A quick fix for Hammersmith Bridge

We set summer holiday homework for readers, inviting them to come up with a speedy way to reconnect Barnes with Hammersmith while lengthy repairs are contemplated

ADAMS
INFRASTRUCTURE
PLANNING LIMITED

Please, please, please do not encourage quick fixes

1. Establish a temporary ferry service for pedestrians and cyclists;
2. Demolish Hammersmith Bridge;
3. Build a reinforced concrete 3 – arch bridge with a clearance of 6.1 metres above Mean High Water Springs (MHWS) for the centre arch;
4. Don't faff around with a design but use the Twickenham Bridge design that is one of three bridges built to the same design (the others being Chiswick and Hampton Court) and all opened on the same day on 3rd July 1933. They have performed well for 86 years with no weight restrictions. Twickenham Bridge *(pictured below)* is listed Grade II* for the quality of its design and its technical innovation.
5. **Get on with it.**

Reason:

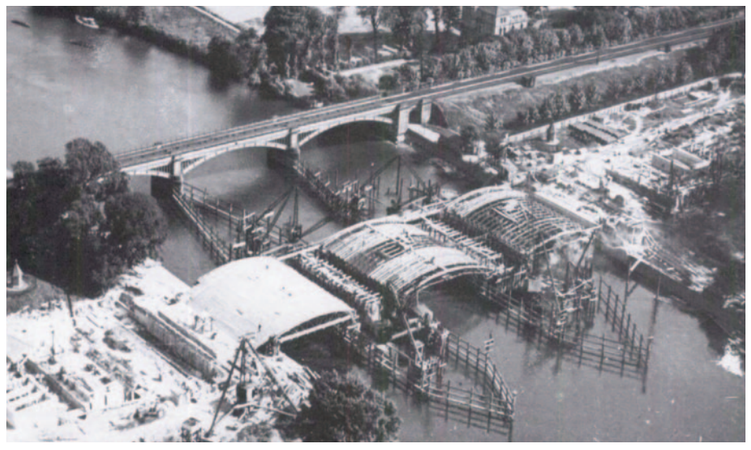
Hammersmith Bridge is not fit for purpose because:

1. It is, with the Albert Bridge, London's weakest bridge over the River Thames – before its closure it was limited to carrying one single decker bus at a time in addition to car traffic;
2. It is a navigation hazard as the soffit is only 3.5 metres above MHWS when it should be at least 5.5 metres above MHWS; and,
3. At 137 years old it is life expired and needs replacing.

The Victorians had no qualms about replacing the original Hammersmith Bridge of 1827 when, after 60 years service, it could not take the weight of heavier road traffic.

Please, please, please do not encourage quick fixes as the best that will be achieved is propping it up – as done by the GLC to Albert Bridge in 1973 as a temporary measure. The result is a navigation hazard of two columns placed in the middle of the river and a weight limit of two tonnes for a one way flow of traffic.

– Mike Adams, Adams Infrastructure Planning Ltd



Hammersmith Bridge was closed indefinitely last April as a result of "critical faults" found after a routine safety check carried out on the bridge.

The bridge has not been a priority for repairs and it has been well known for years that work was needed. Management of the bridge is by Hammersmith and Fulham Council.

A TfL spokesperson has told Richmond MP Zac Goldsmith: "Although funding the maintenance of the bridge is not TfL's responsibility, we are working with Hammersmith and Fulham Council to identify a final plan for upgrading their bridge. We are also ready to support them in identifying the necessary funding for this work. Keeping local authority infrastructure in good condition is essential to ensure the wider road network stays safe and productive and helps the economy grow. We need the certainty of a long-term steady and sustained funding arrangement to allow London to cover the costs of its own infrastructure maintenance."

Bus routes 33, 72, 209, 419, 485 and 609 have been diverted or now stop short of their destinations.

Recent announcements suggest that some £20m has been found to carry out interim repairs but these will take three years before the bridge can reopen for traffic. Cycles and pedestrians can use the bridge but Barnes and the near SW of London are cut off from Hammersmith putting pressure on other bridges.

We invited readers to come up with a temporary crossing pending resolution of the long-term future for the bridge. We publish four responses and comments on them from another reader: The Port of London Authority, which has jurisdiction over the Thames. These are of course informal in the spirit of the exercise.

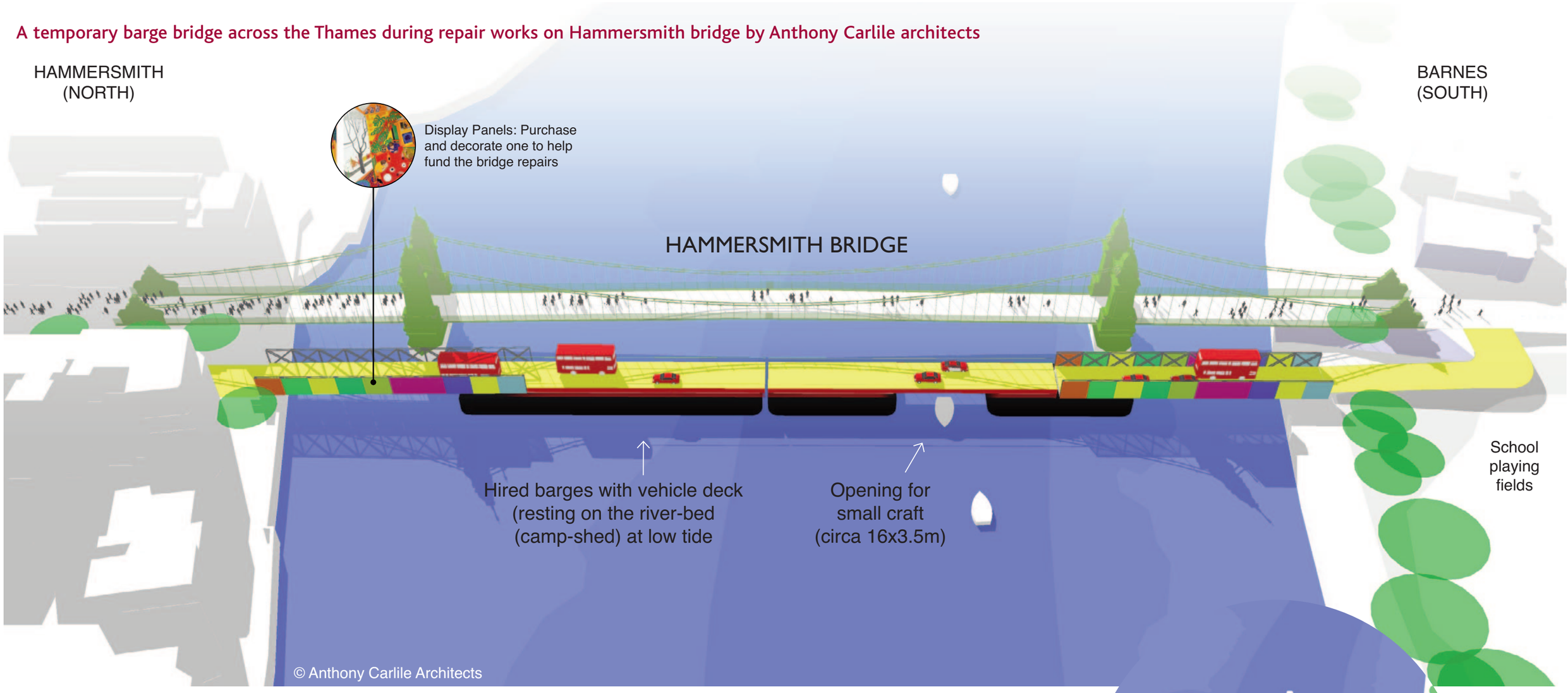
Mike Adams calls for demolition (see LEFT) and reuse of the Twickenham bridge design and says 'get on with it!'.

Anthony Carlile suggests a barge bridge citing the Danube example which took just 60 days to establish. It impedes river traffic so PLA is less than keen.

Beckett Rankine suggest building a parallel tem-

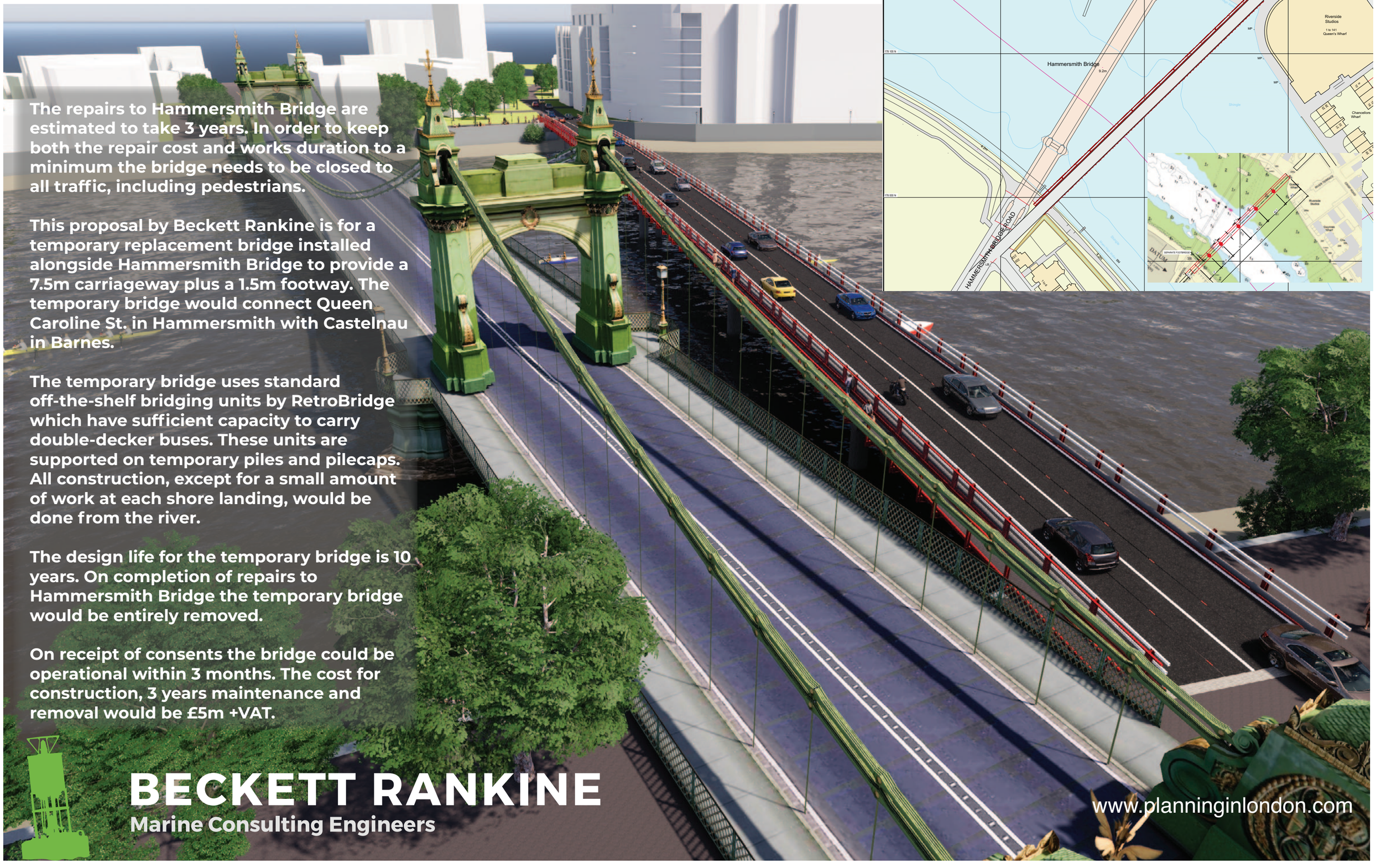
continues on page 12. >>>

A temporary barge bridge across the Thames during repair works on Hammersmith bridge by Anthony Carlile architects



Left: It took 60 days to install this temporary barge bridge across the river Danube at Novi Sad. At 9pm every evening a central section opened up to allow river traffic to pass.

Right: On the Thames, a small section of the pontoon bridge could remain permanently open for smaller craft and for bigger boats one of the barges could swing open.


The repairs to Hammersmith Bridge are estimated to take 3 years. In order to keep both the repair cost and works duration to a minimum the bridge needs to be closed to all traffic, including pedestrians.
This proposal by Beckett Rankine is for a temporary replacement bridge installed alongside Hammersmith Bridge to provide a 7.5m carriageway plus a 1.5m footway. The temporary bridge would connect Queen Caroline St. in Hammersmith with Castelnau in Barnes.
The temporary bridge uses standard off-the-shelf bridging units by RetroBridge which have sufficient capacity to carry double-decker buses. These units are supported on temporary piles and pilecaps. All construction, except for a small amount of work at each shore landing, would be done from the river.
The design life for the temporary bridge is 10 years. On completion of repairs to Hammersmith Bridge the temporary bridge would be entirely removed.
On receipt of consents the bridge could be operational within 3 months. The cost for construction, 3 years maintenance and removal would be £5m +VAT.
GRID NORTH
Hammersmith Bridge
9.2m
Riverside Studios
1 to 141 Queen's Wharf
Chancellors Wharf
HAMMERSMITH BRIDGE ROAD
QUEEN CAROLINE ST
SEPARATE FOOTBRIDGE
BECKETT RANKINE
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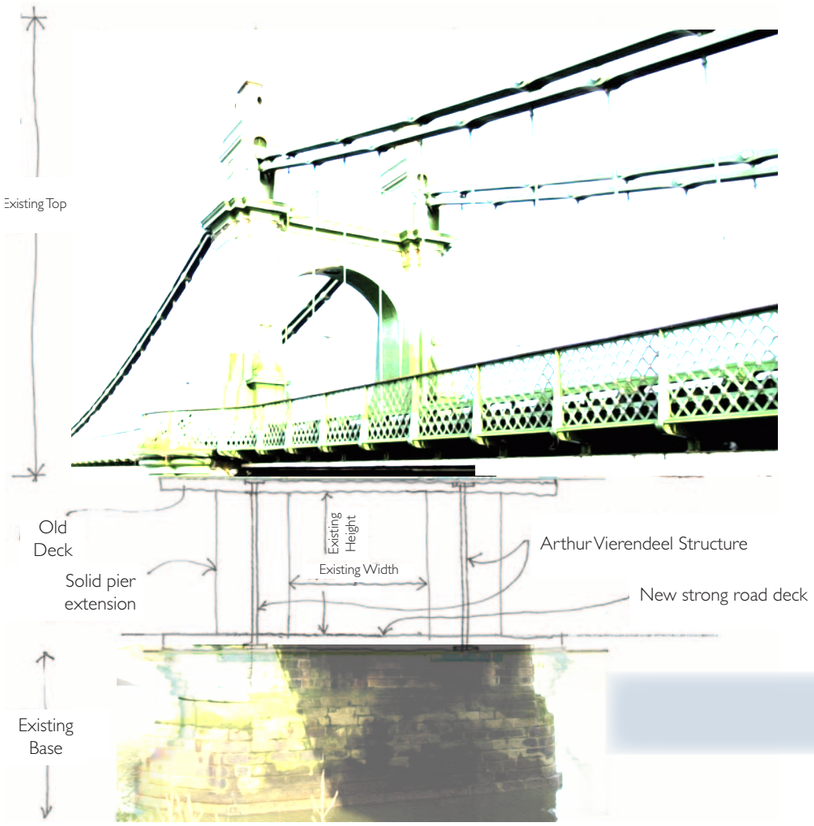


porary bridge using off-the-shelf bridge units. This will take just three months. PLA suggests this might work.

Architects Adams + Collingwood offer a hybrid solution. Lifting the bridge off its piers; reusing them for a vierendeel structure to provide a new roadway and then reassembling the old bridge on top with lifts at each end to allow people to get on high to watch Cambridge beat Oxford in the annual boat races.

PLA's verdicts

James Trimmer, PLA's Director of Planning and Environment kindly comments:

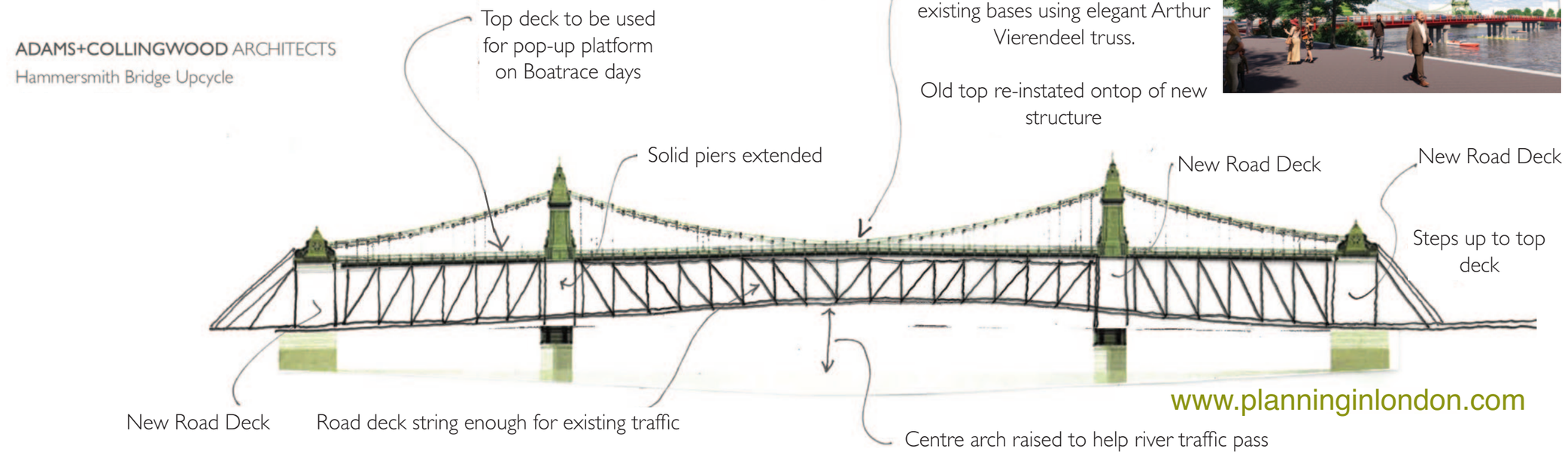
The PLA's views on the navigational implications of each proposal, which you'll appreciate are, at this stage, necessarily brief and informal and as such cannot bind the PLA if and when any applications are made to it for consent under the Port of London Act 1968 (as amended), are as follows: -

Adams

The scheme looks, in principle to be a viable option, but would require further discussion on the details to ensure this was acceptable for river traffic as the tidal sets at Hammersmith are far stronger than those at Chiswick Bridge, which is situated on a much gentler bend in the river

Anthony Carlile

This scheme is unacceptable as it imposes severe and unacceptable restrictions to river traffic and the public right of navigation. The barges, particularly on the ebb tide, would also create significant turbulence and represent a hazard to nearby rowers who could be swept onto the barges.



Beckett Rankine

The scheme *(LEFT)*looks, in principle, acceptable and we do feel that this entry has sought to understand the practicalities of crossing a publically navigable river. The positioning of the bridge piers is not ideal as they block the inshore (rowing) zone and would be quite challenging for rowers.

The 40m span is quite narrow, but potentially achievable and would need some assessment as it is close to a significant bend. The big issue for the PLA would be when it is impossible to navigate through the span in the channel due to works on Hammersmith bridge closing the southern half of the bridge. The narrow arches give no leeway and so the river would be unnavigable at Low Water and at High Water for larger boats. It is likely that 40m spans can be used to the north, but near the channel larger spans will likely be needed.

Adams + Collingwood

The scheme appears to raise the entire bridge, which would seem to result in considerable disruption to river traffic during construction. Assuming the new deck would provide a comparable air draught to the existing bridge, there would be no material impact on the river on completion.