to take shape as a world-class example of airport infrastructure, with a number of projects completed or started since the last issue of outlines.*

Just in time for Christmas, check-in facilities and departure emigration control areas were expanded to cope with the expected summer peak, while alterations to the arrivals area – for the New Zealand Customs Service and the Ministry of Agriculture and Forestry – relieved some of the congestion for returning New Zealanders and international tourists.



*Client: Auckland International Airport  
Architecture: Stephenson & Turner*

### Improving security

Meanwhile, behind the scenes a two-stage project due for completion at the end of the year will see all international baggage automatically security screened before being loaded onto aircraft. Stage one has involved extending the existing baggage handling area to allow bags to be sorted in a separate space, thus freeing up the existing baggage hall. Stage two involves installing three X-ray machines as well as modifying existing equipment to achieve an ultimately enlarged and much-enhanced baggage handling facility with automated screening equipment.

### Smoothing arrivals and departures

Airside visitors can now clearly see a new upper-level departure concourse, which is being built over the existing pier to keep the arrival and departure passenger routes separate. It's a highly complex and challenging project that will not only meet international security requirements but will also offer passengers a revitalised retail area that includes extensive refreshment facilities.

Construction includes installing new escalators and lifts at locations throughout the pier as well as demolishing and extending floor slabs and roofs – all while keeping the airport operating effectively and efficiently. We'll be celebrating the first major milestone in August, when departing passengers will be re-routed to the upper level using a temporary thoroughfare. This will free up other areas of the building, with the overall project programmed for completion by the end of the year.

### Master planning a constant

While these immediate projects are either operating or well underway, S&T, the airport company and its advisers are working on the terminal precinct expansion plan for the international terminal and the adjacent car-parking precinct. It's a long-term view that extends to 2025 and includes, of course, plans for the new Airbus A380 aircraft that recently completed its debut test flight.

The master plan should be finished, and design work started, by the end of the year. Stand by for more (boarding) announcements!

## OFFERING SOUND ADVICE

*S&T's already extensive and complementary service portfolio has been extended to include acoustics advice and solutions' development.*

The new S&T acoustics team specialises in architectural acoustic design, performance testing and evaluation; noise control of mechanical plant and building services (HVAC); and environmental noise control. This typically means satisfying stringent requirements for speech intelligibility and acoustic privacy, restricting unwanted sound transmission and achieving overall auditory comfort.

Led by qualified acoustics and noise control expert Associate Director Fadia Sami, the team has already developed practical, innovative and cost-effective

solutions for a number of major projects in New Zealand and abroad.

“We work with our clients to get the best acoustical performance from their built spaces,” says Fadia. “By carefully integrating acoustical and engineering solutions, we enhance the architectural aesthetic of the spaces we help design.”

The acoustic design services are supported by a complete range of test and measurement equipment, including both conventional and computer-based analysis and modelling systems.

Recent projects have included:

- noise control in the pier-separation project at Auckland International Airport
- plant room noise and vibration solutions for ESR Mt Albert
- audiovisual, privacy and security requirements in the new Fisher & Paykel boardroom
- designing anechoic chambers for the University of Auckland
- ensuring quiet operation of Newcrest Holdings' HVAC services.

## NEW FACILITIES FOR HEALTH, SCIENCE AND ENGINEERING STUDENTS

S&T has undertaken a number of projects for the University of Auckland since our last issue of outlines. These include fitting out six levels of the Science Building 301, a new Clinical Research Unit and two new MRI suites.

### *Changes at the Chemistry Department...*

The fit-out of the upper three levels of the Science Building comprised a major upgrade and rationalisation of Chemistry Department research laboratories and academic bases, together with the provision of a separate, stand-alone food science laboratory for teaching and research in wine and food science.

These upgraded floors, which were officially opened by the Dean of Science and Head of the Department of Chemistry, have been well received: Professor Dick Bellamy describes the floors as “a magnificent new facility of international standard” and Professor Graham Bowmaker, head of the Chemistry Department, comments that “we can now do things that were never possible using the old labs”, adding that the upgraded laboratories designed by Stephenson&Turner are “a massive improvement on what we had before”.



*Client: The University of Auckland and Uniservices  
Architecture and Building Engineering Services: Stephenson&Turner*



### *... and the Department of Electrical and Computer Engineering*

The Science Building’s three lower levels have recently been redesigned and rebuilt to provide modern teaching and research laboratories and academic facilities at the School of Engineering’s Department of Electrical and Computer Engineering. The refurbishment followed changes to the Chemistry Department accommodation and the Science Library’s move to the main Campus library.

The Department of Electrical and Computer Engineering’s relocation has achieved a more cohesive and functional layout than that offered by its previous accommodation, which was spread over four buildings. It will also enable the remaining engineering departments to expand within the current school on the other side of Symonds Street.

### *New medical research unit*

In March 2005 the Governor-General officially opened the new Clinical Research Unit, built at the Liggins Institute to carry out investigations on young children, with a focus on growth disorders, diabetes and metabolism. The Unit houses the DEXA scanner, which measures body composition in a non-invasive way, allowing

comparisons between healthy children and those with growth and other types of disorders. The Unit was sponsored by the Paykel family.

### *New MRI facilities*

Two separate and highly sophisticated MRI suites have been incorporated into the Faculty of Medical and Health Sciences.

The Clinical MRI, which was opened by the Minister of Health in April 2005, undertakes patient and research procedures and provides the Faculty with the most high-tech MRI facility in the country. The suite includes patient preparation and recovery areas and will be managed by the Faculty’s MRI Research Group of the Department of Medicine. Doctors from Auckland Hospital will be able to use the suite for enhanced imaging work.

The second MRI, for small animal research, has been built within the Animal Surgical Unit. Its magnet has twice the strength of the Clinical MRI magnet, providing greatly enhanced images that will extend research capability in medical and biomedical imagery, as well as support advanced, research-led training in biomedical science, bioengineering and biophysics/medical physics.



## GROWING WITH THE BUSINESS

*While most of us will be familiar with the name Fisher & Paykel in association with whiteware and healthcare products, we may not know so much about Fisher & Paykel Finance.*

The company specialises in consumer financing, using innovative point-of-sale technology and card products to help people buy the things they want through a nationwide network of retailers. It also provides financing to businesses to enable them to acquire the plant, machinery, equipment and assets they need for business growth.

Fisher & Paykel Finance has grown significantly since it acquired Farmers Finance in 2003. This, together with the desire to accommodate all staff on one site, created the need to enlarge the existing premises.

Working to, and meeting, tight deadlines, Fisher & Paykel, Savory Construction, Stephenson&Turner and the consultant team have since built a brand new extension to the East Tamaki site – maintaining a close eye on quality and cost throughout.

The extension is made up of two new steel-framed, pitched-roof, ‘lean to’

pavilions that reflect the existing building’s form and materials. Containing a conference room and staff training suite, they are linked with a flat-roofed structure that houses meeting rooms, staff facilities, a server room and staff breakout space.

The pavilions’ glass exteriors give all occupants direct and uninterrupted views of extensively landscaped outdoor areas, creating an ambience of working in a large formal garden. This is enhanced by large exterior timber decks at the same

level as the pavilion floor, which extend from the northern end of each pavilion into the landscaping and lawns. Meanwhile, wide overhangs protect occupants from the sun’s glare and heat, and air conditioning systems ensure a comfortable working environment.

*Client: Fisher & Paykel Finance  
Main Contractor: Savory Construction  
Principal Consultancy, Architecture, Building Services, Fire Engineering and Acoustics: Stephenson&Turner*



## LINKING MANUFACTURING AND MANAGEMENT

*In another Fisher & Paykel project – this time for the company internationally renowned for its whiteware appliances – S&T has designed and built a new components factory and office building. Connected yet separate, the two buildings complement the form and materials of an adjacent electronics facility while offering an intriguing blend of landscaped and ‘industrial’ environments.*

*Client: Fisher & Paykel Appliances Principal Consultancy, Architecture, Building Services, Fire Engineering and Acoustics: Stephenson&Turner*



The components factory’s steel portal frame reaches a height of eight metres – a much-needed requirement as it houses an overhead travelling gantry crane. At its eastern end, an 18-metre long, five-metre wide internal courtyard separates the building from the new 940-square-metre office building, which in turn connects to the electronics facility.

The fully air conditioned office building is a steel framed, hip-roofed pavilion with full-height exterior glazed walls to the east and to the west – where it faces into, and opens onto, the internal courtyard, offering staff a relaxing and attractive outlook from their workspaces.

Unfortunately, while factory staff can also see into the courtyard and enjoy the view, safety, internal environment and security reasons meant direct access was not possible.

The result is an intriguing connection between ‘manufacturing’ and ‘management’ that visually eliminates barriers between the two teams, enhancing understanding of each other’s work and environments and joining the enterprise as a single, effective entity. It is a stimulating, interesting workplace for Fisher & Paykel staff, and an architectural statement of style, cohesion and collegiality.

## NO MORE DRAUGHTS IN THE CABINET ROOM

*The Cabinet Room in Wellington's Beehive has reopened after an extensive refurbishment that included an innovative air conditioning system.*



*Client: Parliamentary Service  
Mechanical Engineering Services:  
Stephenson & Turner  
Architecture: Warren & Mahoney*

The original Cabinet Room was a double-height space with a central light tube and a vaulted ceiling around the outside. This design made it difficult to place diffusers in a way that avoided draughts. As a result, supply-air from the air conditioning system was directed from vertical diffusers to the Ministers seated below. That would have made the room an uncomfortable place – cold air on the back of the neck!

The new air conditioning system introduces two innovations:

- Air quality is improved with a 'once-through' system. Owing to the high occupancy rate (up to 30 people), we specified 100% fresh air.
- Supply-air is distributed at a low level by displacement diffusers, which are hidden behind a continuous grille integrated into wall panels.

The supply-air movement is now imperceptible – even support staff seated against the diffusers don't feel the air moving. What's more, the improvements in air quality and comfort bring major energy savings. Only the occupied zone from floor to head-height need be air-conditioned. This means the space above head-height is allowed to heat up without affecting the comfort of the Ministers in the room. As a result, cooling loads are dramatically reduced.



## CHILD AND YOUTH CARE FACILITIES UNDERWAY

*This year has been significant for S&T's work with the Department of Child, Youth & Family Services (CYFS). In February a new Youth Justice residential centre opened in Auckland – one of three similar facilities for children and young people that S&T has designed for CYFS.*

Located in a semi-rural landscape in Wiri, the new 46-bed facility provides campus-style accommodation that has been created by reducing the building scale, using domestic materials and features wherever possible and emphasising attractive and interesting landscaping. Four single-storey residential 'pods' are linked with landscaped pathways, with each pod having its own colour scheme to allow for differentiation.

In addition to this project S&T is working with CYFS on another Youth Justice facility and Care & Protection facility in Christchurch as well as another Care & Protection facility in Auckland. These projects have developed on the previous projects through extensive benchmarking and re-evaluation so that they now represent some of the best facilities of their kind in the world.

"Although we have developed these designs to an international standard, we understand there is more to do to get them to be the perfect fit for the young people for whom they are designed," says S&T Director Dennis Chippindale.

"We are strongly focused on creating a place that develops care, respect and encouragement in a secure environment, but this isn't all. We are developing new methods where the buildings themselves create a healing environment through the use of ecologically sustainable development (ESD) principles to create buildings that better reflect a domestic, more natural approach."

This will not necessarily be easy in an environment that is built for this purpose, but it is the kind of challenge on which S&T thrives!



*Client: Child, Youth and Family  
Architecture and Building Engineering Services:  
Stephenson & Turner*

## GREEN STAR ACCREDITATION A NEW ZEALAND FIRST

*S&T has recently become the first New Zealand company to gain 'Green Star Accredited Professional' status – reflecting our commitment to ecologically sustainable development.*

Lighting designer Michael Warwick achieved the accreditation from the Green Building Council of Australia, which runs the internationally acclaimed Green Star environmental rating system. The system works by recognising and officially certifying the top 25% of buildings with design features that have a measurable and positive effect on the environment. This goes beyond energy conservation measures to include emissions (such as sewerage and greenhouse gases), material sources (managed forests), indoor environment quality and water conservation.

In addition, projects that have a Green Star Accredited Professional on their project team are awarded an extra two points in the certification process.

The accreditation means Michael has demonstrated his understanding of the Green Star – Office Design rating tool, having been tested on his knowledge of green building practices and principles and his familiarity with Green Star requirements, resources and processes.

S&T Director Chris Rowe says, "Green Star accreditation is part of our

commitment to minimising the impact of the buildings we design on our local and global environments. Our recent investment in the latest computer modelling tools will provide accurate information to enable our architects and engineers to ensure the building envelopes and engineering services are working in harmony and the Green Star initiatives are put to best use."

S&T welcomes Michael's achievement. We look forward to applying his skills to upcoming projects.

## NEW APPOINTMENTS AT S&T

*S&T welcomes two new Directors and five new Associate Directors to the team. Combined and individually, their appointments recognise the value and importance to the company of their extensive skills and experience, whatever their field of expertise.*



**John Wardle,  
Director**

John has been with S&T for almost 20 years and says architecture remains an "engrossing, all-consuming passion"

for him – a unique discipline that, he says, links to all the important things in life and puts the world, past and present, in context.

It's a passion that has seen him involved in a number of high-profile projects. He also has wide experience in designing inner-city apartments and regularly undertakes site feasibility studies for property development companies.

John says the S&T directorship offers him an opportunity to contribute to the company on a whole new level. He is particularly interested in harnessing its many diverse strengths to forge a strong, cohesive and collegial approach to projects.



**Paul Raven, Director**

Paul has been with S&T since January 2000, joining the Auckland team after a number of years working with other large, successful

New Zealand architectural firms and running his own practice. A former school teacher with strong design, planning and contract management expertise, he is involved in all aspects of architecture with S&T.

Paul says he's delighted to have been appointed an S&T Director. "Being a Director offers new challenges along with a new set of roles and responsibilities," he says. "It also offers opportunities to learn more about the company and management in general and to extend my own vision as an architect."



**John Ercolano,  
Associate Director**

John realised that architecture was his career of choice when he was about 14, and he hasn't

looked back since – relishing, he says, the way it challenges and tests his faculties on all levels, and the complex mix of science and art that it offers.

That's particularly true of the projects he's worked on since joining S&T six years ago – from hospitals to youth justice facilities, gymnasiums and multi-storey building refurbishments.

John graduated from Wellington's School of Architecture in 1992 and worked in Nelson and London before returning to New Zealand and joining S&T in 1999. He says his Associate Directorship is enabling him to develop his management skills and encourage and promote effective and enjoyable teamwork.



**Brian Minns,  
Associate Director**

Joining S&T in 2001, Brian brought with him many years of experience in a wide range of design

disciplines – from fire systems to building services, commercial aluminium products and architecture (he ran his own architectural design practice for 12 years). Architecture is now his focus, and he's currently CWA (collaborative working arrangement) Design Manager for the Spring Hill Corrections Facility.

Brian says he enjoys working with a large, multi-disciplinary firm and is interested in exploring ways technology can enhance the company's design practice and capabilities, such as through using 3D technology for presentation models and construction.



**Jeff Potkins,  
Associate Director**

Originally from the UK, Jeff has been in New Zealand for more than 20 years and with S&T for the past

two years. He also worked for S&T in the mid-1980s before he was lured to Papua New Guinea to help design a copper mine there.

As a hydraulic engineer, Jeff has worked for companies large and small on commercial, industrial and institutional projects at universities, schools, hospitals and clinics within New Zealand and overseas. He has also managed his own consultancy and travelled to other countries as part of his work. He says he's looking forward to being more involved with S&T's management and direction and to promoting the company and its hydraulic services.



**Fadia Sami,  
Associate Director**

Originally from Jordan, Fadia joined S&T in 2001 and has since worked on a wide variety of projects,

from educational facilities to commercial premises. "Each offers its own requirements and challenges," she says, ensuring that her work is always stimulating and satisfying.

Fadia has specialist expertise in architectural acoustics, building services noise control, vibration control and environmental noise control. Her acoustic expertise, coupled with wide experience in the design, implementation and operation of building services, permits an integrated approach to acoustic solutions. She is currently very busy providing acoustics solutions for S&T projects and a growing list of other clients.



**Alex Stevenson,  
Associate Director**

Arriving fresh from the UK about two years ago, Alex was appointed CWA Design Manager for the Northland

Region Corrections Facility at Ngawha. It was, he says, a fascinating introduction to New Zealand architectural practice and to the country – and a great professional challenge.

Originally from Scotland, Alex spent 25 years working in Manchester before travelling to New Zealand. There he was Associate Partner for a large multi-disciplinary practice and spent 10 years running his own architectural firm. After completing a Master's in Project Management in the mid-1990s, he chose to pursue this discipline in tandem with architecture and today gets great satisfaction from managing and organising large projects and multi-disciplinary teams.

**Disciplines Provided**

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- Leisure design
- Healthcare planning and briefing
- Feasibility studies
- Space utilisation studies
- Mechanical HVAC services
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- Site development planning
- Building audits
- Plant audits
- Energy audits

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