From the Front...

Managing Director, Steve Abley

Milestones are important. Our most recent reflection was achieving 10 years of excellence for our clients and maybe more importantly, 10 years of work in our community making a significant contribution to better transport systems. Reflecting though is two-way, not only looking back but also visioning the next 10 years, and further. That is something we will be focusing on in the coming year and we are committed to making sure we stay true to our values of innovation, quality, relationship and professionalism.

Regarding professionalism, it is with great pride I want to announce we will be sponsoring the centenary celebrations of professional engineering in New Zealand in 2014 as a gold sponsor of the Institution of Professional Engineers New Zealand (IPENZ). That, along with a host of other initiatives, means we will continue to strive for ongoing future excellence - take the journey with us in this edition of Street Smart that focuses on post-earthquake recovery Christchurch.

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RESIDENTIAL RED ZONE TRANSPORT IMPACTS

THE RED ZONING OF RESIDENTIAL LAND IN KAIAPOI AND CHRISTCHURCH HAS REQUIRED COUNCILS AND OTHER UTILITY PROVIDERS TO THINK ABOUT HOW THE PROPERTIES SURROUNDING THESE AREAS WILL BE SERVICED IN THE FUTURE.

From a transport perspective, this includes how people living in the neighbouring green zones travel to and from their homes when the current roads go through red zones. Abley's Jeanette Ward is assisting Waimakariri District Council with this issue following her role developing new street designs before the land zoning announcements.

Residential property in the flat areas of Canterbury has been zoned red where the land has been so badly damaged by the earthquakes that it is unlikely it can be rebuilt on for a prolonged period. The majority of this land has now been purchased by the Government.

The red zoning of around 1000 properties in Kaiapoi has meant that only some streets that were redesigned following the September 2010 earthquake can be rebuilt. The future of the remaining streets in the red zones can now only be considered in detail given the Government purchase offers have closed. The Earthquake Infrastructure Recovery Steering Group, of which Jeanette is a member, can now focus on how the various infrastructure networks are impacted and consider alternative options for the future.

Jeanette is looking into the options of how the residential areas surrounding the red zones are accessed. This includes the option of new roads that would potentially create a more cohesive network of streets. The options developed will need to be discussed with the community before any decision can be made.

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DISTINGUISHING CONSENT AUTHORITY AND ROAD CONTROLLING AUTHORITY ROLES

MANY DISTRICT PLANS BLUR THE DISTINCTION BETWEEN LOCAL AUTHORITIES’ DUAL ROLES AS RESOURCE CONSENT AND ROAD CONTROLLING AUTHORITIES.

District Plans that outline Council’s role as a consent authority often require a resource consent application to demonstrate compliance with rules that apply to areas outside the property boundary, usually in the road reserve. Roles at this type are often not necessary, as the applicant is usually required to get agreement from the road controlling authority (usually the local authority or New Zealand Transport Agency) before undertaking any work in the road reserve to develop, for example, a vehicle crossing. The road controlling authority can approve the design of the vehicle crossing through that process.

Abley has recently been assisting Christchurch City Council to review the transportation role in the current Christchurch City Plan and Banks Peninsula District Plan that relate to access. In doing this work, we found that many of the current access roles refer to vehicle crossings, that is, the proportion of the access within the road reserve generally from the kerb to the property boundary, which is usually owned by Council. For example, requiring a minimum or maximum width of kerb or the width of a vehicle crossing is designed to assist vehicles to be able to turn in and out of a vehicle accessway or driveway. However, the swept path of a turning vehicle, and consequently the kerb or vehicle crossing width required, depends on a number of factors, in particular how far away the vehicle is turning from e.g. kerbline parking or the frontage road will result in a vehicle carrying a more gentle turn than if there is no kerb parking.

Abley developed revised rules for access on the portion inside the property boundary until the first point where there could be a vehicle on site that entering vehicles could conflict with. Ensuring District Plan rules are focused on areas within the property boundary will result in a more simplified and hopefully quicker resource consent process for both applicants and Councils.

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STAFF PROFILE: AIMEE DUNNE

TRANSPORTATION ENGINEER
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Aimee moved to Christchurch from the United Kingdom early this year, lured by the exciting career opportunities available as part of the Christchurch rebuild. She previously worked for two years as a Highways Development Manager Engineering Transport planning and engineering experience within a local authority in the UK. Aimee enjoys the variety of projects she is working on, including the preparation of integrated Transport Assessments for large national clients. These require the assessment of proposed road development or the success of transport planning measures. She has assisted in a number of District Plan reviews, assessment of access options for proposed Plan Changes and transport analysis studies.

“I have been able to develop new skills since being here such as swept paths analysis, crash analysis studies, the preparation of traffic surveys and subsequent analysis and presentation of data.”

Aimee has attended various presentations including the Trafcon Conference held this year in Retina which focused on road safety, efficiency and sustainability.

“The conference was really beneficial as there were guest speakers from all around the world which allowed me to gain a different perspective on road safety issues and how they are tackled elsewhere.”

Aimee is currently planning an extensive trip around the South Island as she tries to discover as much of New Zealand as possible. She is particularly looking forward to visiting the local wineries as well as exploring some of the renowned tramping tracks on offer.

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FEATURE PROJECT: BUILDING ROLLESTON’S TOWN CENTRE

THE TOWN CENTRE

The Rolleston Town Centre Masterplan contains a vision for the town to become a focal point for its surrounding area with a strong sense of community, good access to services and facilities, and a vibrant local economy.

The Masterplan includes a mix of residential, commercial, and cultural spaces, with pedestrian and cycling amenities integrated into the design.

SHELTON DISTRICT COUNCIL IS PLANNING FOR SIGNIFICANT GROWTH OVER THE NEXT 20-30 YEARS AND BEYOND, WITH ROLLESTON EXPECTED TO GROW FROM 8,000 PEOPLE TO A POPULATION OF BETWEEN 18,000 AND 22,000 OVER THE NEXT 25 YEARS.

To plan for this growth Council has developed a Town Centre Masterplan which is currently available as a draft for public consultation. A critical part of the preparation of the Masterplan was ensuring that the new road layout proposed for the town centre would result in the future demand for the housing and services of transport modal traffic. Abley was engaged by Council to develop a microsimulation transport model for Rolleston to test the impact of the Masterplan and wider local network issues relating to the town’s rapid rate of growth.

Abley’s transport modelling team built the Rolleston Transport Model using i-Patrics software, a specialist microsimulation modelling suite used widely throughout New Zealand and overseas. The model extends to include the southern and of the proposed Christchurch Southern Motorway Stage 2 and includes all proposed residential growth areas in the town. It is is also being extended to include a 3.7 km literature Road Industrial Park (Ira) to the west of the main residential areas.

With the changes proposed through the Town Centre Masterplan process, it is expected that traffic will increase and travel patterns will change in tandem. This will place greater demand on the existing streets and intersections, therefore the model has been used to identify upgrade works that were required at key locations and their likely timing based on the forecasted rates of traffic. Cycling and walking modes of transport contribute to the future success of the Rolleston Town Centre. Intersection layouts and treatments consider walk and cycle network connectivity together with the creation of pleasant streetscapes.

To assist the Council the Rolleston Town Centre Masterplan open day, the Abley team prepared an animation of the model to visually show the current and future traffic demand levels, to explain how the transport network needs to evolve. This animation was well received by Council and the public. This demonstrates the value of microsimulation transport modelling in fewer centre planning to assist with in public consultation.

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The road was required as part of an Outline Development Plan for the Kaiapoi West development area. The clients were the Waimakariri District Council and the developer, H Investments (NZ).

Planning for the mainly residential development to the west of Kaiapoi, known as Silverstream Estates, was underway before the earthquakes and had been approved by Waimakariri District Council commissioners, albeit with some caveats. Following the earthquakes and subsequent red zoning of around 1000 properties in Kaiapoi, and even more in Christchurch, demand for new housing soared. For people who wished to stay in Kaiapoi, the development land to the west of the town was an attractive option. To enable the development to proceed more quickly, Earthquake Recovery Minister Gerry Brownlee lifted the caveats under the Canterbury Earthquake Recovery Act. This meant that the development for this area could be progressed and a Memorandum of Understanding was signed with the developer, Canterbury Earthquake Recovery Authority, and the regional and district Councils agreeing to deliver the sections quickly.

Abley undertook strategic transportation modelling using CUBE to determine the future volumes on the road and developed the scheme design, including the intersection layouts. This was a critical aspect of the commission as it determined the extent of land required to accommodate the road reserve. The scheme was presented in a Scoping Report along with the geotechnical, hydraulic, planning and pavement design investigations completed by Davis Ogilvie. The project is now proceeding to detailed design and is likely to be constructed in 2014.

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