

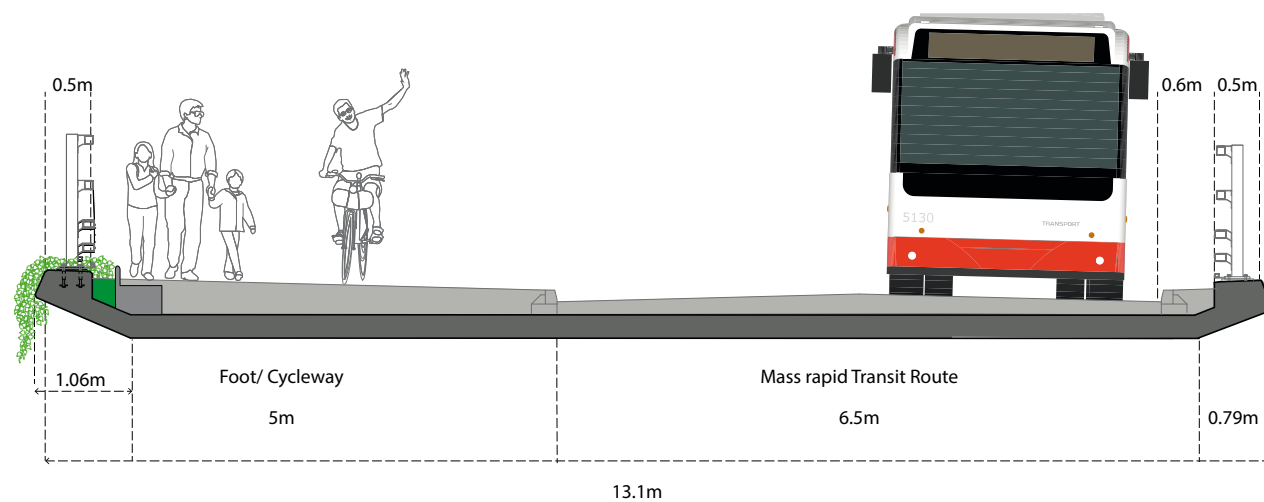


Figure 44. Parameter plan -wider main route cross section across viaduct and approach ramps

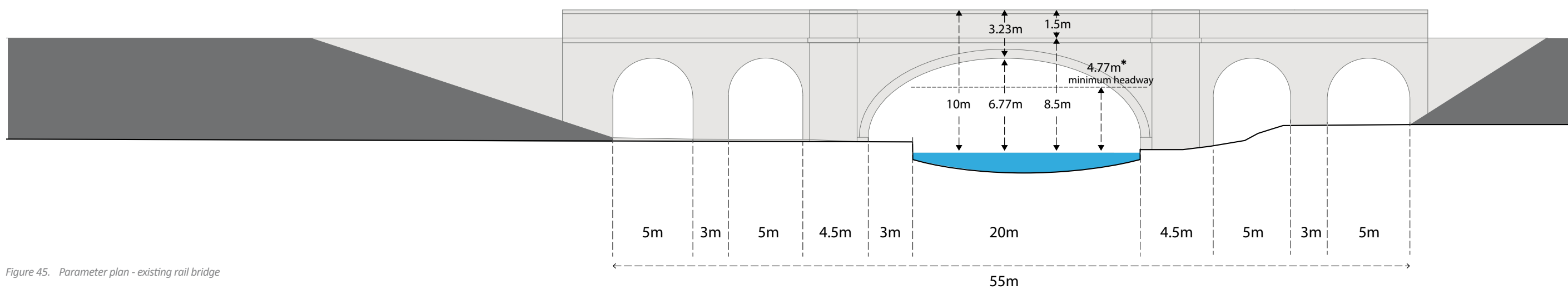


Figure 45. Parameter plan - existing rail bridge

* minimum headway has been determined by the Environment Agency)

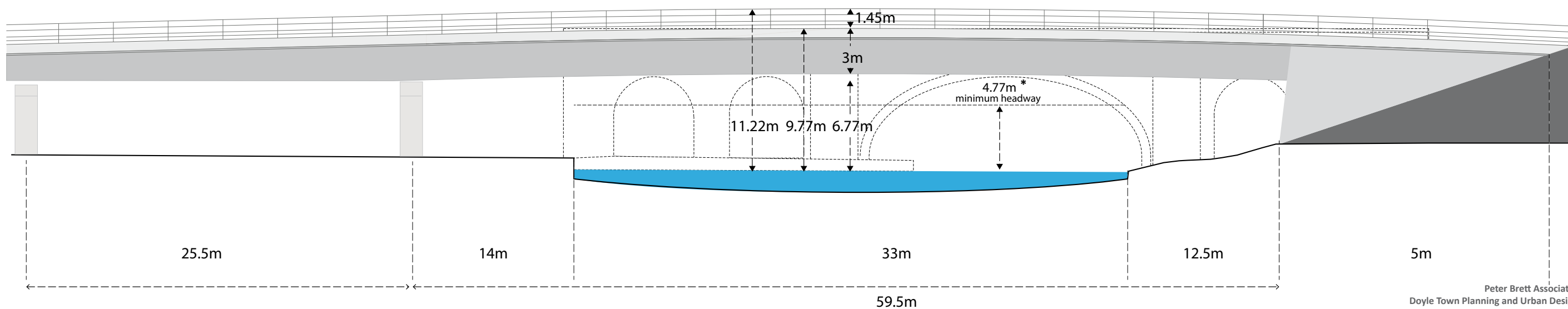


Figure 46. Parameter plan - proposed bridge

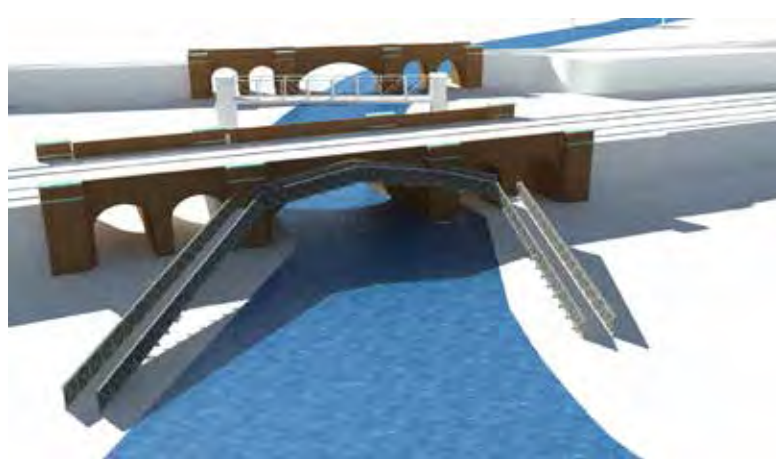


Figure 47. The bridges of the lower Kennet



Figure 48. Horse Ferry at Reavensthorpe (Yorkshire Waterways Museum).



Figure 49. Maidenhead Railway Bridge

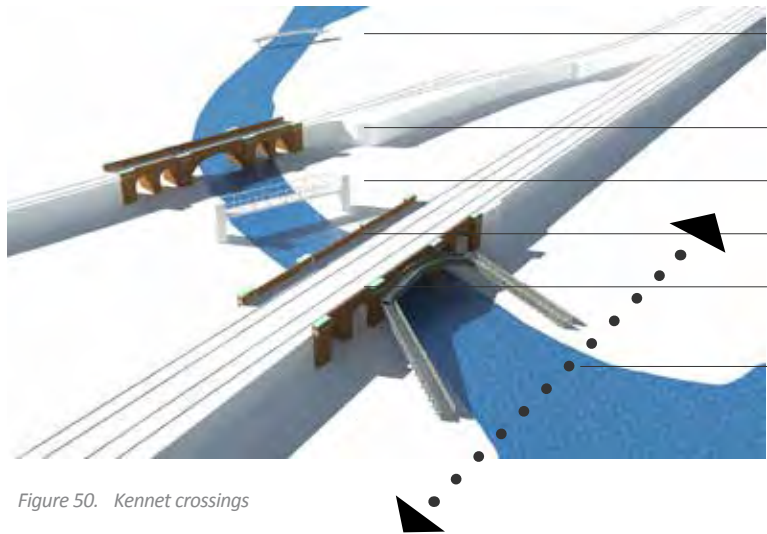


Figure 50. Kennet crossings

12 Bridges and crossings

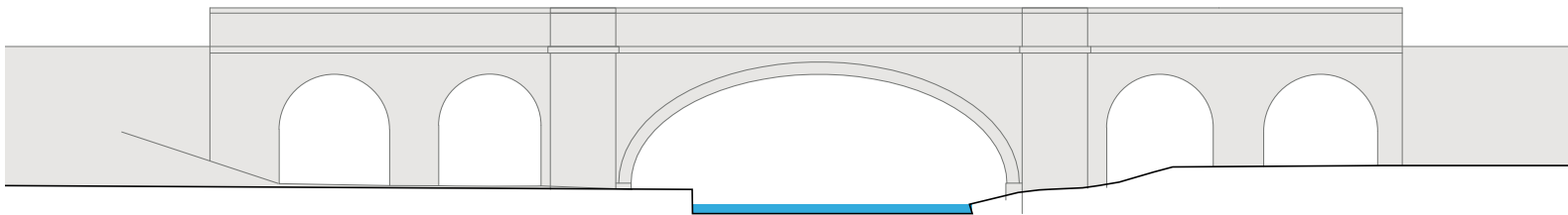


Figure 51. Great Western main line bridge (1839-40)

Bridges and crossings		Horse ferry		Main Line Great Western Railway Bridge		Wokingham Branch Line Bridge	
12.1	There are a series of bridges across the Kennet in the vicinity of the new route and a long history of bridges and ferry crossings nearby that reflect the wider story of the Thames and the Kennet.	12.4	When the canal link between Newbury and Bath was completed in 1810, a ferryman was appointed to take towing horses across the mouth of the Kennet. The toll was 2d (0.8p).	12.7	The route and bridge travel beside the main line London to Reading Great Western Railway bridge. The railway bridge was the first crossing of the Kennet in the area and is listed Grade II.	12.11	In historical terms, the bridge is significant in reflecting the early development of railways in Britain and also one of its most accomplished Engineers, Brunel.
12.2	The new route and bridge need to be carefully integrated into this wider riverine, urban and historical context.	12.5	The ferry continued in use up until the installation of the Accommodation Bridge in the 1890's.	12.8	Isambard Kingdom Brunel for The Great Western Railway originally constructed the bridge in 1839-1840. The bridge was widened to the north, probably in 1892, with the accommodation bridge also probably attached at the same time.	12.12	In architectural and technological terms the bridge is significant, reflected in its status as a Grade II listed building. The skewed form and parabolic arch provides a more interesting appearance, particularly when viewed from river level. However, it is not a particularly rare design approach and the span is relatively short when compared with more significant early railway bridges, such as at Maidenhead.
12.3	The lower reaches on the Kennet stretching from Blakes Lock to the confluence with the Thames is distinct from the narrower, shallower and canalised upper stretches through central Reading. This lower stretch was characterised by marshland and later wharfage.	12.6	The new public transport route is broadly aligned with the former ferry crossing route.	12.9	The railway bridge is of red brick, widened in engineering brick with ashlar dressings.	12.13	The bridge remains in relatively unaltered condition. The Bridge is a significant and distinctive landmark in this part of Reading. However, views of the bridge are limited to walkers along the riverside walks.
				12.10	The bridge is built on skew with a central elliptical arch flanked by pilasters, the western one on cutwater, with two round flood arches to either side and broad battered buttresses beyond.		
							Footbridge
						12.15	A high level footbridge connects Cumberland Road with Kenavon Drive and is approached via ramps.
							Gas Works Bridge
						12.16	The gas works bridge is a relatively high steel truss bridge designed to carry pipes across the river between the two Gas Works sites on either side.

Footbridge

Wokingham Banch Rail Bridge

Gas Works bridge

GWR Main Line Bridge

Accommodation Bridge

Reading East MRT Route

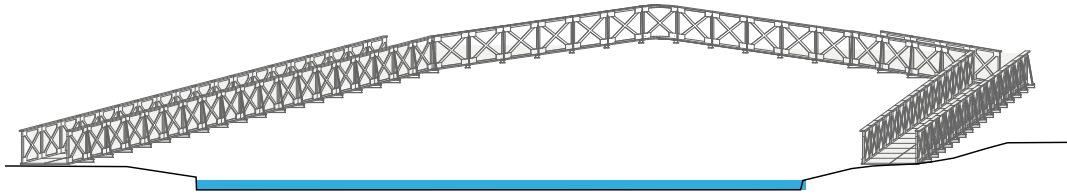


Figure 52. The Accommodation Bridge (or 'Horseshoe' Bridge)

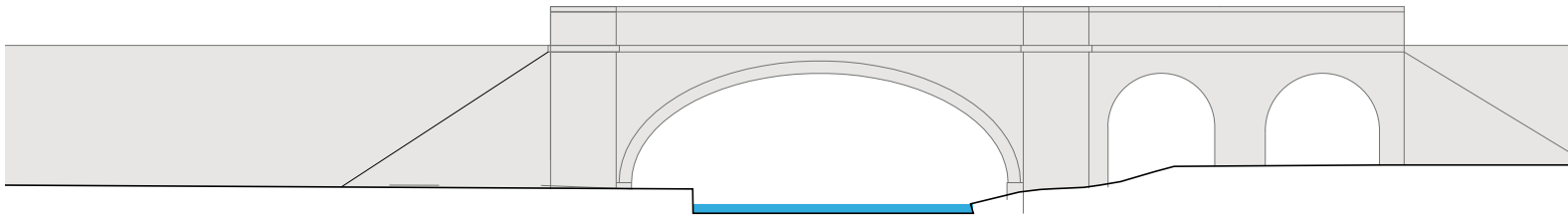


Figure 54. Wokingham Branch Rail Bridge

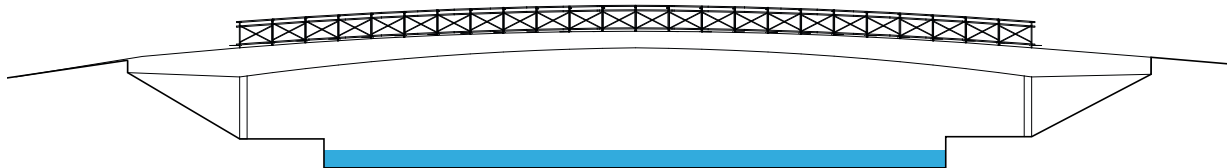


Figure 53. Footbridge

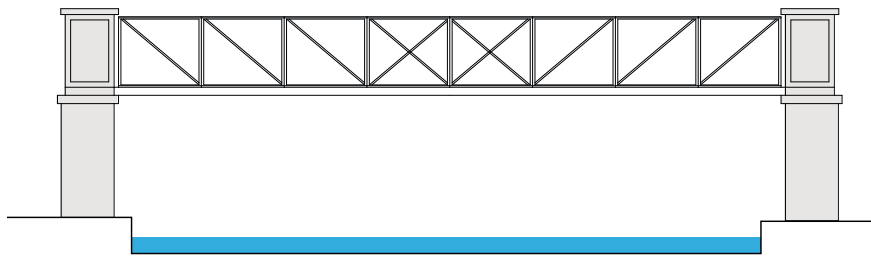


Figure 55. Gas Pipeline Bridge

The Accommodation Bridge

- 12.17 The accommodation bridge was designed to carry people and horses across the river and ensure towpath connections were maintained as the railway expanded. It replaced the horse ferry. The high, (originally wooden) panelled sides are purportedly to prevent horses from being frightened at the high crossing.
- 12.18 The bridge points to the continuing significance of horse-drawn water transport and the continuing importance of commercial navigation roles of the Kennet and Thames in the 'Railway Age'. The bridge also marks the cusp of horse drawn river transport era with the development of steam tugs and motor driven barges at the end of the century and increasing use of the river by leisured classes with rowing and cycling growing in popularity.
- 12.19 The accommodation bridge is made of steel and timber. The bridge has a steel-framed substructure, with girders cantilevered from face of railway bridge; wooden deck; and parapet of vertical boards supported by panelled frame with diagonally-crossed braces, this being of timber to the long, sloping ramps (which are panelled to river) and of steel to the peaked archway.

Responding to context

- 12.20 The new bridge will become the sixth crossing of the Kennet below Blakes Lock and the closest to the confluence with the Thames.
- 12.21 The proposed new bridge across the River Kennet will be situated some 35m away from the railway bridge. The approach ramps to the accommodation bridge will sit closer, but below the new bridge.
- 12.22 The relatively wide 59.5m span (the Kennet is typically 35m wide at this pint) is intended to retain views from the north towards the bridge from the river and riverside paths.
- 12.23 The function of the new public transport, pedestrian and cycle bridge will complement the historic transportation purposes of the railway and horse bridge.
- 12.24 Devising an appropriate new bridge form that sits comfortably next to the existing listed railway bridge and accommodation bridge is a significant design challenge.
- 12.25 Competition between structural forms can easily create visual clutter. The geometrical and architectural relationships between the railway bridge and the accommodation bridge are already complex, with the asymmetric and skewed accommodation bridge appearing to collide and also mask the railway bridge. The result is that neither bridge is presented well, irrespective of their individual aesthetic values. The addition of a new bridge can easily turn complexity into confusion and a cluttered appearance.
- 12.26 It might be reasonable to first consider reflecting, even replicating the structural form of the existing bridges, but this approach has been rejected in favour of a distinctly different bridge that speaks to modern engineering approaches.
- 12.27 The aim has been to devise an alignment, scale, structural form and materials that are a complementary: a memorable new structure where the experience of crossing over or beneath the new bridge is enhanced by the view of the adjacent listed bridges, and vice versa.

- 12.28 Within the many site constraints, the new bridge has been designed and situated as a separate built element, which is a modern engineered design, sympathetic to the historic bridges and transport corridor. The bridge is skewed in relation to the railway (to avoid utility corridors) whilst the wider span recognises and emphasises that the new bridge is located closer to the widening mouth of the Kennet where it joins the Thames.
- 12.29 Distinct, modern materials and forms have been adopted that nevertheless fit in sensitively next to, but clearly differentiated from, the old. This reflects the fact that the new and existing bridges must inevitably be considered as related in aesthetic terms. Form, materials and colour are designed to complement, and not visually overpower the character of the old bridges.
- 12.30 The sense of the scale of the existing bridges is reflected in the head height of the new bridge set at the top of the parabolic arch of the railway bridge to protect viewpoints to and through the rail bridge.

- 12.31 The new bridge does not replicate the rhythm of the railway bridge arches. Instead, the single wide span of the new bridge is intended to maintain wide-angle views towards the railway bridge.

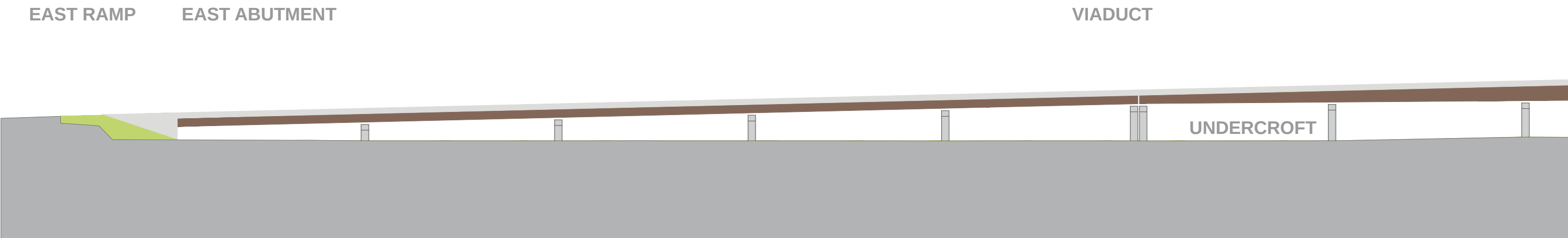


Figure 56. Elevation/section of proposed bridge structure

13 Main scheme components

		Viaduct and undercroft	Bridge and abutments	West ramp
13.1	Whilst the application scheme is conceived as one integrated whole, it is useful for descriptive purposes to consider it in terms of individual components.	13.12	13.17	13.23
13.2	From east to west, the main components are as follows			
	Link route from TVP roundabout			
13.3	The route begins at a new spur from the existing roundabout at Thames Valley Park entrance.	13.13	13.18	13.24
13.4	The route then travels to the south and broadly at the same level as the proposed park and ride car park.		13.19	13.25
13.5	The scheme is designed to complement and integrate with the proposed Park and Ride facility at Thames Valley Park, which would provide approximately 260 car parking spaces, motorcycle parking and associated vehicular access and landscaping. The East MRT Scheme runs adjacent to and directly connects with the TVP P&R facility.	13.14	13.20	
13.6	The eastern section of the route serves as the main vehicular entrance to the park and ride for all vehicles, but with exit to the west restricted to bus only.	13.15	13.21	Napier Road link
		13.16	13.22	13.26
13.7	The carriageway running adjacent to the committed TVP P&R scheme is 7.3m with a 2.4m shared foot/cycleway and is also included within the TVP P&R planning permission.			13.27
13.8	The entrance to the route will be defined with a section of coloured surface and ‘bus only’ signs to raise awareness that entry is prohibited for all vehicles except public service vehicles.			
13.9	There is an SGN valve at the western edge of the TVP P&R. The scheme retains the valve by splitting the route either side.			
13.10	The route for pedestrians and cyclists is segregated from the bus route and is itself divided into pedestrian and cycle paths.			
13.11	The ground level in this area is generally raised up above riverside path level. The land falls away to the west, so that the route is increasingly situated on a low embankment until this gives way to the viaduct structure.			