

The Wave



The Wave is all about improving health and wellbeing through accessible surfing.

Sited on the edge of a highly developed urban landscape, The Wave provides a carefully landscaped public space bridging the gap between the city and sea, bringing surfing to those who can't easily access the sport and its health benefits.

- **Date of completion: Oct 2019**
- **Cost: £25m**
- **Location: Easter Compton, Bristol**

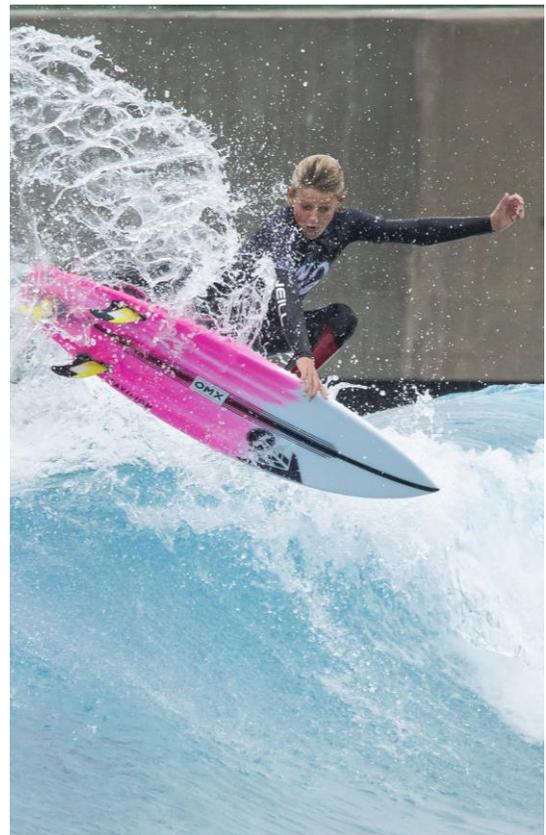
Challenges and solutions

The 75-acre site includes a 180sqm surfing lake, a 100m viewing pier extending into the lake and a 1,000sqm clubhouse situated unobtrusively, adjacent to the lake, with woodland and meadowland offering visitors an all-embracing experience.

The attention to the design, engineering and environmental credentials of The Wave, alongside the sheer power of generating up to 1,000 waves per hour and holding 20,000 cubic metres of water in an inland surfing lake, is what makes the project truly pioneering.

Situated close to the Severn Estuary, the water table is barely 200mm below ground level in some places, so an innovative solution was required to avoid 'flotation' of the lake when empty. A 4mm geo composite drainage layer feeding into the local drainage network to lower the water table and remove hydrostatic pressure when the lake is empty proved to be a sustainable and cost-efficient solution.

The shape of the concrete slab, acting as an artificial reef beneath the water, is what dictates the quality of the waves which is fundamental to the success of the surf park. Hydrock's design accounted for the fact that on each side of the lake there are 263 individually designed concrete panels surrounding the lake, instrumental in defining the quality, size, gradient and elevation of each wave.



Benefits and achievements

On the edge of a major urban area, The Wave brings the opportunity to surf to people who would not otherwise have considered the sport or had access to the seaside. The entire facility is set up for people of all abilities – from beginner zones, with all kit included, to elite surfers enjoying the regular and consistent generation of waves. Critically, the design of everything, from the lake to the height of the bar in the clubhouse is accessible to people with even the most severe disabilities.

From the outset, public consultations helped the local community understand the multi-dimensional nature of the project and the positive opportunities for both local and wider communities. During construction, local schools and community groups were invited for a walk around.

The project's sustainability strategy included 100% renewable energy; a timber-clad clubhouse; all site excavated materials reused on-site; lake design allowing for excess rain to be retained within the lake; and enhanced biodiversity through planting of new trees, a wildflower meadow and hedgerows.



Fascinating facts

- ❑ An artificial reef beneath the water, combined with 263 individually designed concrete panels on both sides of the lake, are instrumental in defining the quality, size, gradient and elevation of each wave.
- ❑ The Wave is a fully inclusive experience – every feature, from the lake to the height of the bar in the clubhouse, is accessible even to those with the most severe disabilities.
- ❑ The concept for this £25m scheme was first set in motion in 2011 with a crowdfunding campaign, propelled by a comprehensive digital media campaign to provide the funds for the feasibility studies.

People who made it happen:

- Client: The Wave
- Engineer: Hydrock
- Surveyor/Project Manager: Ward Williams Associates
- Architect: APG
- Main Contractor: Andrew Scott Ltd.

More about this project: thewave.com