

Pimlico

Nine Elms

Existing trees and gardens retained

Gentle slopes seamlessly bring cyclists and pedestrians down to street level

Generous segregated cycle and pedestrian routes on shared deck

Elegant landmark

Graceful form

Clear views through and from bridge

Light touch structure cantilevers over banks

New garden

Pocket park

Light touch structure cantilevers over banks

All load transferred through piers

Benches on pedestrian side of bridge deck

Benches on pedestrian side of bridge deck

150m Clear span up to 10.91 AOD

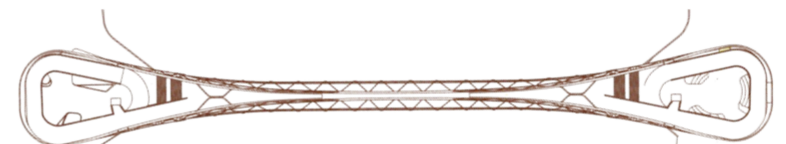
All load transferred through piers

Pedestrians

Pedestrians

Cyclists

Pedestrians



New London Bridge

An elegant addition to the story of London's arched bridges providing an inclusive experience for all.

1. Integrating cycle and pedestrian traffic

At deck level there is a generous shared surface allowing for demarcated cycling and pedestrian routes indicated by changes in texture. The sloped and stepped access routes at either end of the bridge allow cyclists and pedestrians to continue their journey without the need to cross deck.

3. Height across the river and inherent access issues

The bridge structure has been developed to minimise the height change required when accessing the bridge without impacting on the navigation of the river. The resultant change in level at each bank is overcome with a generous gently curving slope cantilevered from the bridge structure, centrally located lifts and a grand staircase. This arrangement will accommodate all users and an array of activities.

2. Place making across the bridge

Within the coil of the ramp a new space is created on each bank. To the north a meeting space provides a pavilion like arena at the heart of the sloped bridge access. Along the main span a series of benches rise out of the deck providing rest and viewing points for all bridge users. On the south bank an aromatic garden with a single elm tree at its heart provides a focus for the bridge landing.

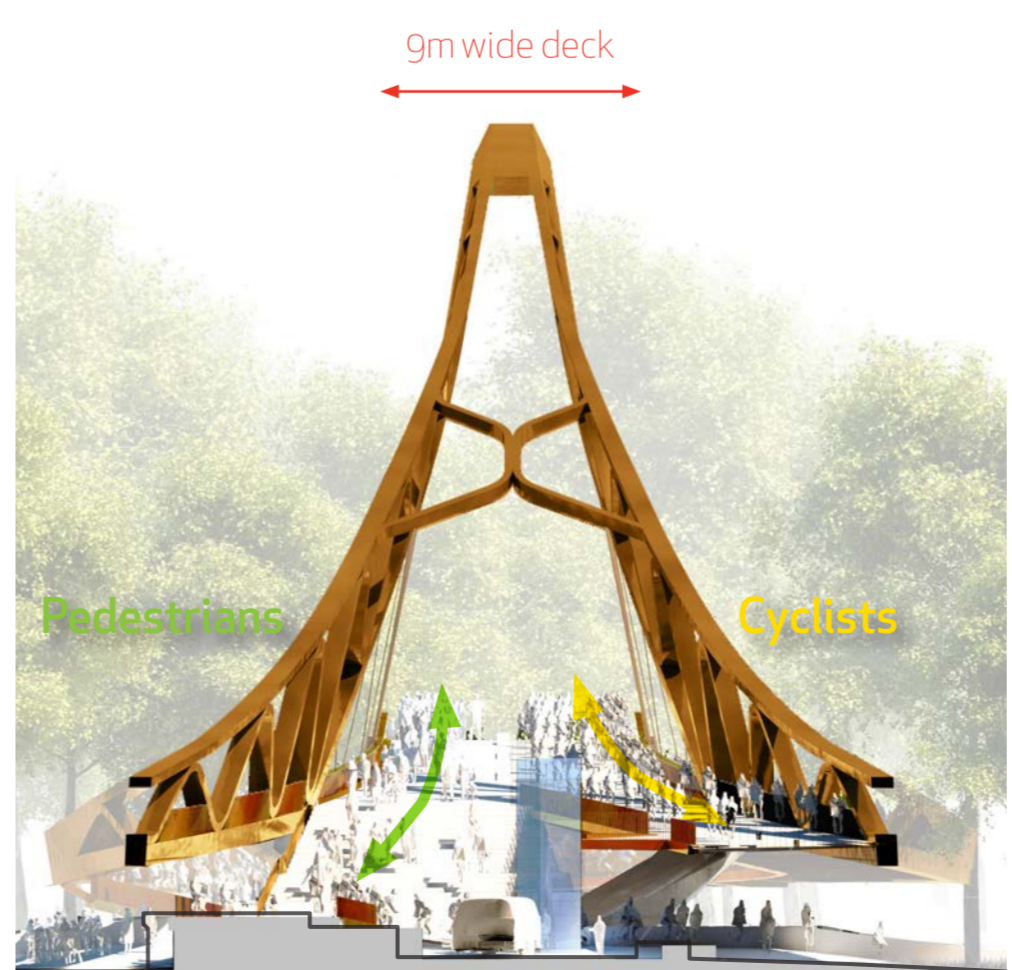
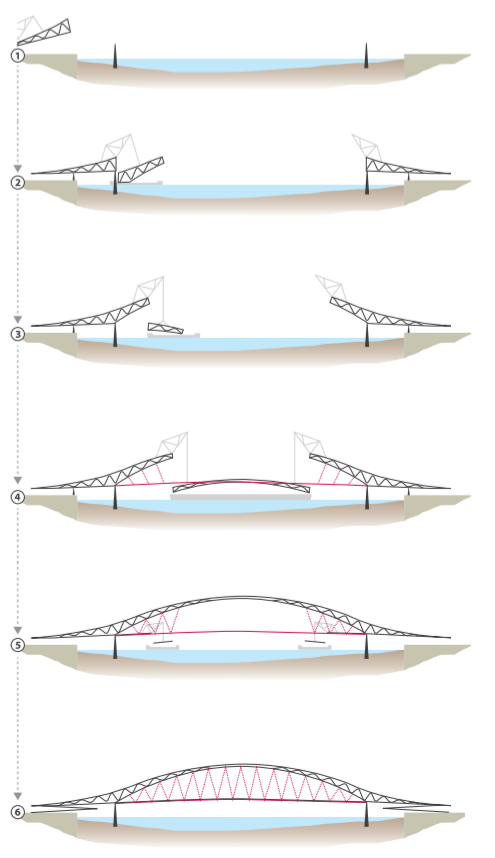
4. Approach to construction to minimise impact on river traffic

Construction starts at the flank areas using ordinary cranes for the side spans.

The 'haunches' of the bridge are then adopted temporarily as cantilevers to reach out until the full central arch has been created.

Once the integrity of the tied arch is established, the deck itself is then progressively lifted and 'hung' below the arch to complete the bridge.

All components of the main span are thus floated by barge in the river and lifted into place using the permanent structure. In this way, disruption to river users is minimised, and it avoids the need for difficult and expensive independent heavy lifting; our bridge can thus 'self-form' in a simple and cost-effective way.



Cross section

Aerial diagram of north bank landing





Nine Elms to Pimlico Bridge Competition

Stage 1B Submission, 16th February 2015

A graceful new landmark to the River Thames corridor, connecting established and renewing neighbourhoods in a sensitive and inclusive way.

Our bridge is an update of the traditional London arched bridge providing segregated routes for pedestrians and cyclists within a generous shared experience.

Canaletto brought the Thames to life when he illustrated The Lord Mayor's Procession with a multi arched Westminster bridge. Since then bridges have developed and the number of arches reduced. Our proposal takes this pure form and brings it into the twenty first century with a single, powerful form providing an accessible and open journey between Nine Elms and Pimlico. The engineering responds to the industrial past of the southern shore whilst allowing the most delicate of landings on each bank, respecting conservation areas and preserving existing trees.

The bridge adopts an elegant and continuous curving loop to form both the primary span and the splaying access ramps at the banks. The shape of the top loop, working with the bridge deck, provides all permanent structural support and allows an efficient construction process with minimal impact to river users. Primary ground support is from two river piers providing a 150m clear span from which the flanking loops reach out to the banks touching the ground lightly and delicately; the looping ramps hover over the ground by taking their support from the river piers and continuity from the central span.

The main span is a 'tied-arch' for efficiency, and the flank spans cantilever from the arch springing point above the piers, flowing into a 'torsion box' ribbon for the loop ramps at the far extremities of the bridge. Height is retained in the middle of the river to celebrate the crossing whilst the ends drop lower to reflect the existing context.

Materials are chosen for their high quality, durability and sensitivity to the surrounding built environment. The main truss reflects the industrial past of both the north and south side of the bank. Artwork will be integrated seamlessly into the design of the bridge to reflect local history and culture.

Amongst the residential gardens of Pimlico and Nine Elms and with the memory of the Vauxhall Pleasure Gardens to the south and Chelsea Physic Garden to the north, local pocket parks are created within the looping landing areas at each end of the bridge linked by a series of benches along the deck. To the south an elm tree stands central within a park of indigenous aromatic planting. To the north a new meeting place opens up and provides a transition zone with clear way-finding between the sloping bridge access and Grosvenor Road. Crossing the river along the deck benches form a series of rest and viewing points. These new places connect with local communities and visitors providing opportunities for performance and relaxing in keeping with the scale and character of each bank.

As London's network of greenways develops our beautiful arching bridge proposal spanning from Nine Elms to Pimlico will provide a powerful symbol of London's future as a liveable, integrated and sustainable world capital.