A life cycle approach to sustainable Olympic architecture

OTTERDAM OLYMPIC STADIUM

Stadium Concept

The Rotterdam Olympic stadium is built up out of floating elements and temporary components. A traditional stadium bowl is cut into separate parts to increase the post-Olympic legacy potential. The floating stadium elements can be reused as housing elements elsewhere in the Netherlands and abroad, but can also be used for other purposes such as flood shelters. The temporary parts can be reused as stands for different sport clubs and temporary events.

Waalhaven Floating Residential Community

The Rotterdam harbour area is moving towards the sea. The Rotterdam Stadshavens are developed into the pilot project for floating buildings. A number of stadium elements are reused into a floating residential community in the Waalhaven area. The elements are reminders of the Olympic Games of 2028 and form the infrastructure and architectural expression for the transformation of this area.

Sustainability

The waste in this post-Olympic stadium conversion strategy is minimised by limiting the adjustments necessary for the transformation. Most of the stadium elements are being reused. The stadium parts which can’t be reused are developed as lightweight structures and make use of materials that produce less carbon dioxide during their manufacture. This both reduces the embodied energy and financial costs.

Olympic Legacy

Olympic architecture isn’t only about presenting the Games, it is about proposing the Olympic dream. The main question of is whether the impact of hosting the Olympic Games justify the enormous costs and footprint. Isn’t there a way of rethinking these enormous events completely, where legacy and sustainability is part of the central architectural question? The Rotterdam 2028 Olympic Games should become the next chapter in legacy driven Olympic architecture.