Cycling is making a comeback. The evidence is clear from the number of people cycling and general observations on the street. The surge in popularity is probably a result of the convergence of many complementary factors, including accessibility to a wider range of bikes, greater awareness of the practicalities, sustainability and economic efficiencies of cycling, and the fact that cycling is fashionably ‘on-trend’. At the same time as cycling is increasing in popularity, the number of cyclists being killed or seriously injured in crashes is rising. In November 2013, Coroner Gordon Matenga directed the NZ Transport Agency to convene a panel of cycling experts to review cycling safety in New Zealand. The Transport Agency has just announced the group of 10 local experts that will form the panel tasked with developing recommendations for making our roads safer for cycling. This is a great initiative. Enjoy this edition of Street Smart, which not surprisingly has a cycling focus.

From the Front...
Director, Paul Durdin

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Valuing Walking and Cycling

The Economic Importance of Active Transport Modes is Becoming Better Understood with Time.

In a study carried out to fulfil the requirements of an MSc (Eng) in Transport Planning and Engineering at the University of Leeds, Courtney found that the annual value of walking and cycling in Christchurch is in the order of $68-$74 million. This includes vehicle operating cost savings, travel time savings for drivers, health benefits, pollution and productivity benefits. As in most economic evaluations, the largest single benefit of walking and cycling was found to be improvement in health. Comparison with the European methodology, the Health Economic Assessment Tool (HEAT), for calculating the health benefits of walking and cycling, showed that the value of the overall health benefit was similar to that found when using the New Zealand methodology. When using HEAT however, the process to get to the final value incorporates a key difference. HEAT takes into account the average trip length and weights the value of health benefits accordingly, whereas the New Zealand methodology applies an average value to every kilometre travelled whether the trip is 1km or 100km in length. This could have significant implications when prioritising facilities. The consideration of productivity benefits associated with how walking and cycling could impact business agglomeration was another interesting part of the research. It has been empirically shown that the higher the density of businesses, especially similar businesses, the higher their productivity is.

Following this concept, active transport modes have a positive impact on productivity. People choosing to travel to work by active modes allow higher business density, due to reduced congestion and lower parking demands. The value of productivity benefits of walking and cycling in this study was found to be in the order of $6.3 million.

Courtney is grateful to the Christchurch City Council for allowing her to utilise the Christchurch Assignment Simulation Traffic (CAST) model to assist with her analysis.

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The diagram shows the frequency of trip lengths for vehicle equivalents, walking and cycling in Christchurch. The data is segmented into 15-minute intervals and the y-axis represents the frequency of trips. The x-axis shows the trip length intervals, from 0 to 15 kilometers. The graph illustrates that the majority of trips are shorter than 5 kilometers, with a peak in the 0-0.5 km range.

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Bikewise

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Extensive wind damage to pine trees forced the park to close in Spring, and many walking, running and biking trails have been moved. The new route for the main park access trail now crosses a road, which was a safety concern for Environment Canterbury park rangers. They approached Abley for help in making the crossing safer after hearing that our team have a special connection with McLeans Island, entering a team each year in the annual ‘12 Hour Day/Nighter’ or ‘6 Hour Blast’ mountain bike races.

Families and young children use the path, so a high standard of comfort and safety was a priority. The final design was customised to suit the site location, incorporating river stones from the nearby Waimakariri. Speed has been controlled to enable drivers to stop safely if they need to, and to encourage eye contact and mutual awareness between all road and path users. The existing users of the road had some concerns about how the changes were going to affect them, but an inclusive conversation before construction let them understand the design decisions and made sure their concerns were addressed.

The path is now busy with people enjoying McLeans Island Forest Park, and the completed crossing has been well received, with positive feedback from all involved. Abley is now assisting Environment Canterbury with a more complex crossing as part of a different trail extension. If you have a challenging location where children or other vulnerable pedestrians or cyclists need to safely cross a road, contact us.

MCLEANS ISLAND FOREST PARK IS BACK UP AND RUNNING FOR SUMMER MOUNTAIN BIKING, AND SAFER THANKS TO PRO BONO ENGINEERING ADVICE PROVIDED BY ABLEY.

STAFF PROFILE: TRACY FLEMING (NEE ALLATT)

BA (HONS) GEOGRAPHY, MSC ENG (HONS) TRANSPORT PLANNING & ENGINEERING

SENIOR TRANSPORTATION ENGINEER

While there are many recognised benefits of cycling, the risk of having a crash while cycling is typically higher than while travelling as a driver or passenger in a motor vehicle. There is also a perception that cycling is unsafe, particularly on busy roads. One of the biggest challenges of developing safer cycle facilities is balancing the desire and need for parking on the local road network.

Tracy joined the Abley team in January after six years working for Beca. The work she has undertaken has enabled quantification of the safety benefits of different types of cycle facilities and development of practical tools to assist local councils to reallocate space for cycling on the local road network. The results of this work has and can be used to guide cycling design. Her work investigating the need for parking on major arterial routes has provided useful data for practitioners who are reallocating space to encourage more cycling.

Tracy has worked for both local councils and the private sector transport industry in New Zealand, the United Kingdom and Ireland. The majority of her career has been spent developing and implementing cycle routes. Her work has always involved creating accessible environments for all and encouraging options for travel choice as part of all transport schemes.

Outside of work, Tracy has spent the last 20 years researching her family tree. She enjoys playing badminton and tennis, is a long time beleaguered Everton football fan and enjoys listening to music. When she gets the chance, she tries to practise her clarinet playing skills.

For more information on the work Tracy has completed, or for assistance in developing cycling strategies or routes, please contact her.
AUCKLAND WALK AND CYCLE ACCESSIBILITY

The terms ‘Access’ and ‘Accessibility’ are often used interchangeably, however they do have distinct differences. ‘Access’ can be considered as a person’s capability to access a system e.g. having a driver’s licence and a vehicle enables people to access the road network by private vehicle, whereas ‘Accessibility’ refers to the ease with which activities can be reached or accessed by people. The achievement of ‘Accessibility’ is ‘Access’ but access by itself doesn’t describe the quality of choice or ease of being able to reach the destination.

Auckland Transport understands the differences between providing access versus accessibility. For the past year they have been able to measure the quality of access to inform significant infrastructure investment via various ‘bang-for-buck’ indicators. This has previously been possible for two modes of transport being private motor vehicles and public transport. Just recently the range of transport modes has been extended to include provision for walking and cycling. This extension to include a full range of transport modes, means transportation professionals are now fully armed with a customisable tool that enables comparisons within, and between, different modes of transport. This means the effects of projects are able to be quantifiably reviewed and matters such as severance or connectivity considered by mode. In addition the assessment provides results by location so if a project was to appear an overall winner, and there are likely to be some losers, this new tool enables those losers to be located and the effects quantified.

The Auckland Transport Accessibility Model (ATAM) fully informs decision makers as to what accessibility effects a project may have, positive and negative, by location, and the assessment can be considered from the perspective of walking, cycling, bus, rail, and private motor vehicle. This enables a balanced scorecard to be produced and the optimised decision taken.

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SEPARATED CYCLE WAYS HIT NEW ZEALAND

These have been a common sight in most European countries for many years. The US have embraced them in some cities, particularly New York, and even our neighbours across the ditch have them – ‘them’ being cycle ways that are separated from the traffic and parking.

The separation zone between the cycle way and traffic lanes or car parking can be made up of a wide painted median such as in St Vincent Street in Nelson. In Island Bay in Wellington, planter boxes have been proposed. In Christchurch a bespoke kerb separation has been used in Ilam Road. Melbourne have used vertical plastic marker posts within the painted median.

In addition the area can be made up of a wide painted median which is being done in St Vincent Street in Nelson, or as in Island Bay, Wellington planter boxes have been proposed. In Christchurch a bespoke kerb separation has been used in Ilam Road. Melbourne have used vertical plastic marker posts within the painted median.

The fact that there is separation from the traffic is what will appeal to less confident cyclists. In Christchurch the target audience for the Major Cycle

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Ways programme is less confident cyclists, referred to as the ‘interested but concerned’. They also need to be friendly and safe enough for 10 year old children to use unaccompanied. Seeing more of these types of facilities appearing around the country is exciting for both transport professionals and cyclists and we will watch this space with interest and keep you up to date.
BIKEWISE

REGARDLESS OF THE WEATHER, IT’S GREAT TO CYCLE TO WORK, SCHOOL, OR ANYWHERE ELSE. AT ABLEY, THIS IS OUR NORM.

Abley is a company full of keen cyclists hence we need a larger bike shed than staff car parking. We’ve invested in two cycles, proudly displaying our logo, which staff find convenient to use for meetings in the CBD. Not only are Christchurch roads not as good as they used to be, road repairs mean the use of our cycles comes into its own. Parking is no longer an issue, plus journeys are often quicker. Abley can be visibly seen promoting cycling as a safe, practical and preferred option.

With February being Bike Wise month, Abley is at the forefront of providing safe solutions for cyclists, which not only reduces vehicle impact on the environment but is in itself, active promotion of physical health. We commit to designing workable road solutions where vehicles and cycles can safely share the roads.

As a company of engineers whose area of expertise is transportation, we continue to lead by example with our new cycles added to our fleet.

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