



WHoW!!

Wai Huka o Waitaha - awa

(Foaming Water of Canterbury - river)
A whitewater park for Christchurch

BRINGING THE OUTDOORS TO TOWN

This is a concept proposal for the inclusion of a whitewater park within the Residential Red Zone regeneration, designed and built to give the look and feel of a natural river and to provide for a wide range of activities and users. Also outlined are the synergies and benefits of having a number of sporting, recreational, cultural, and educational activities co-located in a critical mass readily accessible to Christchurch's urban population and visitors alike.

Ian Fox
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WHoW!! Wai Huka o Waitaha – awa. A whitewater park for Christchurch

A broad outline of what this is about

This proposal is for a multi-purpose whitewater park to be sited in the Residential Red Zone (RRZ). Users will include whitewater paddlers such as rafters, kayakers and canoeists, boogie boarders, stand up paddle boarders and even surfers. The audience will include beginner and one-off 'experience-seekers', leisure users (beginner through to advanced), competitive whitewater sports teams, and people undertaking courses in fields such as adventure tourism and swiftwater rescue. This facility has potential synergies with several other RRZ proposals, most notably the surf park, cable wakeboard park and flatwater sports lake, and can easily fit within the wider concept of an ecological and recreational reserve. We recommend that when undertaking any study of this proposal that consideration of these linkages to other proposals be included as part of that study. Consideration should also be given to the inclusion of ancillary activities such as retail and food & beverage facilities, potential add-ons such as climbing walls, and potential shared services between this and other proposals. This is an initial concept discussion paper to help inform the [Regenerate Christchurch](#) RRZ public engagement activities (so everyone can get an idea of what this is about) and feasibility/business case studies.



A whitewater park is an activity centre based around an artificial whitewater course (such as the [US National Whitewater Center](#) (USNWC, Charlotte, North Carolina, USA) *shown above*) - a constructed flowing river with rapids and active features that simulates a natural river, using pumps and recirculating water from an integrated holding pond. Paddlers are conveyed from the pond to the start on a conveyor ramp, enabling them to run the course multiple times while remaining in/on their boats. The course can be run with many different craft: Rafts, kayaks, canoes, hydro-sleds and boogie boards, inflatable tubes – pretty much anything that floats that can be sat in or on! Rafting and the like are run commercially, enabling broad participation and providing a degree of subsidy for youth and education programmes. The course provides a whitewater training venue for beginners to Olympians, and the lower pond can cater for canoe polo and flatwater training. Overseas experience shows that a whitewater park co-located with other activity centres (such as flatwater sports lakes) can improve overall use and performance of all associated facilities.

Key points

- Siting a whitewater course close to the city centre makes it accessible to all of Christchurch, and to any visitor.
- We believe that the viability of the various water sports centres (whitewater course, surf park (which has a close alignment with this proposal), cable wakeboard park and flatwater sports lake) being proposed for the RRZ will be greatly improved by their being co-located. The various water sports are eminently compatible, and examples exist that demonstrate the benefits of co-location: [Penrith](#) (near Sydney), USNWC and [Riversport Rapids](#) (Oklahoma, USA), *shown in the concept drawing below* amongst others have co-located activity centres, and are successful. The co-location of a whitewater course with other such facilities can; improve overall use; provide synergies in terms of co-use of some components such as sports science and training; allow for sharing of common facilities such as buildings and carparks.



- Whitewater kayaking and other whitewater sports are dynamic and attractive to participate in for all ages, and for the general public to watch.
- Rafting has a commercial business model and supports the competitive, educational and recreational activities financially.
- A whitewater centre – like the new Christchurch Adventure Park for mountain biking has proven – has direct revenue generation potential. This could assist in supporting the indirect revenue potential of some other proposals.
- There are synergies between a whitewater park, a surf park, a cable wakeboard park and flatwater sports such as rowing and flatwater kayaking: To offset operating costs; to broaden the attractions on offer; to encourage cross-code participation; for environmental benefits in water quality; for flood management; and for biodiversity values.
- Whitewater parks are being constructed in urban areas in many places across the world (USA, China, France, UK, and Czech Republic to name some of many) and

most recently in Auckland ([Vector Wero Whitewater Park](#)), which has been open for nearly a year now) – they are proven popular attractions, and this is increasing.

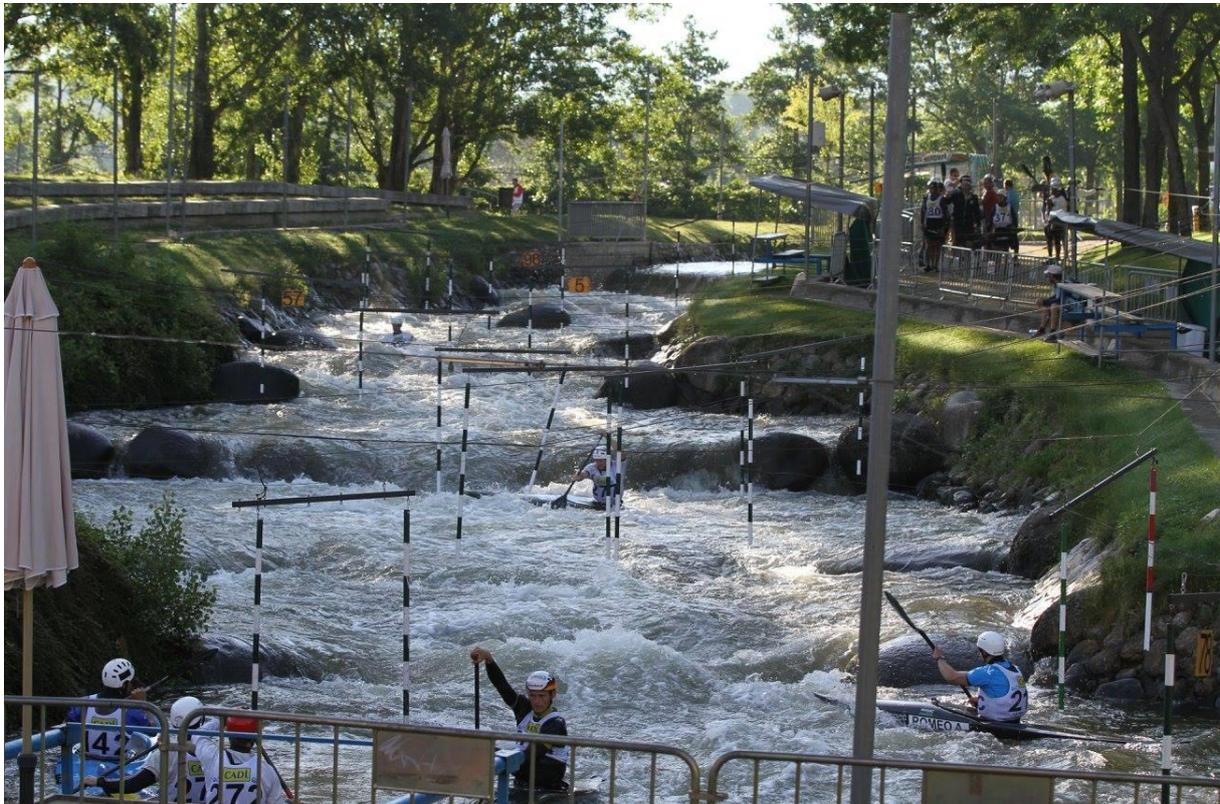
- Most such sites are part of brownfields conversions of urban space (like Riversport Rapids), but uniquely in Christchurch we have the Residential Red Zone, which is already closer to nature, has clean ground water and the potential to integrate with the proposed native forest park - to achieve this, we propose to use mostly natural rock for the channel lining (similar to the [ASCI](#) course (Maryland, USA) *shown on the cover*, or [Pau-Pyrénées](#) (France) *below*), and significant native plantings to provide the feel of a river flowing through a forest such as at [Parc Olímpic del Segre](#) (Catalonia, Spain) *shown on p4*.
- Having multiple water sports facilities in Christchurch will literally put the city on the map for national and international events, and will generate tourism benefits.
- These facilities will provide greatly improved opportunities (through increased accessibility and availability) for Kiwis to become consistently competitive at international and Olympic levels in all whitewater sports, canoe polo, surfing, and flatwater codes like rowing, sprint kayaking, waka ama and dragon boating.



Wai Huka o Waitaha is the opportunity that whitewater sports have been waiting for to increase accessibility, participation, visibility, and performance. While we are lucky to have several good whitewater rivers in Canterbury, the time and cost to drive to them can be a barrier to participation for people at any level – from visitors to dedicated enthusiasts. WHoW!! will:

- be an accessible, attractive, fun and safe whitewater venue right in the heart of Christchurch that will be available for everyone to use
- enable more people to experience, participate in and learn about whitewater activities
- be dedicated to fostering collaborative relationships with other similar venues in order to encourage overall growth of participation in whitewater sports and related activities – this isn't about slicing someone else's pie, it's about baking a bigger one
- provide a safe and controlled venue to learn about being safe around moving water, and to learn whitewater safety and rescue skills
- help schools, clubs and businesses to teach more people general paddling skills, and how to enjoy rivers safely
- allow clubs to more easily recruit members thereby growing participation in whitewater sports

- be designed and situated to allow both recreational paddlers and competitive athletes to be able to train more effectively, more often, giving them more chances to reach their goals



“Parc Segre” at La Seu d’Urgell, Catalonia, Spain, was built in 1990 for use during the 1992 Summer Olympics in Barcelona. Note the use of natural rock and the tree-lined setting. [Photo courtesy of Glenys Travers whose daughter, Kelly, is one of our representatives in canoe slalom]

Some basic details (Where? How big? How much?)

Our vision is for Wai Huka o Waitaha to be designed and built to deliver maximum benefit to the widest range of people living in and around, and visiting, Christchurch. This means a course that, as a minimum, has two sections: A harder one designed for whitewater rafting and high-level competition; and an easier one designed for learners, teaching, and training. This enables the widest use and the best return from commercial activity. Design options for this are either multiple channels with each having a different gradient (such as Riversport or Wero), or a single channel with sections of different gradient (such as ASCI) – either should allow for addition of other features/channels in the future.

Where? WHoW!! could fit in a lot of places in the RRZ, although the southern Dallington to Burwood Park area is probably best. This assessment is based on factors such as maximising accessibility, minimising effects on existing infrastructure, a sustainable supply of clean groundwater, space to allow co-location with other aquatic facilities, a site less prone to flooding (compared with other parts of the RRZ), and having the space to allow for a design catering for beginner through to expert that can be landscaped and planted without size constraints. There is some discussion around sites on our map.

How big? This depends on final design, but our vision is this: 12-15 hectares to allow plenty of space for plantings, walkways, aesthetically pleasing as well as functional watercourses, buildings and parking space; fall from head pond to lower pond of 8m allows scope for design variation, innovative safety features, and future-proofing; gradient of the steeper section about 2% (a fall rate of 20m/km), the easier section about 1-1.4%; flow rates variable from 10-18 cubic metres per second (cumecs); the circulation pumps would draw about 1000-3000 kilowatts (depends on course design and flow rate); total water volume would be about 30,000 cubic metres, roughly equivalent to 12 Olympic swimming pools (well tests show this is easily and sustainably suppliable for both initial filling and ongoing top-up).

How much? Recent courses have cost \$10-50M, depending on design, materials used, site preparation, optional extras etc. This is a broad range but there are many examples we can draw on once we get to the stage of detailed study. We believe that with innovative design and ingenuity the desired outcome can be achieved for an acceptable cost, and make an operational profit.

Now what, and so what?

We recommend that further investigation be undertaken through, at least, a properly funded professional pilot study by a recognised experienced consultancy in whitewater park design. [S2O Design](#)

(based in Colorado, USA) is our preferred choice as they are widely considered the best and have already worked in NZ (having designed and supervised the construction of the [Hawea Wave](#) above) - they know about this proposal and are quite willing to visit Christchurch and advise us on the engineering, the practicalities, and the economics. This sort of professional advice is critical in order to give the public, various agencies and potential funders the level of information needed to make an informed decision as to how next to proceed.



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Christchurch has a number of comparative advantages for building water sports facilities – the near-greenfields site of the RRZ, containing a natural river and wetlands (both existing and re-establishing); clean accessible ground water; a very strong paddle and oar sports presence with demand for growth; a high quality regional commercial rafting culture; an education sector with a strong and growing outdoor component; international air and sea ports. Having all these factors combined is unique for an urban centre, allowing us to convert this to a competitive advantage by creating a truly integrated world class outdoor multi-spectrum water sports facility in a natural park in the middle of a city – massively improving Christchurch for residents, wider Canterbury, and all of New Zealand.

We believe Wai Huka o Waitaha can be a key component of us making the best of the one-time opportunity we now have to take Christchurch from being seen as just a gateway, to being known as an international adventure tourism destination working collaboratively with others for the benefit of us all.

A bit about the history and people behind WhoW!! Wai Huka o Waitaha - awa.

The idea for a whitewater park in Christchurch was conceived by a group of whitewater kayakers and rafters as a broadly accessible facility for the people of Christchurch (and beyond) several years before the earthquakes, originally as a co-located project with the flatwater sports lake proposed in the early 2000's for land owned by the late Diana, Lady Isaac. Although the location proved unfeasible at the time, both projects continued to be quietly worked on and many elements of both remain today (particularly the concept of co-location). Some of the same people are still involved (both in advisory and front-line roles) and the proponents of both have remained in regular contact. Post-EQ, other aquatic activity projects have been proposed, notably one for a surf park which has now become closely aligned to the whitewater park proposal to the point both are being co-promoted under the WhoW name with the distinctions of awa (river) and karekare (surf).

Conversations about WhoW!! - awa have been had over the last 6 years with experts in many fields including tourism, sport and recreation, health and social services, ecology, native forestry/biodiversity, sustainable design, geotechnology, hydrology and civil engineering. All have encouraged us to keep going with this, and all have said that nothing they know is a show-stopper for the WhoW concept. While not a formal study of course, the constant litmus-testing of the idea and thus far fruitless search for fatal flaws has encouraged us to continue investigating and promoting WhoW.



The lead spokesperson for WhoW!! - awa is, at present, Ian Fox.

Like other RRZ "project proposal champions" Ian is interested in the wider view of the RRZ, not just the project he's leading, and firmly believes the regeneration process must be open, inclusive and collaborative. Ian is supported by others with a wide range of technical expertise and knowledge.

Ian is an avid whitewater kayaker and rafter with over 30 years' of whitewater experience (and over a dozen boats in his shed). He has paddled throughout New Zealand, as well as a bit in Australia, the USA and Canada. His involvement in the whitewater community has included many years of holding leadership, instruction, event management and river safety roles (and helping make "[Rivering](#)", a documentary about kayakers and our passion for our sport).

Ian has been actively involved with the [Canterbury Water Management Strategy](#) and its committees since inception, including having served as Chair on the Christchurch West Melton Water Management Zone Committee for 3 years, which has given him a sound understanding of land and water issues in Christchurch and throughout Canterbury. Ian is a current member of the [Avon Ōtākaro Network](#), sitting on both its Executive and Strategic Steering Group. Ian is also a qualified Master Mariner who spent 14 years at sea before coming ashore to better pursue his passion for the outdoors – mostly water based – and now works in a shipping and boating safety and education role.

Ian became involved with this proposal for two main reasons: "Although we Kiwis see our outdoor heritage as a right, I'm well aware that it is often difficult for many people (particularly youth) to access our wilderness places so I find the idea of bringing the outdoors to town strongly compelling; and, the clear need to have vibrant and viable recreation options within any redevelopment of the RRZ in order to sustainably assist not only the reinvigoration but the ongoing vitality of post-EQ Christchurch".



families...



Friends...



flowing...



fast...

Kelly Travers



fun...

WHoW!!

WhoW!! Wai Huka o Waitaha – turning the red zone into the rad zone. Find us on [Facebook](#)