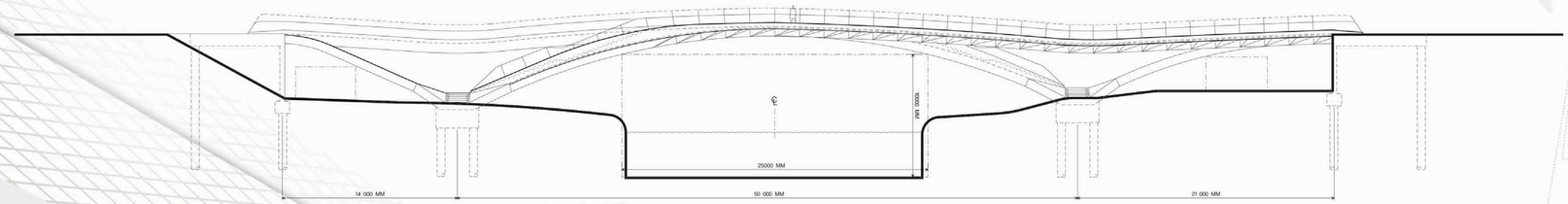
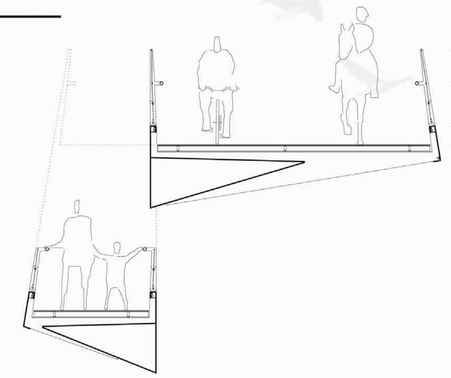
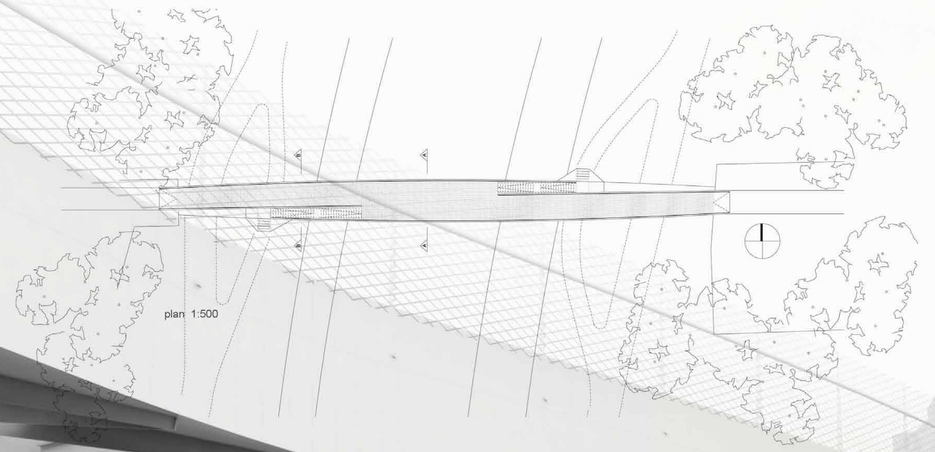


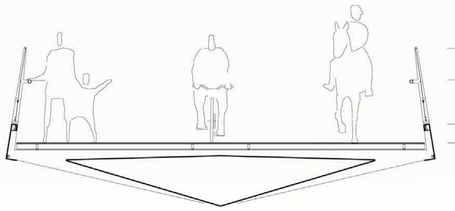
south elevation 1:250



section BB 1:50

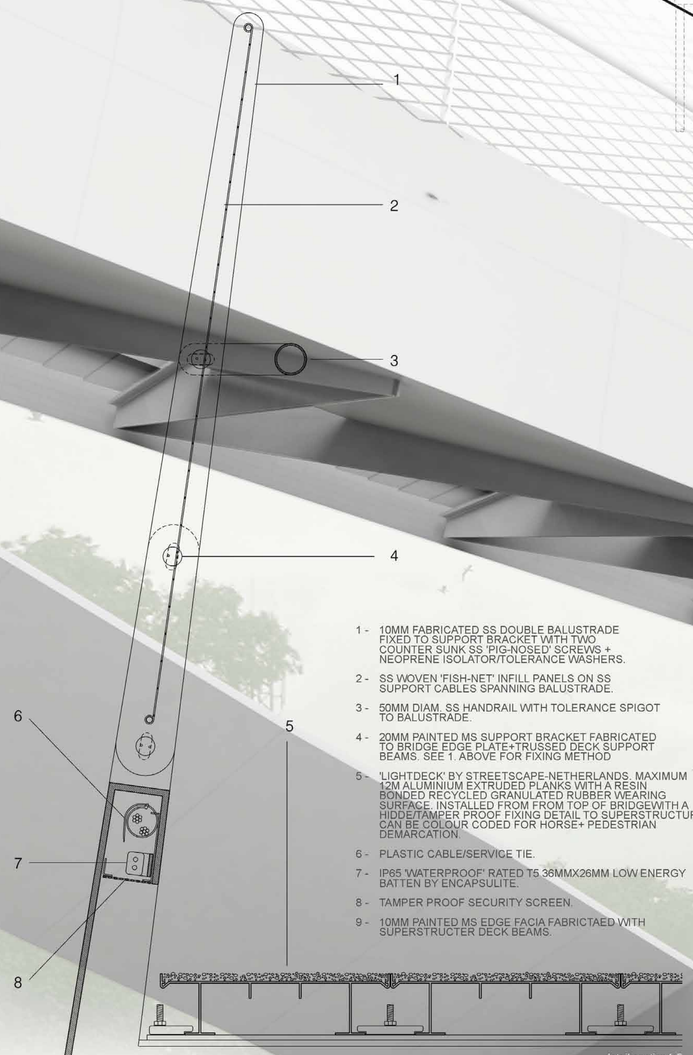


plan 1:500



section AA 1:50

soffit plan 1:500



detail section1:5

1 - 10MM FABRICATED SS DOUBLE BALUSTRADE FIXED TO SUPPORT BRACKET WITH TWO COUNTER SUNK SS 'PIG-NOSED' SCREWS + NEOPRENE ISOLATOR/TOLERANCE WASHERS.

2 - SS WOVEN 'FISH-NET' INFILL PANELS ON SS SUPPORT CABLES SPANNING BALUSTRADE.

3 - 50MM DIAM. SS HANDRAIL WITH TOLERANCE SPIGOT TO BALUSTRADE.

4 - 20MM PAINTED MS SUPPORT BRACKET FABRICATED TO BRIDGE EDGE PLATE+TRUSSED DECK SUPPORT BEAMS. SEE 1. ABOVE FOR FIXING METHOD

5 - 'LIGHTDECK' BY STREETSCAPE-NETHERLANDS. MAXIMUM 12M ALUMINIUM EXTRUDED PLANKS WITH A RESIN BONDED RECYCLED GRANULATED RUBBER WEARING SURFACE. INSTALLED FROM FROM TOP OF BRIDGEWITH A HIDDE/TAMPER PROOF FIXING DETAIL TO SUPERSTRUCTURE. CAN BE COLOUR CODED FOR HORSE+ PEDESTRIAN DEMARCATION.

6 - PLASTIC CABLE/SERVICE TIE.

7 - IP65 'WATERPROOF' RATED T5 36MMX26MM LOW ENERGY BATTEN BY ENCAPSULITE.

8 - TAMPER PROOF SECURITY SCREEN.

9 - 10MM PAINTED MS EDGE FACIA FABRICTAED WITH SUPERSTRUCTER DECK BEAMS.

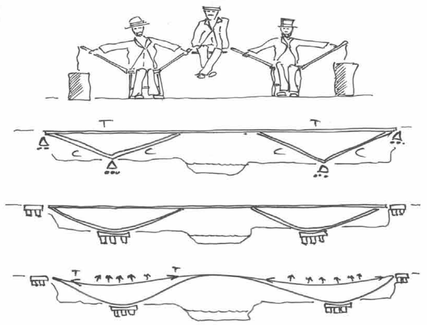
RIVER DOUGLAS BRIDGE

In order to integrate a naturally sweeping line connecting the river bank and upper Greenway levels with the structural function of the bridge the overall diagram is characterised as two ribbons that begin from either side of the river and descend down to the opposite bank. Set side by side they narrow from 4m at the upper levels and narrow to staircase width on the river's edge, touching half way across the river where they create an expanded deck that can be used as a viewing platform. The box girder supper-structure is gradually peeled back allowing the deck support beams to be exposed and in this way break down the overall form, from solid and impenetrable concrete at river bank level to light and branch-like as it rises over the river.

Fig 1 - illustrates the basic structural arrangement of bridge as very similar to that of Benjamin Baker's Forth Rail Bridge in Scotland. They demonstrate the cantilever bridge principal arranged by Baker to counter scepticism about his design following the Tay River Bridge disaster a few years before.

Fig 2 - illustrates now the top parts of the deck are in tension over the supports and the stair-cases are in compression. Members extending from the abutments to the foundations at the stair feet are also in compression and complete the system. The addition of these members cancels out horizontal forces on the foundations which, due to poor ground conditions at the abutments themselves and in the flood plain, would not have been able to resist them without considerable thrust block or inclined piles.

Advantage can be taken of the tension in the top decks of the end span by introducing a slight "drape" in the trajectory of the bridge deck. This drape means that the decks at either end can act as catinery structures as well as beams in bending making them shallower and lighter than they would have been. Because the deck sits throughout its length to one side of the box tor-sional forces are created that must be resolved back to the supports. The deck and the fins have therefore been configured in a triangulated arrangement so that the stiffness of the box is enhanced and these forces can be effectively transmitted. The lower portion of the structure is constructed with concrete as it extends into an area of possible high water and would be more durable in the event of a flood.



1 Install piles | 2 Cast pile caps | 3 Cast concrete sections of lower members | 4 Deliver and lift into place prefabricated steel sections | 5 Crane in final section.

aerial view

elevation view looking south