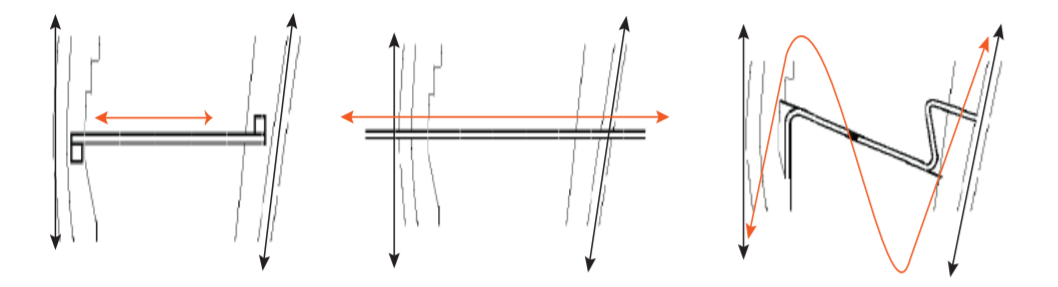


CHALLENGE 1: INTEGRATING CYCLE AND PEDESTRIAN TRAFFIC

A joy for all
By implementing complete separation between pedestrian and cyclist, the design ensures superb user comfort, seamless integration with transport connections, and guarantees ample capacity for the future.

A dedicated cycle-path is provided along the full length of the bridge, which allows cyclists to cross the bridge, in a fast and safe manner. Pedestrians can opt to take the direct and shortest path from Pimlico to Nine Elms, or choose to linger at the water's edge as they follow alongside the cycle route.

Near the mid-span, a grade separate crossing is provided which allows pedestrians to freely and safely pass over cyclists. At Pimlico Gardens, the pedestrian and cyclist routing enhances the existing transportation links at Grosvenor Road. While at the south bank, the bridge provides new integrated connections to Riverside Walk and Nine Elms Lane, within an improved public space.



Conceptual design development of integrated cyclist and pedestrian movements

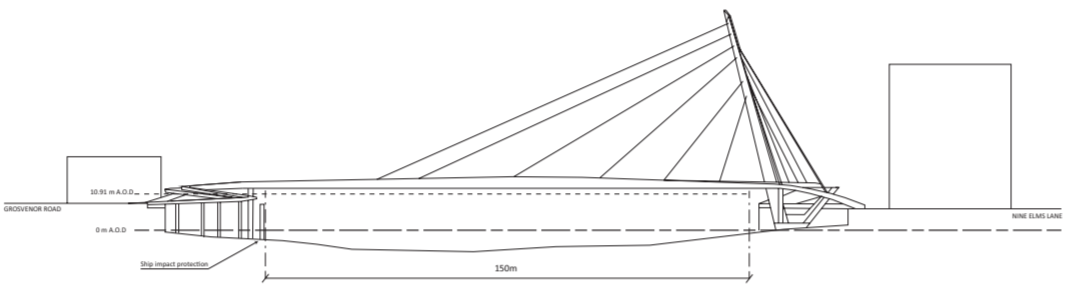
CHALLENGE 2: HEIGHT ACROSS THE RIVER AND THE INHERENT ACCESS ISSUES

Bridging the Thames.....
The curved asymmetric cable stay design delivers the desired navigational clearances while also guarantees top quality access for cyclists and pedestrians.

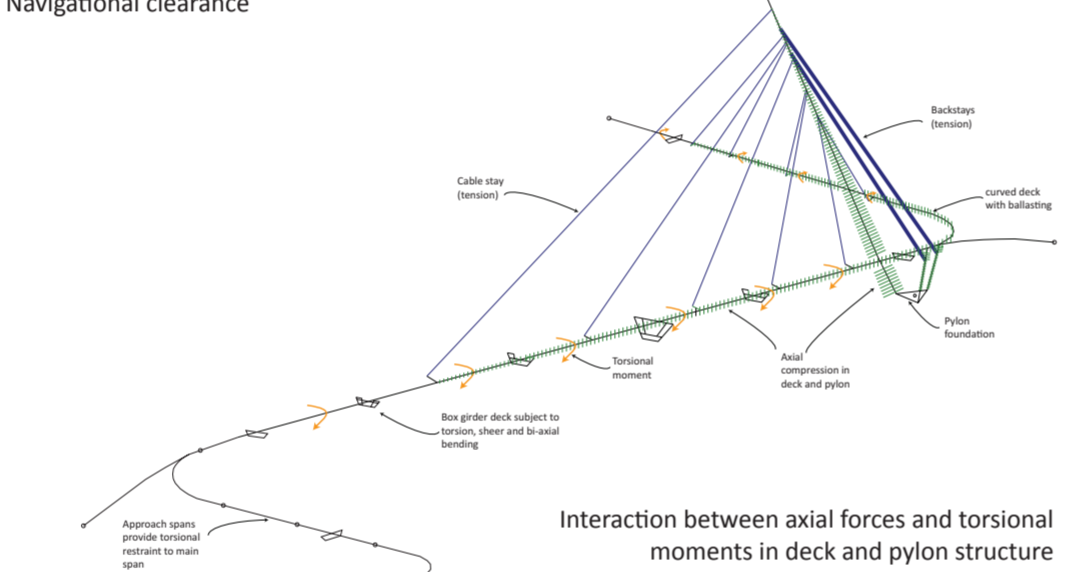
The bridge provides a horizontal clearance of 150m and minimum height of 10.96mAOD to ensure unrestricted access for river vessels, while also ensuring an elegant structure, fitting for London and the Thames.

To satisfy the expected high cyclist demand, the design provides a devoted cycle route across the bridge. The route is provided with the appropriate gradients, landings, widths and alignment to ensure a safe and comfortable passage for all cyclists.

Pedestrians access the bridge from the staircases provided at each end of the main crossing, bringing them directly to the high point on the bridge. Alternatively the pedestrians may continue beside the cycle route, with the associated mobility impaired access provisions.



Navigational clearance



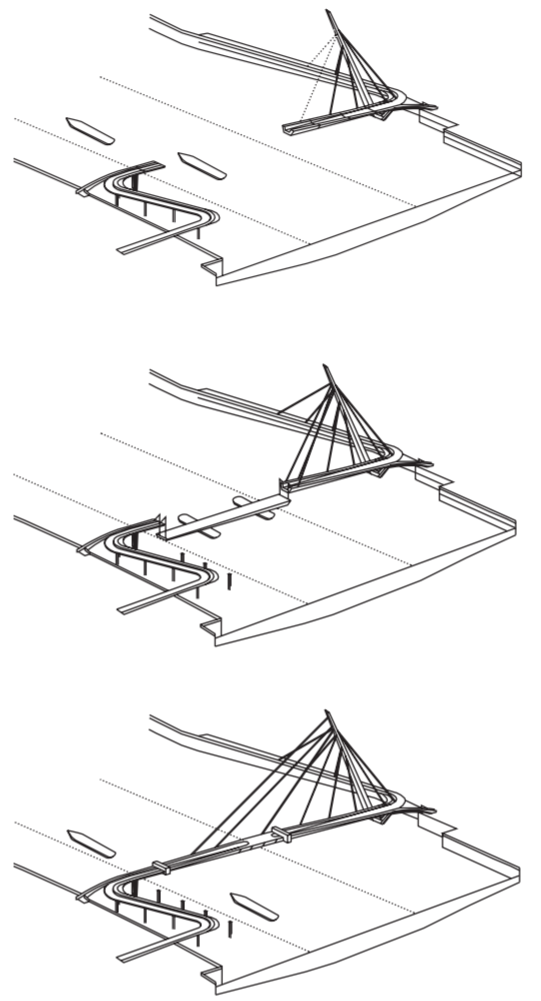
Interaction between axial forces and torsional moments in deck and pylon structure

CHALLENGE 3: PHASED CONSTRUCTION TO ENSURE THAT RIVER TRAFFIC CAN CONTINUE

Let the river work.
The phased construction inherent within the design ensures that river traffic experience minimum hindrance.

The bridge will be constructed in stages. Initially work will commence on the foundations and approach structures, away from the navigational channel. Using the pylon, segments of the deck will be progressively constructed, approaching the navigational channel.

In order to minimise the hindrance to river traffic, the portion of the deck located within the navigational channel, will be installed in a single element using barges in the rivers and strand jacks from the partially constructed bridge. This element will be designed to be temporarily simply supported, to allow final connections to be undertaken at a later time without further impact to river traffic.



Indicative construction phasing

CHALLENGE 4: PLACE MAKING ACROSS THE BRIDGE AND AT ITS LANDING POINTS

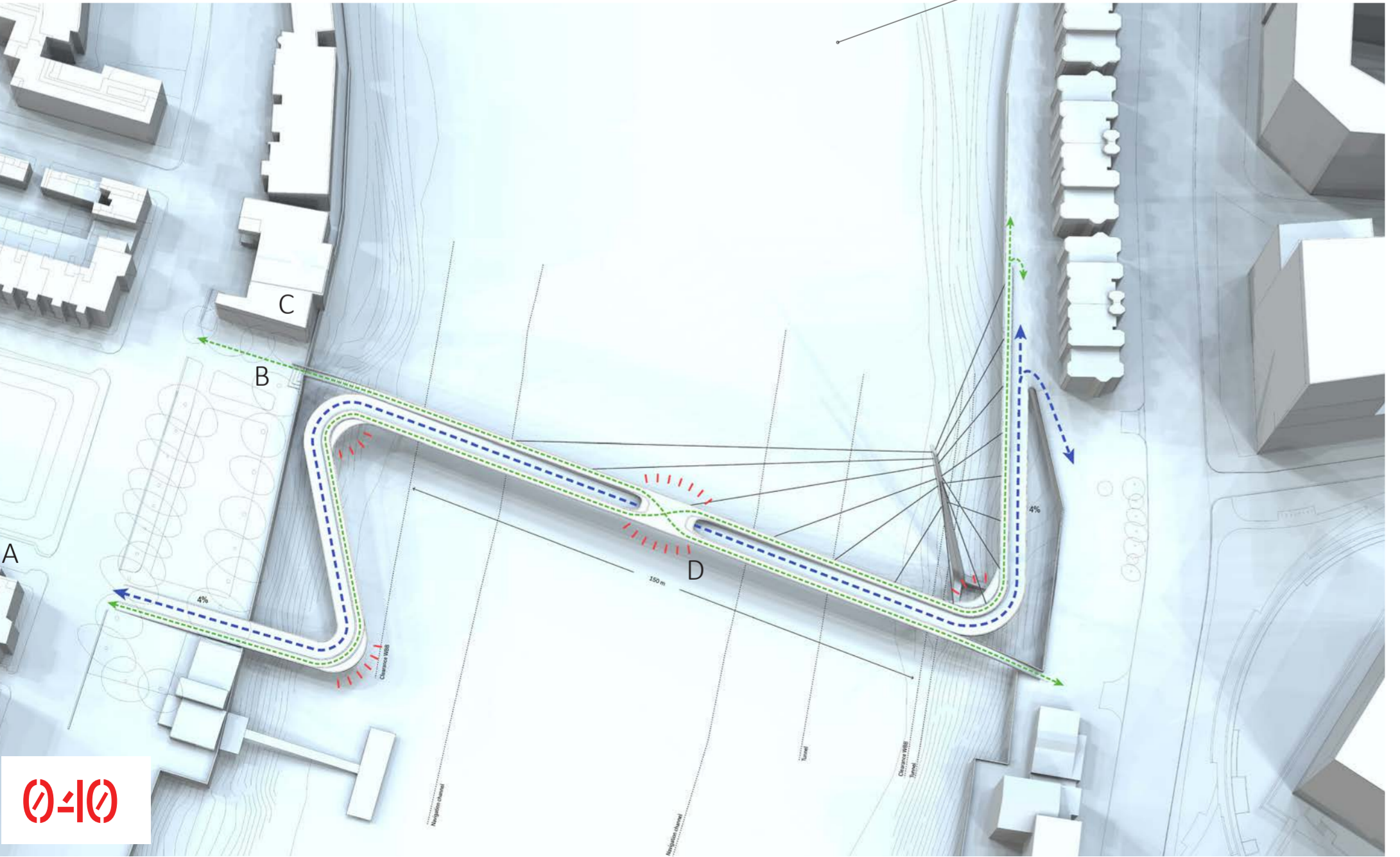
Weaving Water.
The design invites pedestrians and cyclists to enjoy a positive, dynamic and secure experience, from the banks of the river and across the water.

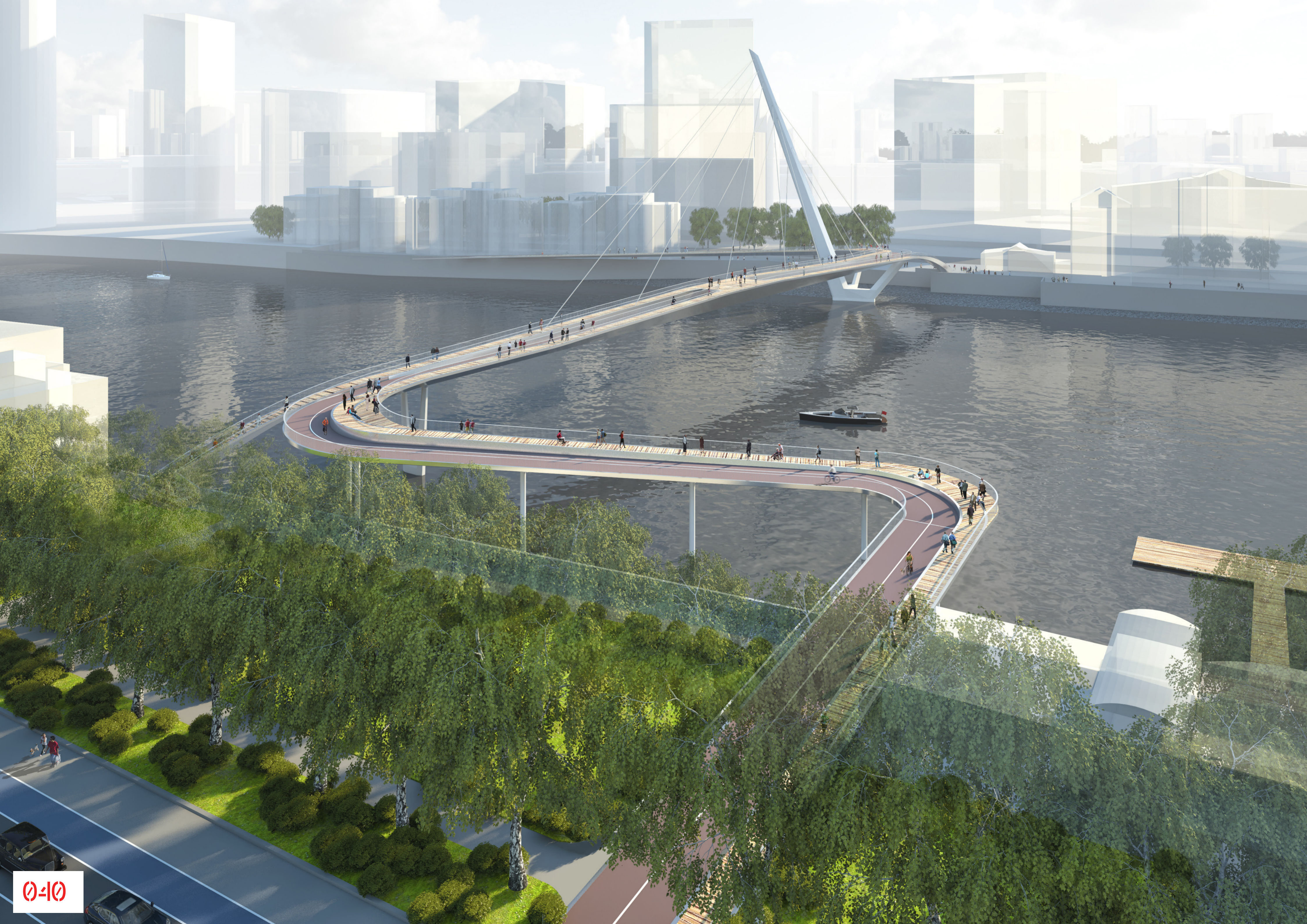
Near Pimlico Gardens, pedestrians and cyclists are carefully guided into the attractive riverside park, amongst the beautiful London Plane trees. Pedestrians are encouraged to the corner of the park to take a staircase, over the water. Cyclists sweep briefly through the park and above the water, on their way to the main river crossing. The design seeks to complement the maturity and style of Pimlico, retaining the character within the park and allowing open views to the Thames from the quay wall. The strong connection to the water and the shoreline is maintained.

From the bridge the users are granted an open vista upon the Thames and the London horizon, including the iconic Battersea Power Station and the new emerging skyline at Nine Elms, both en-route and at designated viewing points. By way of the inclined pylon and offset cable stays, an unrestricted view is afforded to all along the direct alignment between Pimlico Gardens and the new US Embassy building.

At the central cross-over, cyclists briefly pass below the pedestrians on a direct trajectory to their destination. The bridge affords protection to the cyclists from high cross winds as they continue over the Thames. Here, pedestrians are granted freedom from the fleeting cyclists to savour London from the middle of the river.

Near the southern bank, the inclined pylon announces the emergence of a new and vibrant neighbourhood. Pedestrians are once again connected to the shoreline as they touch down at the river bank staircase; cyclists descend, adjacent and parallel to the riverbank. The design envisages a new public realm at this landing side, which is, in itself a destination, as well as a new gateway to cross the Thames.





Weaving Water....

..... from the river shoreline, to above the water, the bridge offers an inviting path from Nine Elms to Pimlico.

The bridge concept is founded on the ambition to facilitate the movement of people with optimum choice, comfort and inspiration. Connecting places to the people is paramount and is best achieved with an inclusive and highly comfortable design.

The design invites everyone to enjoy a positive, dynamic and secure experience, from the banks of the river and across the water. The pedestrian is segregated from the cyclist, thereby ensuring superb user comfort, seamless integration with transport connections, and guarantees ample capacity for the future. A dedicated cycle-path is provided along the full length of the bridge, which allows cyclists to cross the bridge, in a fast and safe manner. Pedestrians can opt to take the direct and shortest path from Pimlico to Nine Elms, or choose to linger at the water's edge as they follow alongside the cycle route. Near the centre of the Thames, a "tunnel" is provided within the bridge which lets pedestrians to freely and safely pass over cyclists.

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Once on the bridge you are offered an open vista upon the Thames and the London horizon, including the iconic Battersea Power Station and the new emerging skyline at Nine Elms, both en-route and at designated viewing points. By way of the inclined pylon and offset cable stays, an unrestricted view is afforded to all along the direct alignment between Pimlico Gardens and the new US Embassy building.

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