

Inside this issue...

Cardno Young stopping the nation this November

A new beginning with Cardno Grogan Richards

Roads to recovery in the Solomon Islands

Seeing double across the Gateway Bridge

and more...





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A message from the Managing Director

Welcome to the first issue of Cardno News for 2007.

2006 was another exciting year for Cardno, and from all indications 2007 will also be successful.

Since the last issue the Cardno group has expanded domestically, via mergers with Stanwill Consulting Engineers (Newcastle), Grogan Richards Consulting Engineers (Melbourne and Brisbane) and Saraceni Engineering Group (Perth).

Each of these acquisitions strengthens our ability to better service clients through our expanding geographical coverage and discipline base.

Our organic growth is also evident with office openings in three new action centres; Springfield in South East Queensland's western corridor, Ballina in Northern New South Wales and more recently Bundaberg in Queensland.

Almost two years ago Cardno changed from what was predominantly an engineering consultancy (physical infrastructure services) to include the delivery of social infrastructure services in the international development

assistance sector. Cardno has now emerged as a multidisciplinary firm offering both physical and social infrastructure services in Australia, the Pacific, Asia, Africa, Europe, the Middle East, and North America.

This issue includes articles on our contribution across a wide range of projects. Our teams are working on the historic Gateway Upgrade Project in Brisbane – one of the single largest infrastructure projects ever undertaken in Queensland; the Palm Jebel Ali in the United Arab Emirates – one of the world's largest marina developments; the Solomon Islands Road Project; and the upgrade of the Course Proper at Flemington in Melbourne. Each of these projects is testament to Cardno's vision of becoming a world leader in the provision of professional services for the improvement of physical and social infrastructure.

I hope you enjoy reading about Cardno's current projects and programs around the world.

Andrew Buckley
Managing Director

Cardno has now emerged as a multidisciplinary firm offering both physical and social infrastructure services.



A new chapter begins with Cardno Grogan Richards

Cardno's partnership with the highly respected engineering firm Grogan Richards Consulting Engineers is an exciting opportunity for the group to expand its share of the growing Victorian market.

The acquisition of Grogan Richards by Cardno in December 2006 further strengthens the company's ability to provide world-class infrastructure solutions to clients across Australia.

Cardno Grogan Richards is a Victorian headquartered multidisciplinary practice with considerable experience in the disciplines of civil, structural, hydraulic, traffic and transport engineering.

With a client list that reads like a who's who of the Australian construction industry and an impressive number of signature developments to its credit, Cardno Grogan Richards is an excellent fit for the Cardno group.

The firm has approximately 110 staff in Melbourne increasing Cardno's staff numbers to around 1,600, making it one of the largest infrastructure consultancies in Australia.

"The union of the two companies gives Cardno stronger representation in Victoria and allows the company to offer a greater range of specialist engineering services to its existing clients," said Andrew Buckley, Managing Director of Cardno.

Cardno Grogan Richards' client base is set to benefit by being connected to a network of global infrastructure businesses that can all be defined by a culture of performance, continuous improvement and client-focused solutions.

Steve Richards, Manager of Cardno Grogan Richards, will head the newly formed Victorian Division; a development that reflects the importance of this market to the group.

"Grogan Richards was founded in 1979 and since that time we have been involved in numerous high profile projects including the QV Centre, Hallmark Apartments and Waterfront City Docklands in Melbourne, and various projects for the Queensland Investment Corporation," Mr Richards said.

Mr Richards said the firm had developed solutions for large masterplanned projects, such as Lakeside Pakenham for Delfin Lend Lease, and several shopping centre projects including Highpoint Shopping Centre at Maribyrnong and Plenty Valley Town Centre for Westfield.

Cardno Grogan Richards' client base includes builders, developers, shopping centre owners and managers, local government, government departments, town planners and the legal profession.

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Roads to recovery in the Solomon Islands

In recent years, violent conflict and considerable decline in the economic performance and stability of the Solomon Islands has exacerbated poverty and economic hardship.

To aid the rehabilitation process, Cardno Acil has been commissioned by AusAID, the Asian Development Bank and NZAID, to implement a project designed at increasing institutional capacity building of the ministry responsible for transport. Additionally, Cardno Acil will complete feasibility studies, design and project management of 100km of national roads, and rehabilitate more than 40 bridges throughout the Islands.

In the Solomon Islands, the current socioeconomic situation is characterised by high unemployment, one of the largest population growth rates in the world, slow economic development and a significant decline in the GDP. These

factors have resulted in limited funding for the maintenance or upgrade of road networks.

It is estimated the current road infrastructure in the Solomon Islands reaches less than 75 percent of the rural population. Only 20 percent of the roads are in good condition, with the remainder impassable by light vehicles.

Peter Knee of Cardno Acil said due to isolation, communities and villages have maintained a subsistence style of living with little or no interaction between communities or the majority of society.

"The project will improve the interconnectivity between communities and access to education, health and other services in rural areas," he said.

"From our previous experience, improving the infrastructure alone is insufficient.

"With limited education standards, we will educate and communicate with villagers through workshops to demonstrate the importance of road infrastructure and community based maintenance."

The project, which is scheduled to be completed in late 2011 is designed to increase both GDP and employment opportunities as well as improve transport facilities, boost school enrolment and reduce high vehicle operating costs.

The project will also incorporate improvements in road maintenance. These include the development and implementation of management systems, assistance with the implementation of a national transport fund and the participation of private sector contractors and communities in routine maintenance.

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“...and they’re racing at Flemington.”

“The upgrade of the racecourse is the single most important project undertaken in the club’s history and it will be fundamental to racing at Flemington for at least the next 30 years.”

The Melbourne Cup is the race that stops the nation. As such, it is one of the most important three minutes in Australia each year. With millions of Australians listening or watching, the prospect of the race not running is unimaginable. It’s therefore lucky the track’s redevelopment is in safe hands with Cardno Young. Cardno Young has designed and is project managing the upgrade of the Course Proper at Flemington.

Cardno Young has been working with the Victoria Racing Club (VRC) since 2002 and has also had design and project management involvement with the flood mitigation and stormwater drainage projects as well as contract administration and surveillance work in the Grandstands Lawns Area.

Cardno Young first became involved with the VRC following successful track reconstruction projects at Moonee Valley in Melbourne, Royal Randwick in Sydney and Thoroughbred Park in Canberra.

The work at Flemington includes a total track reconstruction. This is a considerable

task involving the removal of existing track material to a depth of approximately 500mm; stabilisation of the subgrade (track foundation); new under track subsoil drainage system; importation of specially engineered soil; installation and establishment of offsite grown turf; and all associated works such as a pumped dedicated stormwater drainage system, underground services conduits for power communication/television, and the reinstatement of a watering system and track timing systems.

This is the first time the track has undergone a complete reconstruction since it was built in 1840.

The design of the new track involves a revised geometry, including a one way track crossfall easing into banked turns, which will provide

for more consistent running for horses. In addition the new running surface will be more reliable, given the superior drainage conditions and consistent soil type designed specifically for the purpose of horse racing.

Ray Young, Director of Cardno Young, is the Project Director.

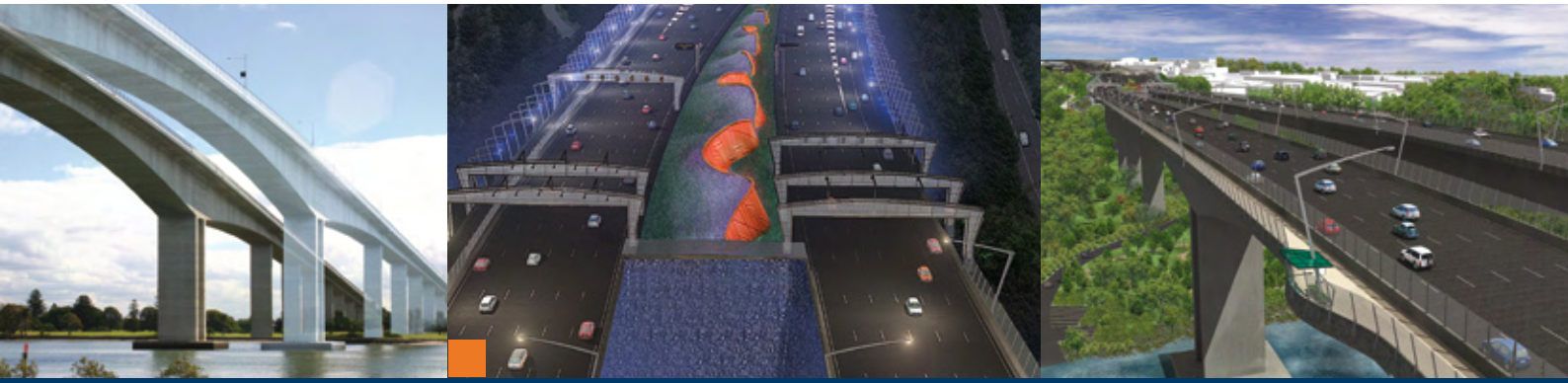
“Our aim is to work with the VRC to help develop Flemington as a world-class racing venue,” said Mr Young.

Dale Monteith, Chief Executive of the Victoria Racing Club, said the club was eager to see the masterplan vision realised.

“The upgrade of the racecourse is the single most important project undertaken in the club’s history and it will be fundamental to racing at Flemington for at least the next 30 years,” said Mr Monteith.

Maintenance of the new Course Proper will be greatly reduced without the need to address a variety of track conditions brought about by inconsistent drainage and soil conditions. The new track will provide greater surface consistency and improved drainage. This means the club will be able to avoid meeting cancellations and have safer racing conditions in the future.

This is the first time the track has undergone a complete reconstruction since it was built in 1840.



Gateway to Brisbane's transport future

The \$1.88 billion Gateway Upgrade Project is one of the largest road and bridge infrastructure projects in Queensland's history.

The Queensland Government initiative is being delivered by Queensland Motorways in partnership with the Leighton Abigroup Joint Venture (LAJV).

The 20km long upgrade project from Mt Gravatt Capalaba Road to Nudgee Road will allow for growth in the area, both commercial and residential, as well as reduced traffic and congestion and improved safety for South East Queensland's growing population.

The existing Gateway Bridge crosses the Brisbane River to the east of Brisbane and comprises a 1627m long concrete box girder bridge with a main span of 260m, constructed using the cast-in-place balanced cantilever technique.

Cardno, as specialist bridge subconsultant in association with Maunsell and SMEC, carried out the successful tender design of the duplication bridge for the LAJV as part of the overall Gateway Upgrade Project.

Cardno, in association with Maunsell, is carrying out the detail design of the main bridge and, in addition, Cardno is assisting in design management services for the design of the other bridges on the route.

“Bridge design is part of the company's culture. Our co-founding partner, Harold Davies, worked on the Sydney Harbour Bridge, so we are proud to be contributing to another iconic bridge.”

The design team includes a number of Australia's leading bridge design engineers who are working closely with experienced and capable construction engineers from the LAJV.

Managing Director, Andrew Buckley said he is proud Cardno is part of the team delivering this vital piece of infrastructure for Queensland.

“Cardno brings to the project an established track record in bridge design excellence,” he said.

“Over a 60 year history Cardno has been involved in the design of more than 3,000 bridges in Australia and internationally.

“Bridge design is part of the company's culture. Our co-founding partner, Harold Davies, worked on the Sydney Harbour Bridge, so we are proud to be contributing to another iconic bridge.”

Teams from Cardno have worked on significant bridge and infrastructure projects such as

the Bolte Bridge in Melbourne, the Westlink M7 and Lane Cove Projects in Sydney and the Rajang Bridge in Malaysia.

Cardno's contribution to the Gateway Upgrade Project is not limited to bridge design.

“Cardno Eppell Olsen, Cardno's specialist traffic and transport arm, undertook the transport planning work for the initial study and provided recommendations to duplicate the bridge and create a new roadway to the north, so we are pleased to see the suggestions become a reality,” Mr Buckley said.

Cardno Lawson Treloar, Cardno's expert coastal, ocean and marine business unit, is also providing the flood study expertise for the Bulimba Creek catchment for the project.

“This project demonstrates our ability to bring specialist teams together on significant infrastructure projects,” Mr Buckley said.

The \$1.88 billion Gateway Upgrade Project is one of the largest road and bridge infrastructure projects in Queensland's history.



Cardno helps create an island paradise in Dubai

The second development in the renowned palm trilogy off the coast of Dubai, the Palm Jebel Ali, will be one of the largest man-made islands in the world. The island is 60 percent larger than the original, the Palm Jumeirah.

Construction began in May 2002 and upon completion in 2010, the Palm Jebel Ali is expected to be home to more than 250,000 people, and feature luxury homes, hotels and resorts, water homes on stilts, dive sites, a theme park, and a variety of premier marinas.

Cardno has been commissioned by developer, Nakheel Properties, to prepare masterplans for all marinas for the Palm Jebel Ali, which will host several thousand berths for residents living on the Palm Jebel Ali.

The Palm Jebel Ali was initially commissioned by UAE Vice President, Prime Minister and Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum to increase tourism in the region and has fast become one of the most exclusive and complex developments ever undertaken.

"Cardno was selected from amongst the world's best engineers to play an integral role in this

Cardno was selected from amongst the world's best engineers to play an integral role in this pioneering project because of the company's skills, experience and reputation internationally.

pioneering project because we have the skills, the experience and a solid reputation internationally," said Mr Kevin Renshaw, Regional Director of Cardno's Middle East operations.

The marinas will grant residents with a direct gateway to the pristine boating playground off the Persian Gulf, and alleviate the need to join long waiting lists for existing berths in Dubai.

The marinas will also host waterborne transport alternatives for residents. It is envisaged the transport services will include water taxis, high speed ferry services to Dubai, and door to door services for residents of water homes.

"The marinas will provide residents with the infrastructure they require to enjoy lifestyles that reflect their surrounds, climate and ideals,"

said Graeme McIlwain, Cardno's Project Director of the Palm Jebel Ali Marina Development.

Cardno's team is undertaking the project in two phases. The initial demand study phase analysed the current and predicted trends in Dubai and Abu Dhabi. The study examined population growth, boat registrations, current demand for marina berths and the economic and psychographic segmentation of the residents.

This research was then compared to marina demand in Australia, France and Italy to determine the scope and parameters for the marina designs. The second phase involves masterplanning all marinas.

Based on the results of the demand study, Cardno is preparing the masterplans showing the location of the berths, the number and mix of berths, breakwaters and associated infrastructure for each marina.

The masterplans for all marinas are being carried out in pairs. The concept marina design is being integrated into the masterplans of each of the 'crescents' to ensure the marina facilities are compatible with the surrounding land uses.

"The marinas will provide residents with the infrastructure they require to enjoy lifestyles that reflect their surrounds, climate and ideals."



Go west to prosper

Cardno's Western Australia division has experienced significant expansion and diversification over the past three years due to strategic mergers and organic growth.

Following the successful Cardno and BSD union in 2004, the division has capitalised on key development opportunities in the civil engineering, town planning and environmental science sectors.

The capabilities and expertise of Cardno BSD has been boosted by two acquisitions in 12 months. In June 2006, Cardno Gilbert Rose was created as a result of the merger with Gilbert Rose, an established land development engineering consultancy.

Cardno Gilbert Rose has brought additional experience and expertise to Cardno's existing land development team, and has introduced new clients to the business.

"In Western Australia the land development market is extremely buoyant, making it an opportune time to expand Cardno's engineering services and strengthen our presence and capacity to satisfy the demands of clients," said John King, Cardno's Western Australia Division Manager.

In January 2007, Cardno merged with structural engineering company Saraceni Engineering Group to form Cardno Saraceni.

This merger has enabled the Western Australia division to offer more comprehensive structural engineering services.

"Saraceni Engineering is renowned for handling complex and difficult structural projects. They have an established reputation for providing leading lightweight structural design, as well as boasting extensive experience and capability in the design of bridges, shopping centres and apartment blocks," Mr King said.

A water engineering team has also been established in Western Australia in response to the mounting industry demand. The team has hit the ground running, working on urban development projects for new and existing clients and has been awarded significant contracts with the Water Corporation of Western Australia.

"In the midst of the strong market conditions, Cardno has not only strengthened its position and reputation through organic growth, but we have also diversified and grown through the acquisitions of two well managed engineering companies," he said.

This growth has been buoyed by the Western Australian economy performing above the nation's average, the strength of the mining sector and significant state government revenue activity. The population and urban

development boom has also produced an increased demand for infrastructure projects.

With the high level of economic activity expected to continue in Western Australia over the next few years, Cardno's presence and growth in the west will continue to flourish.

"In Western Australia the land development market is extremely buoyant, making it an opportune time to expand Cardno's engineering services and strengthen our presence and capacity to satisfy the demands of clients."



Rebuilding northern Uganda

The Government of Uganda has made significant progress in recent decades to restore political stability and introduce a market oriented economy. However the country continues to face serious social and economic imbalances caused by decades of conflict in the northern regions of Karamoja and Acholi.

In December 2006, a Cardno Agrisystems team of technical and financial specialists was mobilised to Uganda to support the Northern Uganda Rehabilitation Program (NURP), a four year €20 million program funded by the European Commission and supervised by the Office of the Prime Minister.

The aim of the program is to strengthen the self-reliance and protection of local populations in Northern Uganda, rehabilitate social infrastructure and improve the capacity to respond to conflict and disaster.

Project Director and Managing Director of Cardno Agrisystems, Dr Geoff Norman, said the program's goals are to improve living conditions, protect civilians, human rights and help the population gain access to justice.

"The program will help reduce poverty, improve governance and promote reconciliation at

community, regional and national levels," said Dr Norman.

The NURP subscribes to the peace dividend approach of reconstruction whereby reconciliation and reduction of regional disparities through development is promoted. The program offers a flexible approach to conflict prevention, management and resolution.

Sonia Pagliaro, Cardno Agrisystems' Project Coordinator responsible for supporting the team on the ground, confirmed the program's aim is to restore hope and rebuild war affected livelihoods.

"Even in the midst of conflict, windows of opportunity exist where targeted intervention can make a difference in people's lives," she said.

"The program is flexible as it combines relief, rehabilitation and development, allowing it to adapt to constantly evolving circumstances."

The NURP is consistent with the European Community's development policy and its general objective of poverty reduction based on the principles of sustainable, equitable and participatory human and social development, and the promotion of human rights, democracy, the rule of law and good governance.

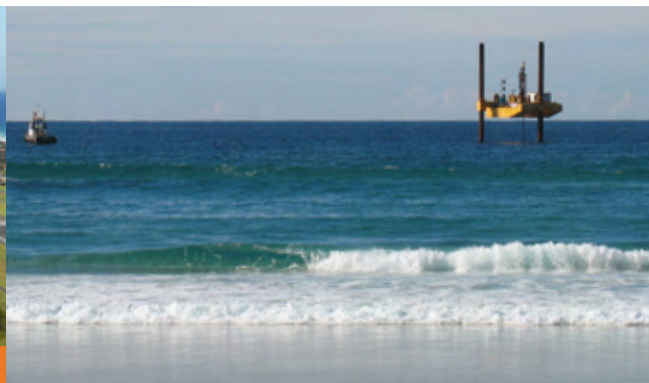
Cardno Agrisystems is responsible for the establishment and forward management of a specialist team based in Kampala and operates through two regional coordination offices in Northern and North Eastern Uganda.

The project team led by Gael Griette will be responsible for the management of €20 million, of which €3 million will be provided to support micro-projects such as community led water supply and sanitation schemes, sports and cultural events and €13 million in the form of grants to regional non-government organisations to improve education, health facilities and youth employment schemes.

Dr Norman said the main beneficiaries of the NURP will be the civilian populations whose lives have been seriously affected by conflict.

Cardno Agrisystems has worked continuously in Uganda since 1981, delivering studies and programs funded by the European Commission, Swedish International Development Cooperation Agency, United Nations Development Program and United Nations Industrial Development Organisation, African Development Bank, Food and Agricultural Organisation and the World Bank.

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Desalination – the future of Queensland's water

Prolonged drought conditions across South East Queensland combined with the population boom and rapid urban development has placed strain on the region's water resources.

The Queensland State Government and the Gold Coast City Council have been compelled to safeguard the future supply of clean drinking water to the region through the Gold Coast Desalination Alliance.

Desalination was selected as a key component of the State's South East Queensland Regional Drought Strategy Contingency Supply Plan and the Gold Coast City Council's Waterfuture Strategy because it does not depend upon climatic conditions to provide safe drinking water.

The project meets both local and regional plans to supply the South East Queensland Water Grid with an emergency water source by the end of 2008.

The \$1 billion project is only the second of its kind in Australia. The plant is expected to produce an additional 125 megalitres of water each day to South East Queensland's water reserves. One mega litre is equivalent to half an Olympic size swimming pool.

Cardno's Business Unit Manager of Water Supply and Sewerage, Jamie Alonso, said the major benefit of desalination is that it will continue to deliver high quality water for household consumption without rain, which is a major consideration for the region.

Cardno has been commissioned as specialists in the planning, modelling, and design of the water supply network infrastructure, and the conceptual and detailed design of the distribution system.

"Because the desalination process does not depend on precipitation, it provides an ongoing alternative source of water for households," he said.

"It will make the region's overall water resources more diverse, and less vulnerable to the strain of drought and population growth."

As part of the Gold Coast Desalination Alliance, Cardno has been commissioned as specialists in the planning, modelling, and design of the water supply network infrastructure, and the conceptual and detailed design of the distribution system.

Cardno's team is currently completing the infrastructure design and developing the operating strategies for connecting the Gold Coast desalination facility to the South East Queensland Water Grid.

Along with the alliance partners John Holland, Veolia Water and SKM, Cardno is providing engineering services for the desalination plant.

"Desalination is a relatively new concept in Australia," Mr Alonso said.

"However this technology is standard practice in many parts of the world."

Desalination technology is rapidly improving, and the Gold Coast, like many other populated coastal areas, is well positioned to use desalination because of its proximity to the ocean.

Nevertheless the design and construction is complex due to the high density urban location and the material shortages.

"Although there have been some hurdles to overcome, the plant is on schedule for the end of 2008," Mr Alonso said.



The seminars provided an informative and practical learning and networking experience for professionals involved in urban development.

Walking – a viable transport alternative?

With mounting community concern over the rise in the price of oil and our sedentary lifestyle, there is an increased need to plan and design transport systems that consider community wellbeing socially, environmentally and economically.

Cardno and Cardno Eppell Olsen conducted a series of sustainable transport planning seminars throughout Queensland and New South Wales to educate and assist government bodies, town planners and developers.

The seminars provided an informative and practical learning and networking experience for professionals involved in urban development.

A walking tour was conducted in each city which examined and critically analysed the existing transport infrastructure. The importance of providing quality sustainable

walkways, cycle facilities and public transport alternatives was discussed by UK based keynote speaker and Director of Walk 21, Mr Rod Tolley.

Cardno sponsored Mr Tolley's visit to enable clients to learn more about walking as a viable transport option.

"The seminars were really well received as they provided the opportunity for participants to not only hear from a world expert, but via the walking tour we got everyone to 'road test' their own communities," said Jerryn Zwart, Cardno Eppell Olsen's Principal Mobility Specialist and co-speaker at the seminars.

"The interactive tour really brought home the limitations of some of the facilities and made the participants realise the benefits of properly planned and interconnected walkways, cycleways and public transport options."

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Unearthing new skills in the Hunter

"We have a particular expertise in structures relating to materials handling plants and an understanding of design inputs required for design and construct projects. We have successfully carried out designs for design and construct contractors for more than 15 years."

Since the merger with Stanwill Consulting Engineers in September 2006, Cardno has expanded its mining capabilities, in an industry worth billions of dollars in Australia each year.

Cardno Stanwill has been working with Calsun Materials Handling for more than 15 years and the latest project is the \$6 million Boggabri Coal – East Boggabri Mine Coal Crushing and Truck Loading Facility.

Cardno Stanwill was involved in the structural design associated with the bin and support structure, conveyor, loading facility, crushing station and retaining wall, and design and documentation of footings for the facility.

The key features of the facility include an automated truck filling fail safe system, together with economical system design with features to minimise future upgrade costs.

This is not the first time Cardno Stanwill has been involved in the design of key facilities for mining clients. Similar designs have been completed for a number of clients and projects including conveyors, transfer structures,

loading facilities, washery modifications and plant and structural audits.

Cardno Stanwill Principal, Alan Willgoose, said the crushing facility is a concept which could be applied to other plants.

"Each facility is purpose designed and built to suit each client's particular criteria and requirements," Mr Willgoose said.

"Calsun engaged Cardno Stanwill due to our experience and understanding of the structural requirements of this type of project and its design and construct supply.

"We have a particular expertise in structures relating to materials handling plants and an understanding of design inputs required for design and construct projects. We have successfully carried out designs for design and construct contractors for more than 15 years."

Cardno Stanwill's skills are not limited to servicing mining clients. Capabilities vary considerably and consist of civil projects; including roads drainage, subdivisions, expert

reports and structural design which relating to materials handling structures and general structural design.

Major projects for Cardno Stanwill include expansions to Port Waratah Coal Services, as well as upgrading and maintaining structural input at its Kooragang and Carrington coal terminals. Another major project is for Dendrobium Coal, focusing on feed conveyor structures for the rail loading facility at Mt Kembla. Project highlights also include conveyors, transfers and fixed stackers for Continental Conveyor and Equipment Pty Ltd; and work at Energy Australia's Maryland, Thornton and Croudace Bay substations.

In recent years Cardno has added significant capacity to service the resources industry. Via Cardno Forbes Rigby in Wollongong, Cardno is now supplying key players such as BHP Billiton and BlueScope Steel. Likewise, Cardno Ullman and Nolan has been servicing key mining clients via their geotechnical capability for more than 30 years in the Northern Territory and Central Queensland.

News at Cardno

Cardno ensures the odds stack up

Cardno has developed an innovative automated Finite Element Analysis (FEA) model to evaluate pallet racking structures. The new method is capable of building, analysing and evaluating these types of structures, no longer demanding the manual building and testing of each model type.

Cardno is now able to deliver clients advanced finite analysis modelling and certification more efficiently than in the past. With the new FEA model the fee to analyse and certify pallet racks has halved, ensuring clients receive the most cost effective and efficient service possible.

"As leading analysts and engineers, our efforts have been focused on developing the most proficient and dynamic solution possible," said David Beneke, Business Unit Manager of Structures in NSW.

"We understand the dynamics of and the myriad of forces on structures, but just as

importantly we also understand the business needs of our clients and deliver solutions that solve each design challenge," he said.

Cardno's automated model ensures the design of each pallet racking structure reaches its maximum potential, without compromising the health and safety of employees and stock in each environment.

The automated FEA model has already been used with great success. Dr Murray Clarke of Dematic said the automated FEA model is an important and innovative development.

"The automated model developed by Cardno has streamlined the analysis and certification process, and lead to significant cost reductions opening the doors to many new markets," he said.

David Beneke has more than 18 years of experience as a structural engineer and is on the Standards Australia Code Committee for developing the updated steel storage structures code AS4084.

Cardno boasts a team of highly experienced specialist engineers who have a comprehensive analytical capability to ensure the analysis of structural designs is comprehensive and focused on finding the most appropriate solution.

Cardno's structural design experience and expertise also includes cable structures, arch structures, major bridges, membrane structures, manufactured components, research and development, and vibration assessment.



National Stormwater Industry Association Awards for Excellence

Success was in the air when Cardno received a number of awards at the 2006 Stormwater Industry Association (SIA) National Awards for Excellence. Cardno's project winners were diverse, confirming the company's leading position in stormwater management and Water Sensitive Urban Design (WSUD).

Dr Brett C Phillips, Discipline Leader for water engineering and WSUD services and Director of several Cardno companies that received awards, is proud of the industry recognition of the quality of stormwater management services and products delivered to clients both nationally and internationally.

"The awards are testament to Cardno's commitment to innovative stormwater management and WSUD," he said.



"The breadth of industry recognition is an accolade few firms can claim."

Five Cardno projects were recognised at the SIA National Awards:

- ▶ Winner of the Award of Excellence in Stormwater Software Development
- ▶ Highly Commended and Finalist in Stormwater Management
- ▶ Highly Commended and Finalist in Stormwater Education

XP Software, a subsidiary company of Cardno, received the Excellence Award in Stormwater Software Development for its range of software products that support improved stormwater management in Australia and overseas.

Cardno won a high commendation for Excellence in Stormwater Management for

SALT. SALT is an urban village in Northern New South Wales and is a concrete example of environmentally sustainable living.

The heart of SALT is a village centre and park precinct, which serves a dual purpose. The park is a recreational area and is also critical to the success of the WSUD strategy for the site.

Cardno also set new benchmarks for urban residential design that meets flood control, pollution control and stormwater harvesting objectives without the use of on-site or 'lumped' detention storages or constructed wetlands in the Heritage Mews development in Sydney. The development represents one of the first practical applications of WSUD in western Sydney and was a finalist in the Excellence in Stormwater Management category.

In Canberra, Cardno Willing joined with the ACT Planning and Land Authority to develop WSUD Guidelines for sustainable development that received a high commendation for Excellence in Stormwater Education. The fourth edition of the UPRCT On-Site Stormwater Detention Handbook prepared by Cardno Willing was also a finalist in the same category.

Cardno's commitment to growth

Cardno is committed to offering its services in regions of high demand and as a result, three new offices have been established recently.

The new offices include Springfield in South East Queensland's western corridor, Ballina in Northern New South Wales and, more recently, Bundaberg in Queensland. The recent Bundaberg addition has solidified Cardno's position as having the largest geographical reach of any engineering services consultancy in Queensland with 12 offices located throughout the state.

The decision to move into each of these areas has been a combination of Cardno increasing its geographical spread as well as a move towards permanent local teams rather than location-based project teams from capital cities. Each of these regions has been identified as areas of major economic growth and rapid population growth.

Cardno Queensland and Northern Territory Division Manager, Paul Gardiner, said Cardno has been working in these areas for a number of years and the demand for Cardno's services was significant.

"We already have a wealth of experience in Northern New South Wales, Springfield and Bundaberg, so it was a natural transition to establish offices in these areas," he said.

"It is important to have a local office. Experience has shown clients are more comfortable working with, and get better outcomes from firms with local knowledge."

Cardno has been working with the Springfield Land Corporation for more than three years, helping plan and deliver projects such as Sinnathamby Boulevard and the Centenary Highway off ramp as well as Brookwater Estate and Springfield Tower.

Another area of high growth is Northern New South Wales. In the few months since the office opened in Ballina the team has already secured a number of significant contracts.

"In Ballina the outlook is extremely positive and we will allocate additional resources to meet the demand," Mr Gardiner said.

"Like Ballina, Bundaberg is experiencing population increases and Cardno has recently completed the design of approximately 50km of on-street bicycle facilities for Bundaberg City Council."



Mr Paul Gardiner of Cardno (right) and Maha Sinnathamby of Springfield Land Corporation (left)

Record half-year

On February 20 2007, Cardno Limited announced revenue for the half year was \$111.1m, up 23.8% over the corresponding period.

Cardno Limited Managing Director, Andrew Buckley, said the strong result was due to revenues flowing from solid performance across Cardno's operations and acquisitions.

Mr Buckley said he expected less seasonality in the company's second half results than in previous years.

"Our engineering infrastructure divisions are in demand both in Australia and internationally and our development assistance arm has also secured major project wins," he said.

Cardno's strategy is to identify and acquire businesses which are located in new geographic locations or which deliver professional services disciplines which

complement Cardno's existing business. "All acquisitions have made a positive contribution to profit," Mr Buckley said. "Group staff numbers are now around 1,600 people."

"This strategic approach has diversified the revenue base, created cross-selling opportunities, and minimised duplication in newly-acquired businesses."

"Cardno's outlook continues to be bright and we have good prospects for expanding the business through organic growth and acquisitions both in Australia and internationally."

"Demand for services across physical and social infrastructure disciplines remains strong, with the private and public sector funding infrastructure maintenance, upgrades and new projects. The resources boom continues to drive growth across Western Australia and Queensland."

Cardno continues to assess potential Australian and international acquisition prospects and the pipeline of opportunities remains strong.

Cardno's acquisitions for the period were:

- ▶ **Cardno Stanwill:** Cardno strengthened its capacity to deliver services into regional areas with the acquisition of Newcastle based Stanwill Engineering.
- ▶ **Cardno Grogan Richards:** The acquisition of established Victorian based consulting engineers Grogan Richards has complemented Cardno's existing Victorian representation by adding approximately 110 staff.
- ▶ **Cardno Saraceni:** Saraceni Engineering was acquired to provide Cardno's Western Australian team with additional staff and enhanced structural engineering capabilities.

Workplace Health & Safety

Cardno's commitment to providing and maintaining a healthy workplace is a central element of its corporate vision of high quality through improving processes and service delivery.

Cardno is presently reviewing its national Health & Safety Management System.

Implementation of the system will provide Cardno employees with a consistent approach

to hazard identification, risk assessment, risk control and monitoring processes.

This national approach will provide greater opportunities to record health and safety statistics and review safety performance between Cardno's divisions and benchmark results against national and state averages for incident and accident frequency rates and lost time injuries.

The Health and Safety System will be a useful tool assisting Cardno to meet its legislative

requirements for each state and territory and providing the opportunity to set measurable health and safety targets. It will also serve as a vehicle to provide employees with information regarding health, safety and wellbeing.

For further information regarding the Cardno Health and Safety Management System, please contact Kieron Kelly, Health and Safety Advisor.



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