

# THE VEILED BRIDGE

## NEP PEDESTRIAN AND CYCLE BRIDGE

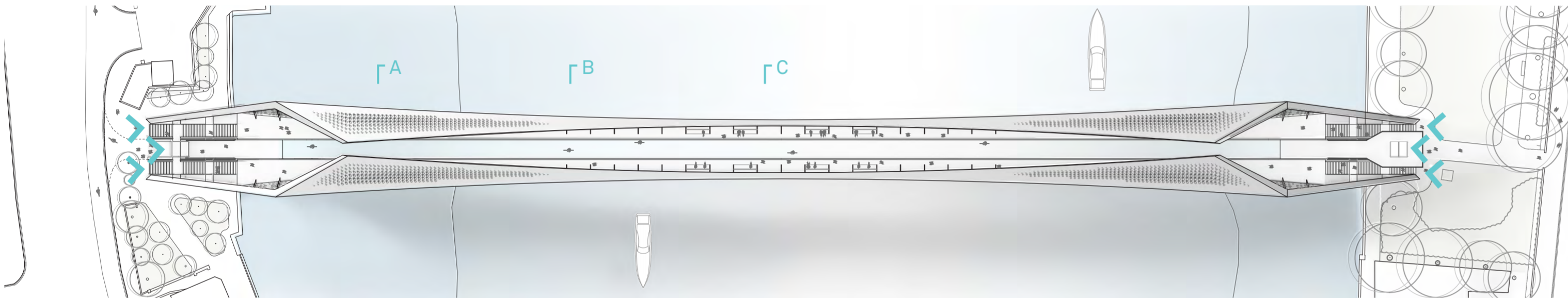
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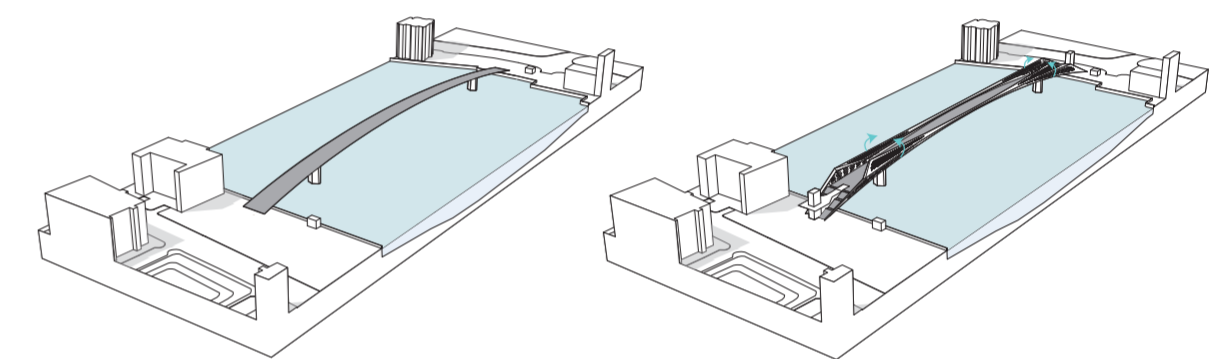
### CONCEPT

The NEP Bridge offers much more than just a new connection between the two sides of the river – it creates the opportunity for a new city landmark – physically and visually connecting an established London residential quarter with a brand new one. Achieved with the most efficient engineering solution to span the 150m clear distance required over the water, this simple structural form is poetically veiled, through a series of nimble folds, and wraps to create a sturdy frame. This frame provides a partial canopy, which opens out towards the centre of the bridge, to create a new vantage point over the River Thames. The exterior of the bridge is clad in brushed aluminium panels - creating blurred reflections of the water, sky and passing river traffic - the bridge 'appears to disappear' into the distance.

Celebrating the crossing of the river, the journey starts by ascending a grand staircase to reach the upper deck level - a partially enclosed space that is veiled with perforated structure, to give select glimpses of the river and city beyond, shading and protecting from the elements. Proceeding along the bridge, the veil unfolds revealing the sky and 360 degree views of London, that gradually open up until the center of the bridge is reached. Floating above the center of the River Thames – at the narrowest, thinnest, highest and most delicate part of the bridge - you experience peace, tranquility, vulnerability and weightlessness. After some moments of contemplation, you continue your journey and the veil envelops you once again as you approach and arrive at the opposite bank.

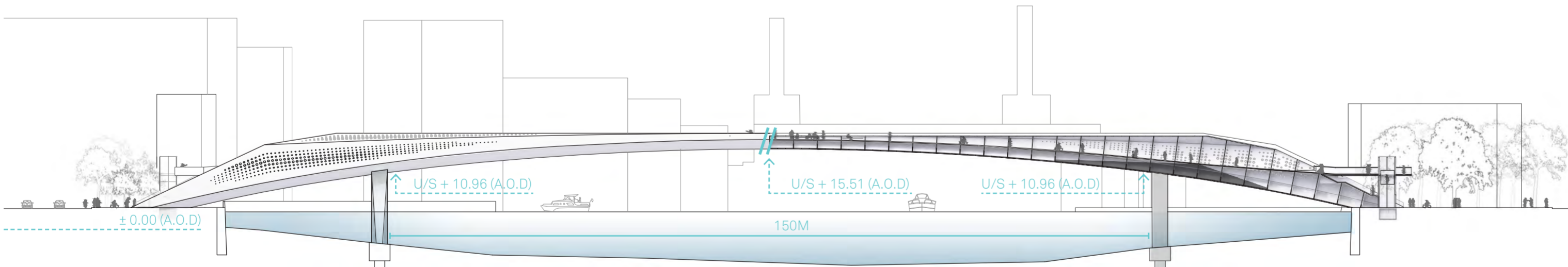


SITE PLAN 1/750



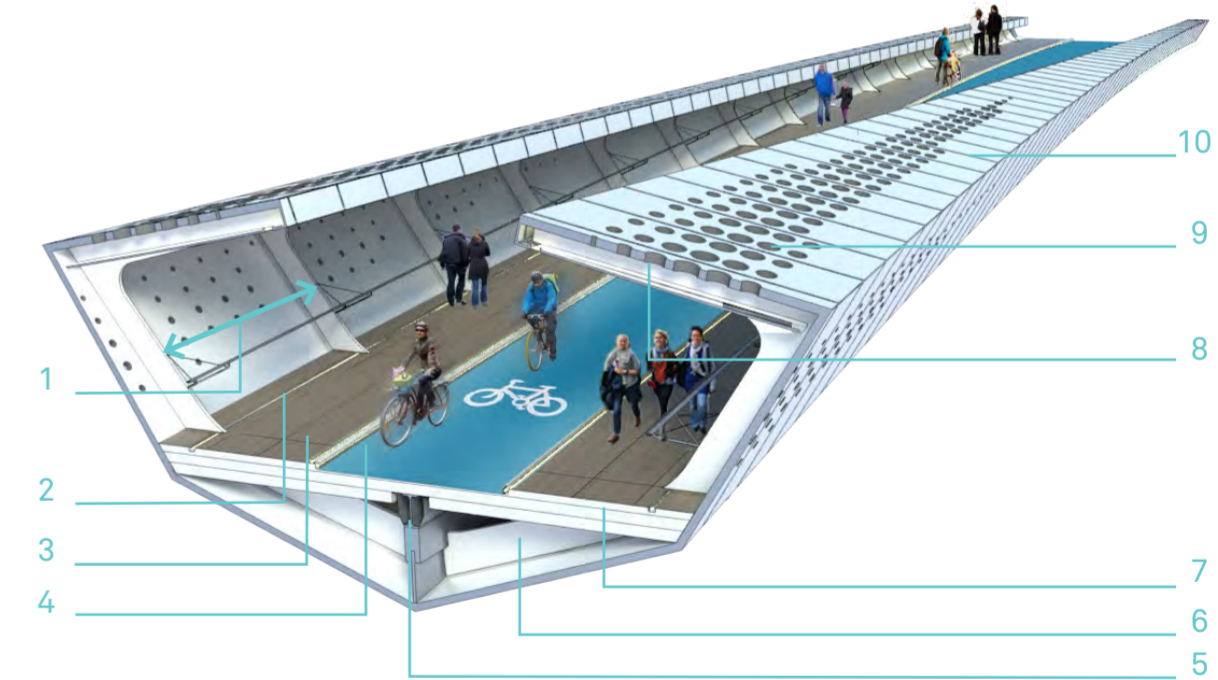
RIVER CROSSING

THE "VEIL"



CONSTRUCTION PHASE TIME LINE

ELEVATION/SECTION 1/750



1. 4.5m structural module / 2. Dynamic LED lighting with flush mounted louvre cover / 3. Custom timber finish with anti-slip inserts to pedestrian walkway / 4. Coloured resin finish to cycleway / 5. Continuous 'I' girder / 6. Web plate stiffeners at 4.5m spacing / 7. Steel and concrete composite deck / 8. Perforated steel plate to upper web structural flange / 9. Circular perforations up to 500mm dia. allow views out / daylight in / 10. Brushed Aluminium cladding panels.

### STRUCTURE

The structural system of the bridge is a steel girder of variable depth, with concrete slabs near its bottom flange where negative bending moments occur over the piers, making up a strong steel and concrete composite section, in which the concrete slab provides beneficial mass, stiffness and inertia in compression, whilst the upper steel plates act in tension.

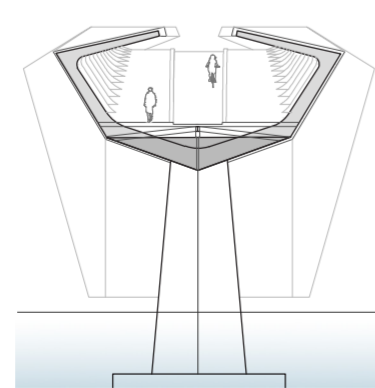
The bridge walking surface, is a lightweight composite deck of steel and concrete. The deck is supported on steel beams which also serve as stiffening diaphragms to help control sectional distortion resulting from torque.

Taking advantage of the benefits of composite construction, the steel structure - lightweight and relatively easy to install - can be the first element to be erected. The steelwork can then serve as the form work and support for the concrete base and later the construction of the deck.



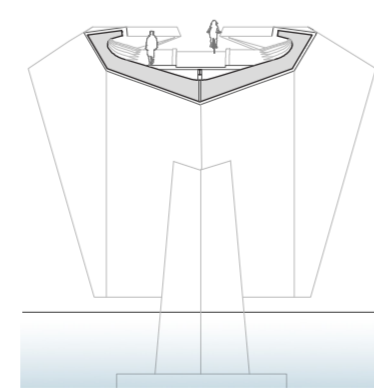
SOUTH LANDING

Access at both landings consists of pedestrian staircases with integrated cycle ramps. Single lift car for DDA Compliance, families and casual visitors.



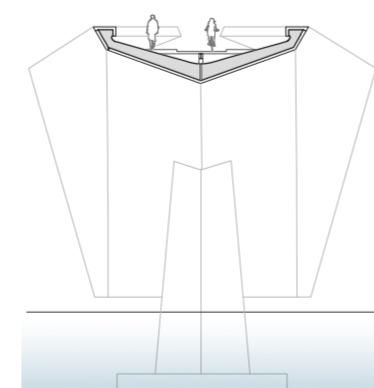
SECTION AA 1/400

Steel girder frame, with concrete slab, anchored rigidly to piers.



SECTION BB 1/400

Cycle lane with raised kerbs to segregate from pedestrian walkways.



SECTION CC 1/400

Central viewing platform, a wider deck area to allow for integrated seating.



NORTH LANDING

New public realms to both landings merge the bridge with existing city context. Flowers running along the stairs, soften the transition from garden space to bridge deck.



