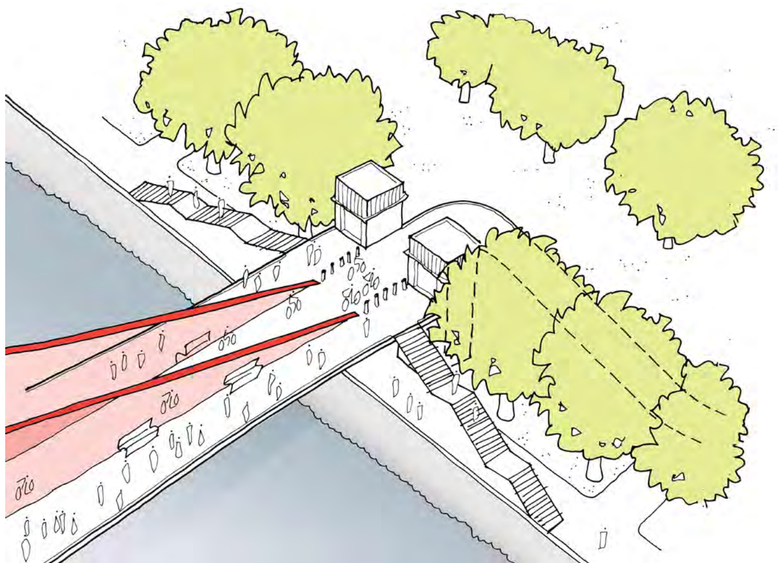
01

## A Bridge for All People at All Times

The bridge structure naturally divides the deck into three lanes at the bridge ends. This gives confidence to all users that they are safe and well provided for, with good lighting and furniture complementing the linear deck arrangement. A traffic-calmed area where the main cables reach deck level at mid-span allows bridge users to enjoy a unique sense of public place.

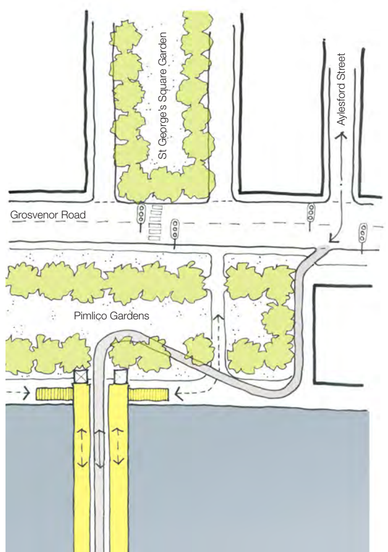
## Well Defined Routes Avoid Conflicts

The layout of the approaches protects Pimlico Gardens by separating cyclists from vehicles and pedestrians well away from the bridge. This allows pedestrians to enjoy the public realm at ground level in safety while providing a faster route for cyclists independent of pedestrians.



## London's First Bridge for Cyclists

Cyclists enjoy fluid riding and seek momentum with minimum interruptions. They hate stairs but don't mind gradients. A dedicated cycle ramp with gentle bends to reduce speed connects to the cycle network and surrounding streets, ensuring a direct, flowing route for cyclists at all times and allowing the different speeds of each mode to be safely brought together.




02

## Minimise Height to Deck Level

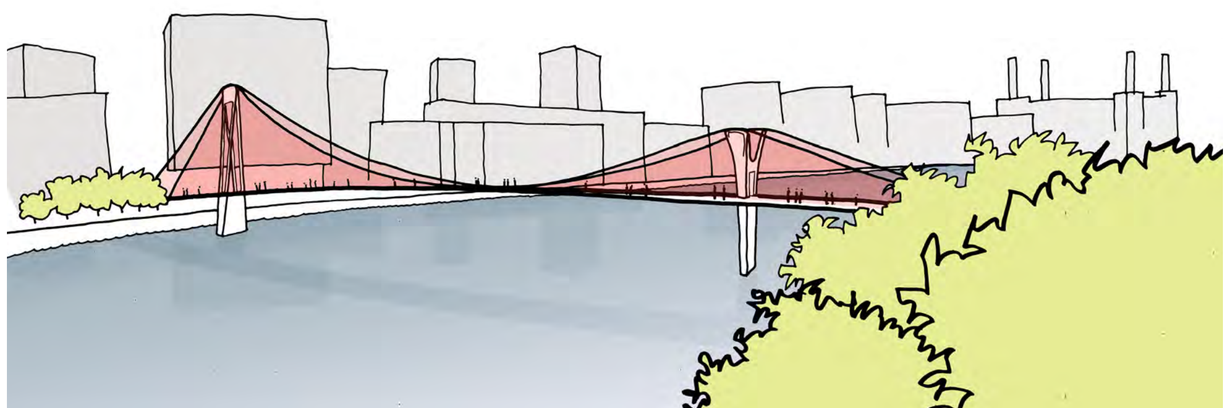
An above-deck system of structural support, combined with transverse spans of minimum depth, allows the slenderest possible deck cross section. This minimises the height difference to ground level at the bridge ends improving accessibility and reducing the footprint of the approaches in the public realm.

## Span suits Landmark Tower Design

A suspension bridge is one of a range of structural typologies which suit the 150m clear span and it complements its use at Albert, Chelsea and Hammersmith Bridges. The form is tuned to suit its unique context, at a bend in the river and with a significant asymmetry in scale and architectural language between north and south banks. The different architectural forms of the two bridge towers bring drama and moderate the change in scale between each bank.

## Elegance, Efficiency and Economy

For a pedestrian bridge of this scale it is most efficient to carry loads in tension and the resulting structural form is elegant, economical and legible. The flow of forces is clearly expressed and readily understood – which is attractive and reassuring for users – and the form celebrates the joy of elegant engineering design.



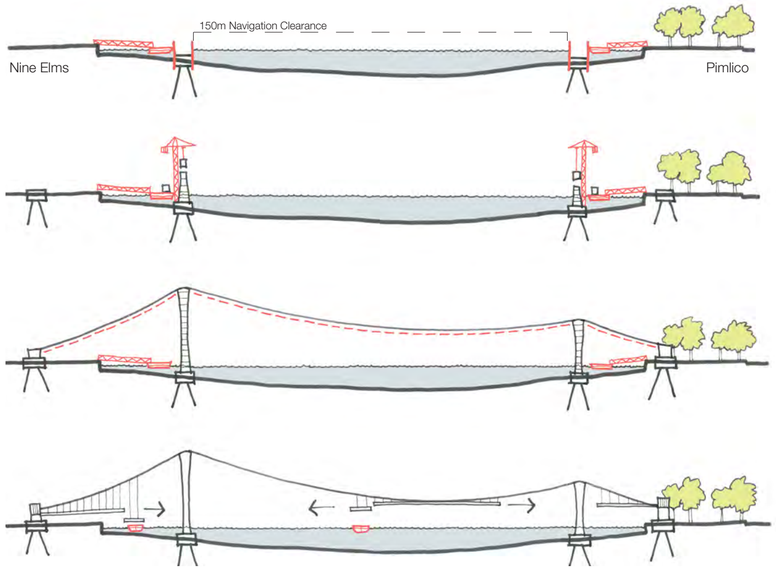
03

## Rapid Erection of Modular Elements

Component delivery by barge minimises disruption and the environmental impact of highway deliveries in Central London. The erection sequence employs established, well-tried techniques that are known to reduce risk and construction time to achieve minimum cost and rapid installation on site, with no need for large floating cranes (restricted by existing bridges).

## Suspension Form an Advantage

Relatively small, manageable bridge sections will be delivered by barge and lifted into place, requiring no river closures. Only a single short river possession would be required to draw across the elevated temporary catwalk between the tower tops on which the main suspension cables (most likely comprising pre-formed locked coil strands) are assembled prior to deck installation.




## Low Impact Construction

The tower foundations will be constructed within cofferdams outside the navigation channel, without disturbance to the river banks. Tower segments will be delivered by river and installed by crane. Construction access by road to the north abutment is minimised by using a temporary bridge from the north tower pier as a landing stage. This significantly reduces vehicle movements in Pimlico.

**(i)** Piled river foundations constructed within temporary cofferdams outside navigation channel. Establish floating pontoons and access bridges for delivery to abutment areas.

**(ii)** Pre-fabricated tower sections delivered by barge and installed by tower crane or climbing derrick. Abutments and cable anchorages constructed with primary access from river.

**(iii)** Temporary catwalk strung between towers during short river closure (the only one needed). Main cable strands pulled across and adjusted to correct profile.

**(iv)** Deck segments delivered by barge and lifted into place on suspenders from main cables. Short duration river traffic control is needed while barge in place in navigation channel.

04

## Minimal Landing Footprint

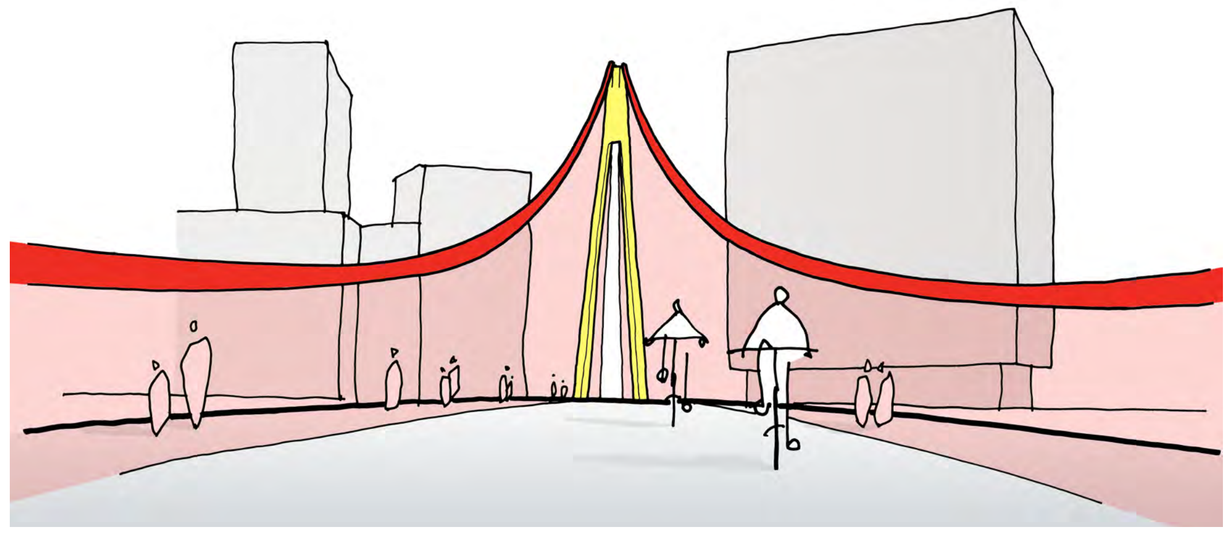
Terminating the bridge deck with twin lifts and turning the pedestrian stairs through 90° along the river wall ensures the bridge ends set down with a minimum footprint, and the impact on the mature trees and formal lawns of Pimlico Gardens is reduced and kept to the river margin. A similar arrangement will be used at the south landing, depending on alignment.

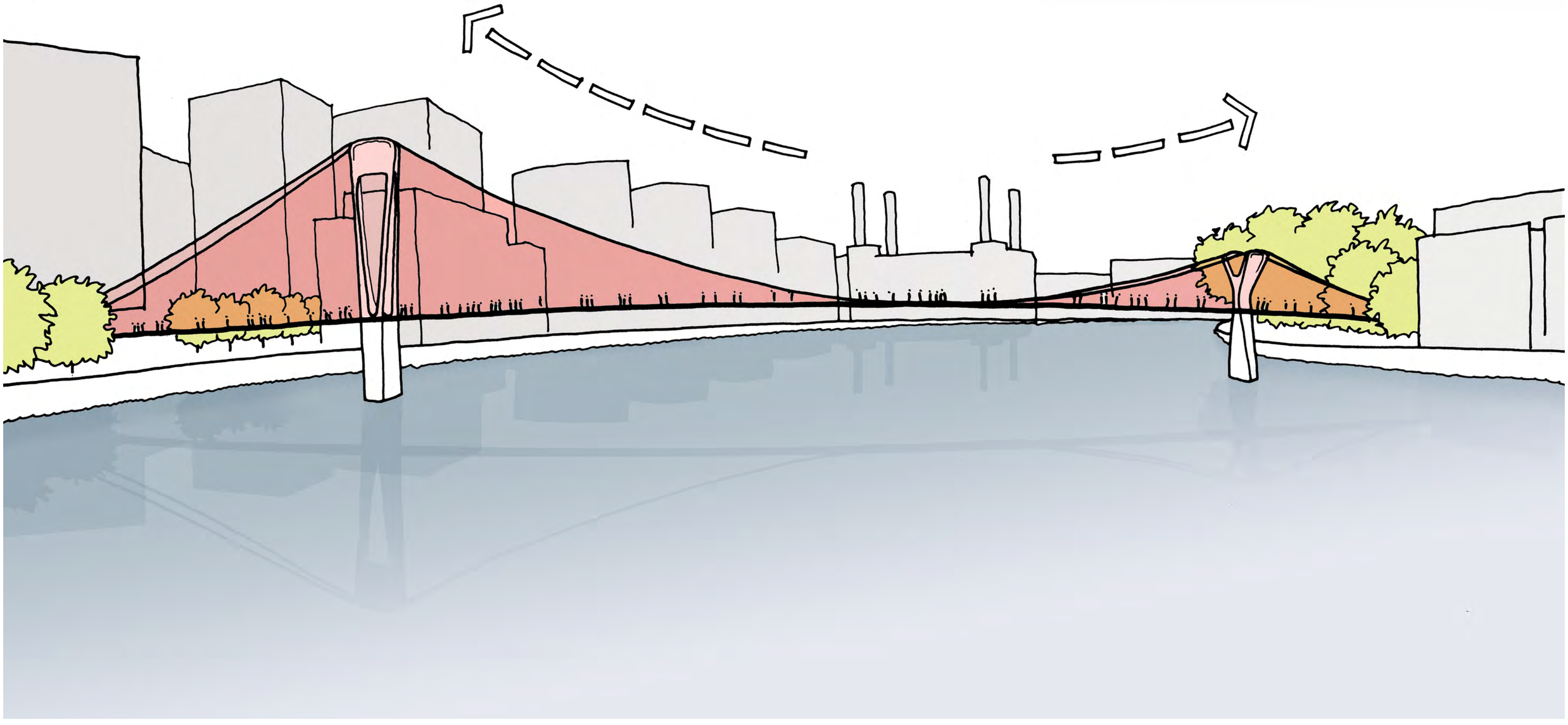
## 'View From' as well as 'View Of'

Bridges are often considered as picturesque objects in a static landscape view. However it is just as important to consider the dynamic definition of three-dimensional form and how time, light and movement are the source of rhythm and patterns which bring richness and subtlety. We see the bridge as a dramatic public space from which to experience London, with seating and wind breaks offering comfort and shelter.

## Sense of Place, Sense of Theatre

The role of the bridge differs for each user, whether the high-speed commuter cyclist, the early morning runner or the daily flâneur. The experience of arrival for everyone will be legible, safe, attractive and enjoyable. The soaring cables of the main span draw people to deck level and the portal of the south tower provides a memorable sense of theatre to the crossing.





## Familiarly Unique

We have selected a structural form for the bridge which is immediately familiar and synonymous with this part of London – and one that clearly relates to nearby Thames bridges – but which is reinvented to create a distinctive new landmark that is both functional and memorable.

The desire for a long river span is well suited to a suspension bridge and the dip of the main cables ensures the maximum visual transparency at mid span, preserving iconic river views of Battersea Power Station from downstream.

The asymmetric suspension bridge form responds clearly to its context with the sweeping curve of the main catenary cables echoing the composition of neighbouring riverside buildings and offering sensitivity to the scale of Pimlico, while reflecting the drama of the new Nine Elms skyline. The different architectural forms of the two bridge towers bring drama and delight with a sequence of experiences that is rich and enjoyable.

## Separately Together

In order to design a bridge that is best suited to cyclists and to pedestrians it is important to identify their different needs and to combine these naturally into one structure, rather than to compromise the enjoyment, safety or function of either group of users.

It is clear the bridge ends offer the greatest challenge for access and also the most likely area of conflict between cyclists and pedestrians. With different users travelling at different speeds we propose to safely segregate them away from the bridge and bring each group to bridge level in a clear and safe manner. This preserves Pimlico Gardens as a pedestrian-only environment and ensures an efficient and direct route for cyclists.

Once comfortably at the level of the bridge deck, cyclists and pedestrians can see each other through the twin planes of hanger cables but don't actually meet until the middle of the bridge, where there is an opportunity for the parallel linear routes to be safely combined in a public space which celebrates the crossing of the River Thames.

## Linking Lightly

Although the bridge will offer a new civic space and a dedicated river crossing for pedestrians and cyclists it should do so without treading heavily on the existing public realm at each end of the bridge, especially the valuable green pocket park of Pimlico Gardens.

We have orientated the bridge arrival parallel to the river, with stairs and lifts bringing pedestrians to ground level alongside the river wall, allowing the retention of the line of mature trees and planted landscape areas in the park. A sinuous and lightweight ramp for cyclists will weave its way around the margin of the park, connecting to the highway at the existing junction of Grosvenor Road and Aylesford Street, taking cyclists towards Pimlico and Victoria away from St George's Square Garden.

A similar arrangement can be proposed for the south landing and this simple, clear diagram of movement is adaptable to whichever alignment is selected.