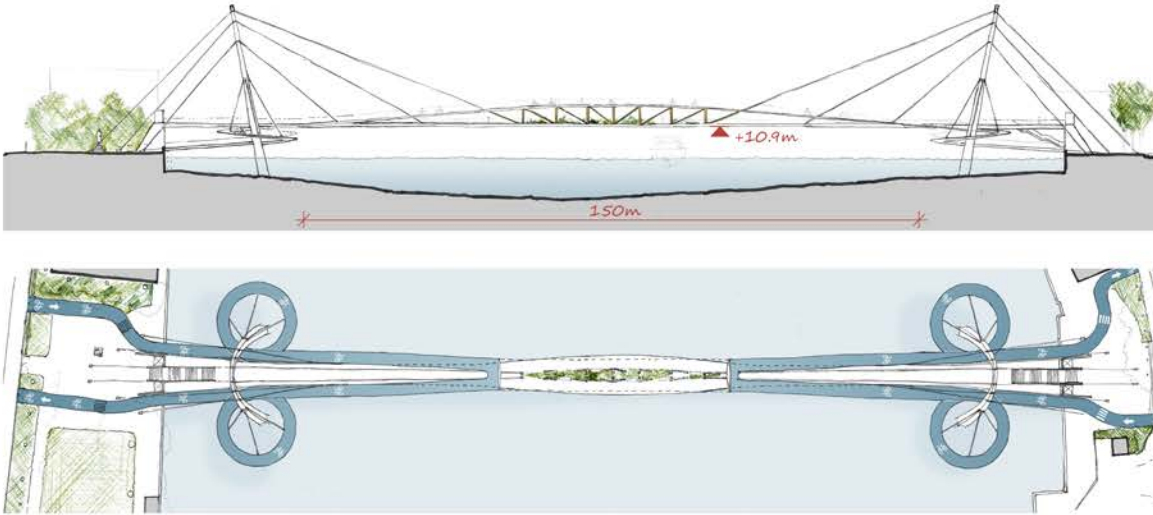


NEP Bridge Competition - Entrant 018

Concept

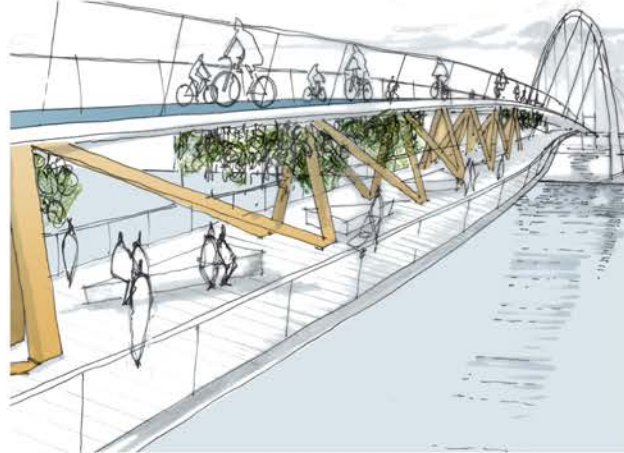
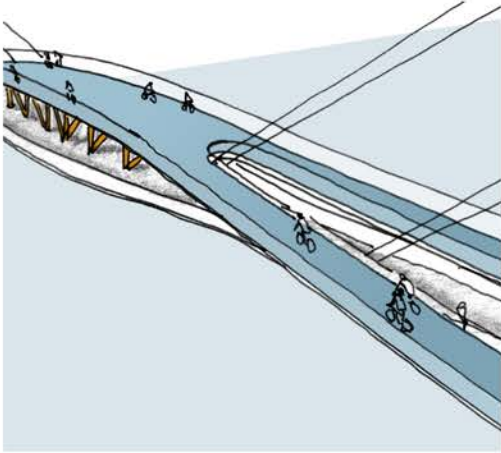
The primary concept of the bridge is the seamless union of efficiency and form. The pedestrian and cycle routes are segregated and intertwine in a symbiotic use of the structure. A key driver in the principles of the design is the unhindered act of crossing the bridge, enabling the full enjoyment of the views of the river and the surrounding city.

By incorporating ramps suspended over the river, the footprint of the landing points of the bridge are kept to a minimum. This allows for maximum tree and green space retention. The ramps provide a one-way system that ensures a fluid journey across the bridge with no congestion or need to dismount. The ramps are typically 1:20 and no more than 1:12.



Materials

The material palette of the bridge is kept natural, embedded in its context and suitable for its prestigious position in London's landscape. The main cable stay, arches and buttress walls around the lift cores are a white concrete, with the lift cores, suspension cables and central metal truss expressed by bronze in a natural patina. The main bridge deck structures would use steel with powder coated panelling for ease of maintenance and construction. The cycle decks would use an aggregate resin, coloured in the London cycle lane blue, the pedestrian deck in light weight stone tiles.



The pedestrian journey introduces a place of destination in the central section of the bridge that becomes inherently covered by the arched structure of the cycle deck above. Our proposal shows options for the resolution of this space; including hanging gardens with space for kiosk trade to enliven the atmosphere. Ascension up onto the bridge is primarily via the central steps that are symmetrically framed by the two lift cores. The symmetry and progression of enclosed and exposed spaces makes for a dynamic and exciting journey.



Structure

The structure naturally reduces any impediment on sight lines due to its slender and transparent qualities. Balustrades would use a light mesh that creates transparency, is cost effective and mitigates wind loads.

By using a combination of cable stay and truss structures we make a cost effective assembly that has minimal impact on river traffic during construction. The design discretely touches the banks creating a defined public space. The primary span is the pedestrian deck with a torsion steel beam structure around which the cycle deck is entwined.

