

A BRIDGE FOR THE FUTURE, ROOTED IN TRADITION

Instead of a massive arch, the NEP Bridge has a thin and stiffened steel shell. This one continuous surface, through its wide and gently curved form, both spans the gap and offers a new public space above the river protected from rain. Its ribs align to the flow of forces, concentrating above the light wells near the supports. In between these, a dazzling number of glazed openings animate the crossing with iridescent light, echoing towards the tracery tradition of the English Gothic, and the geometry of Cambridge's mathematical bridge.

A UNIQUE LANDMARK

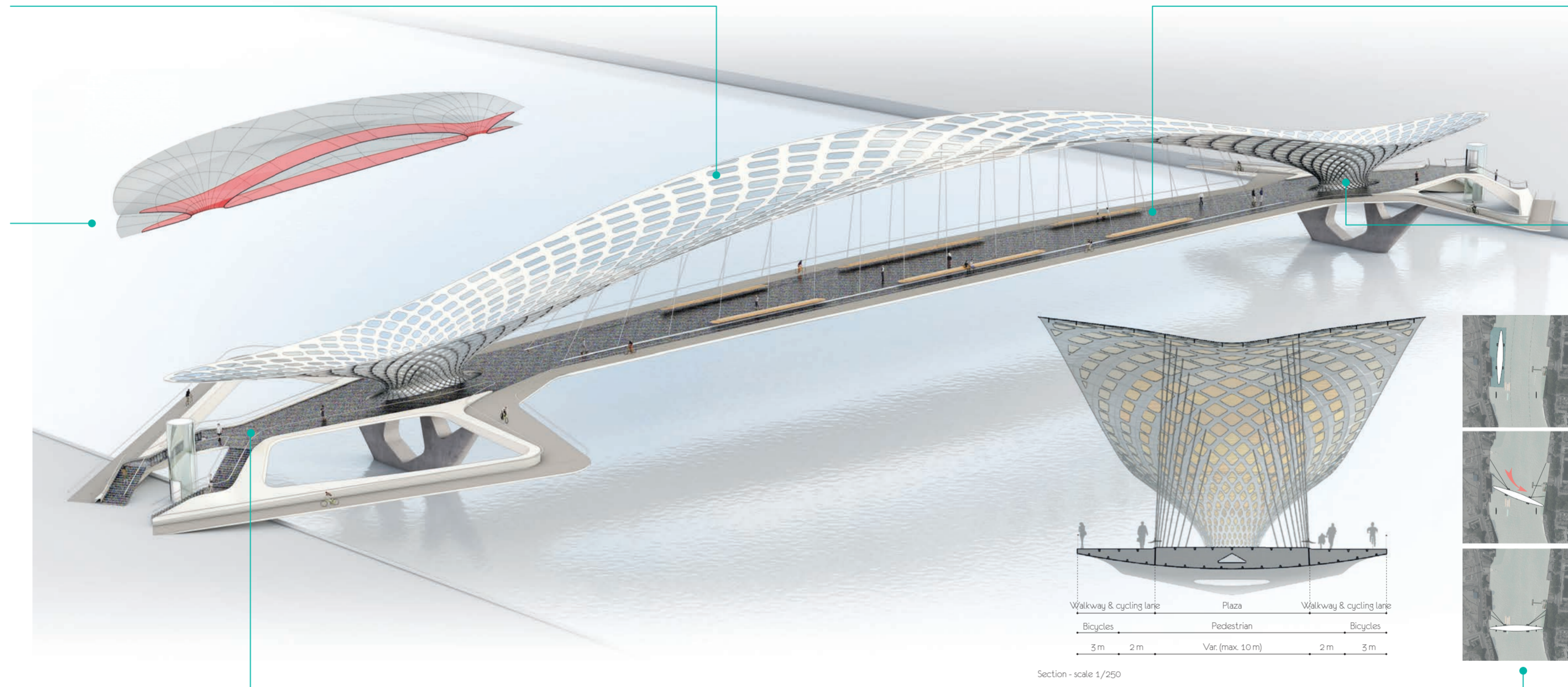
Conceptually the NEP bridge is a double catenoid, axis-symmetric in relation to the light wells. The upper part, the canopy, curves back to form the bridge deck. The inside and outside surfaces are treated in a way that highlights continuity, and specific regions are tailored to the constraints of the project. Fluidity, solidity, but also openness are the hallmarks that make the NEP Bridge a unique landmark.

A SLENDER AND ELEGANT STRUCTURE

The shell is 100% structural. As a bowstring arch of 165 m long and 15 m high, it spans the Thames with a span depth ratio of 1/11. Its definitive shape is optimised by a form-finding process to achieve a slender and elegant structure. Deck loads are transferred to the arch by a twin series of hangers at 5 m increments. The superstructure and the ramps then rest on concrete piers aligned with the Thames' currents.

CLEAR, VISIBLE AND INTUITIVE

Two double cycling ramps smoothly link the mid-span to the banks, which are raised locally to 5.35 m. This is to improve visual relationships, and locally ease the level differences. It also reverts the flood-wall back to standard parapet height. Pedestrians access the bridge via a pair of stairs or through central lifts. The whole guarantees clear visible and intuitive user flows in between Nine Elms Lane and Grosvenor Road. The scheme ensures effortless social control, and its flexibility accommodates for future adaptation to stakeholder requirements.



A SPACE IN THE CITY, AND OF THE CITY

This crossing is more than a bridge; it is a new space in and of the city. Cyclists coming from the ramps can speed along the sides unimpeded, while pedestrians arriving by stairs or lift are guided along the light wells to the central boulevard. Here, in between the hangers, the NEP Bridge provides an 1.000 m² multifunctional space of passage and rest. It is a vantage point on the river and the city, protected from wind and rain. It may just as easily become a marketplace or a performance theatre; it could also be rented out for private events. For these purposes, the space could be temporarily enclosed with a membrane fixed to the hangers.

VOIDS AND LIGHT

The NEP Bridge straddles the edge between solid material and open emptiness. At the supports, the canopy curves back to become the deck. These light wells open the Thames to passer-by's on the deck, and, in a reciprocal way, offer boat users a glimpse of the public live above. The unique shape of the canopy functions in two directions; longitudinally, it links Pimlico with Nine Elms, while transversally, it offers central London an arched window to the river further west.

A WINDOW AT DAY, A BEACON AT NIGHT

Through its faceted glass panels, the canopy offers both a window to the sky, and a play of light and shade on the deck. At midday, it offers maximum protection from the southern sun. At night the glowing light wells make the bridge appear to float away on the Thames. The ambient lightning, smartly integrated into the deck, will make it a safe and animated public space at all times of day.

MINIMAL DISRUPTION TO RIVER TRAFFIC

Prefabricated elements of the bridge will be sailed in on barges and welded together on a temporary support near one of the banks. The assembled bridge will then be jacked onto barges, and finally turned and lowered into final position with minimal disruption to river traffic. Previous experience with even larger steel bridges indicate a mounting time of less than 10 hours.

