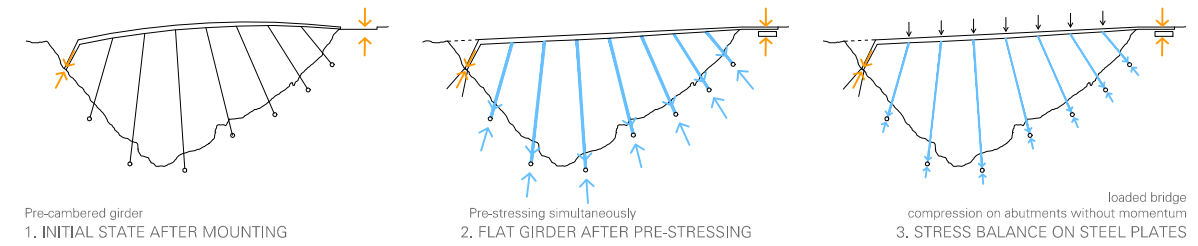




A BRIDGE PRESTRESSED BY STAINLESS STEEL PLATES ANCHORED IN THE RAVINE, EAST ELEVATION



INCLINED PILLARS ON THE ISLAND SIDE, REDUCING ARCHAEOLOGICAL IMPACT



NORTH EAST ELEVATION 1:1200

BETWEEN LAND AND SEA

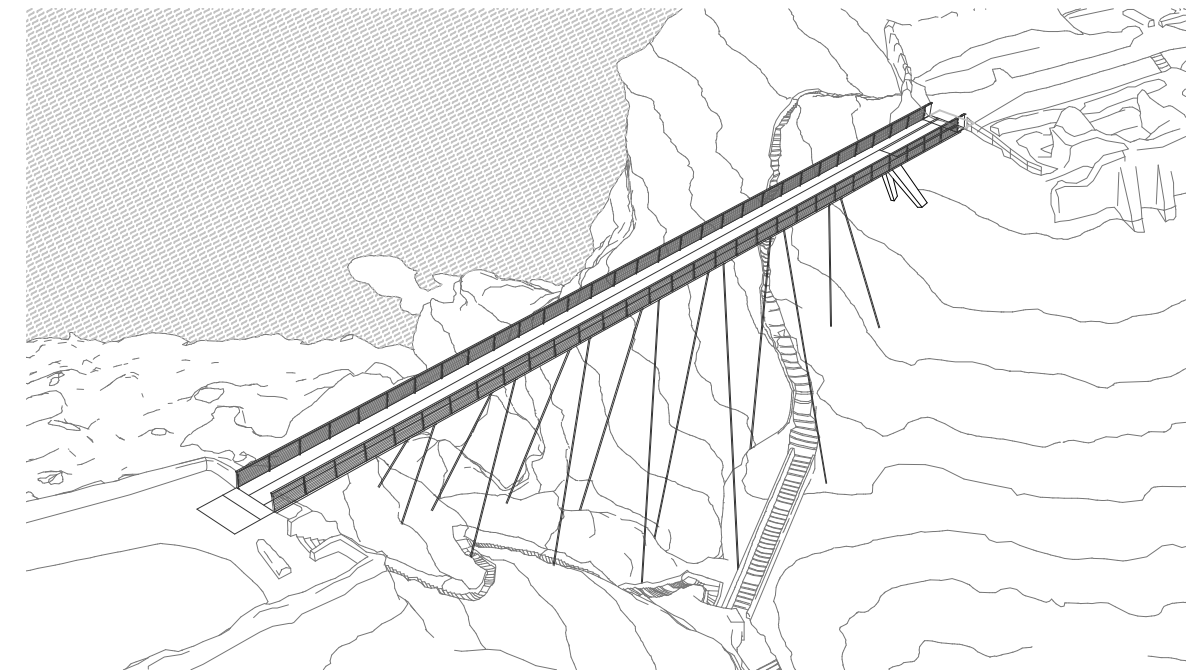
The new connection re-establishes the historic walkway to the island. Our proposal is a design that replaces the former castle's wall and historical isthmus virtually, with prestressed stainless steel plates crowned by a linear deck - the link.

A bowed steel girder is stressed into a horizontal position by stainless steel plates that are anchored in the slopes of the ravine.

This structural principle is an inversion of the forces that one would expect for a structure of this kind. Instead of compressed pillars, the bridge is prestressed by slender stainless steel plates.

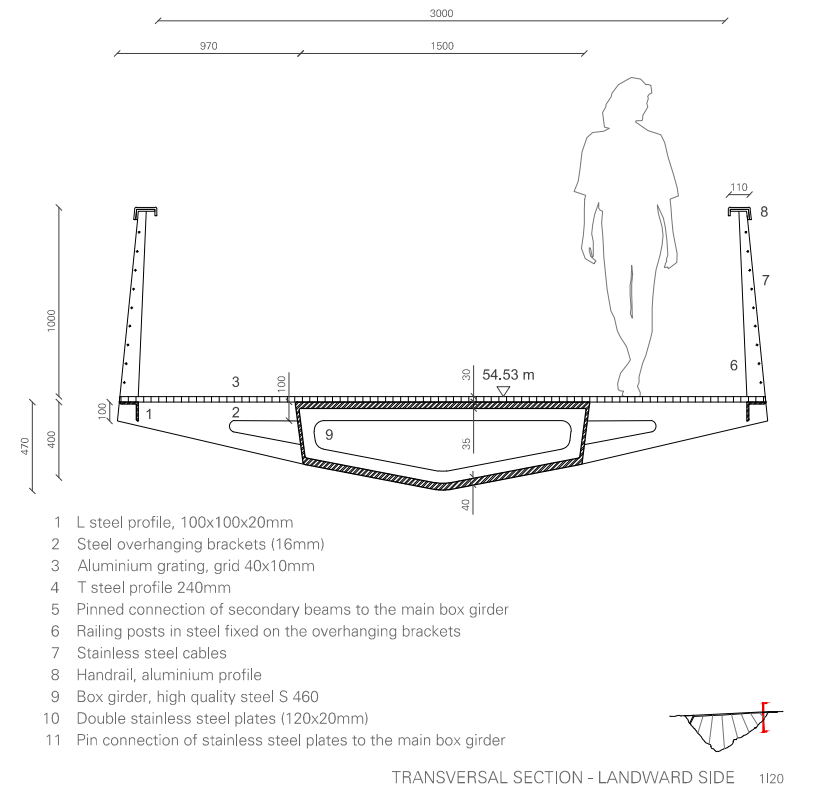
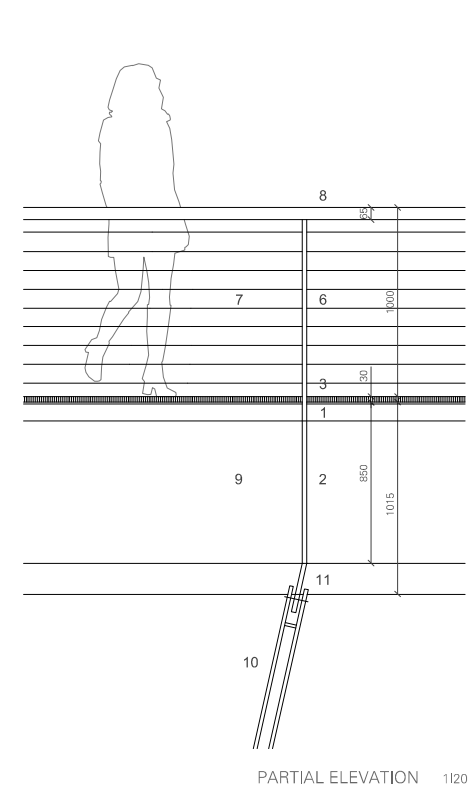
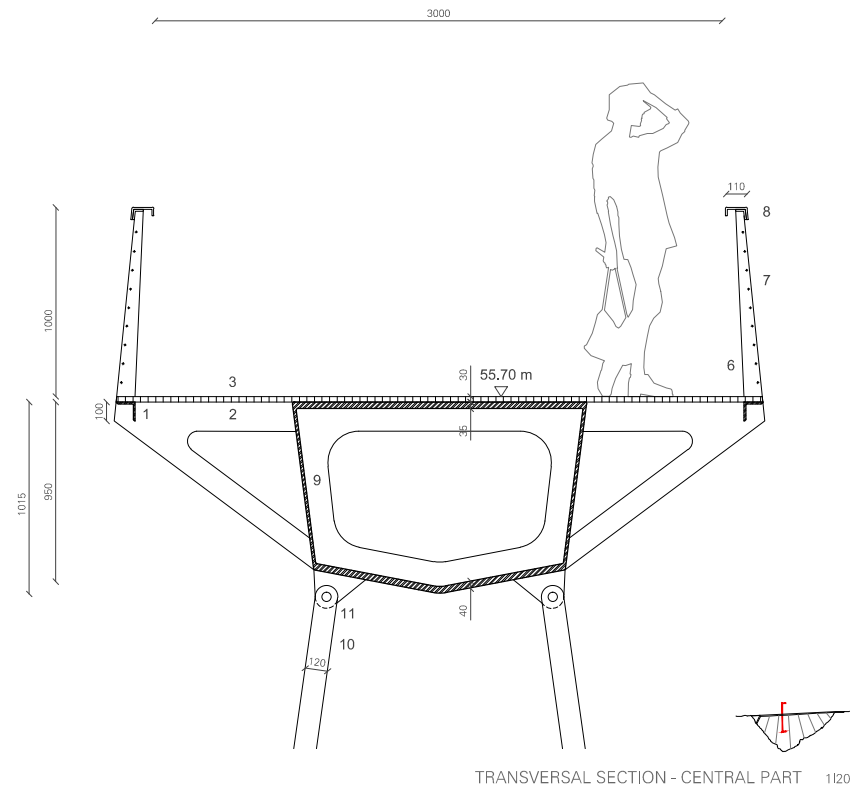
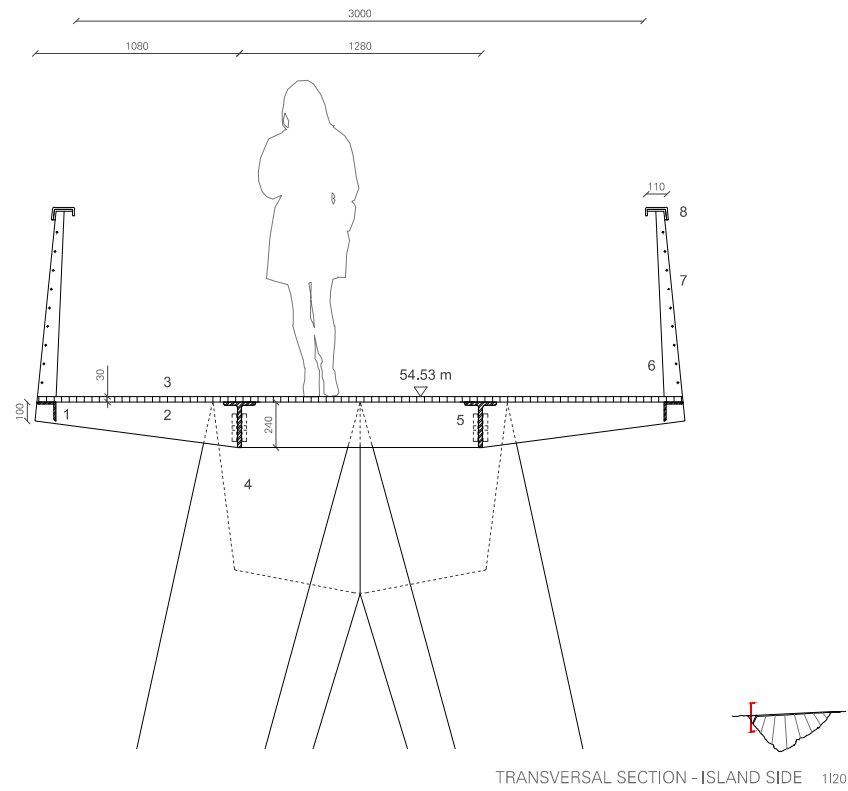
Pre-stressing means that the 65m-long walkway is both light and rigid. Magically it uses the maximum potential that is within the structural elements themselves.

The bridge is posed on the landward side and it is received by inclined pillars on the island side, providing a structural gap that recalls Tintagel's symbolism and recreates the processional entrance to the sacred island.

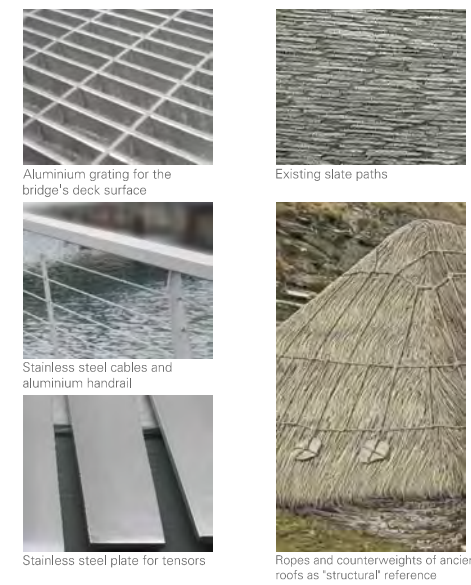


A LIGHT AND TRANSPARENT PLATFORM

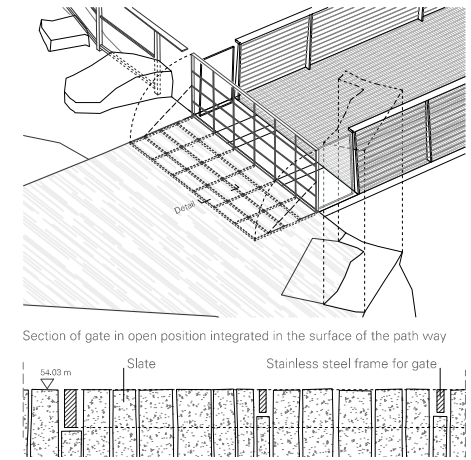




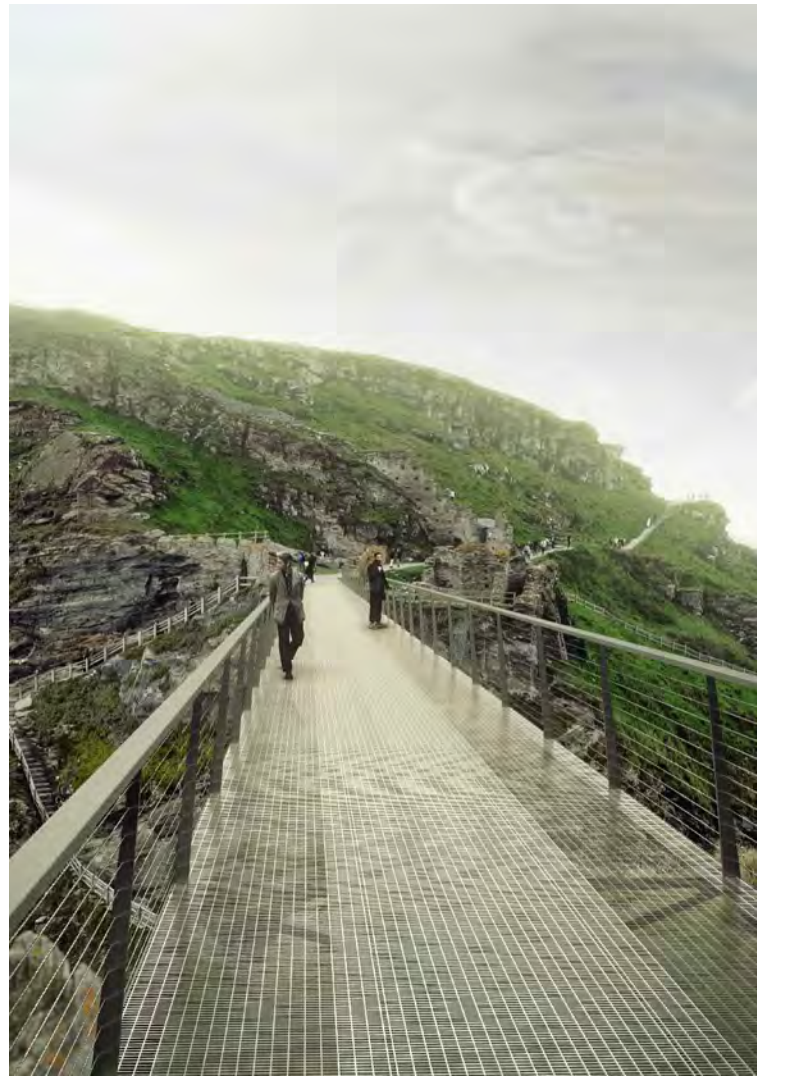
- 1 L steel profile, 100x100x20mm
- 2 Steel overhanging brackets (16mm)
- 3 Aluminium grating, grid 40x10mm
- 4 T steel profile 240mm
- 5 Pinned connection of secondary beams to the main box girder
- 6 Railing posts in steel fixed on the overhanging brackets
- 7 Stainless steel cables
- 8 Handrail, aluminium profile
- 9 Box girder, high quality steel S 460
- 10 Double stainless steel plates (120x20mm)
- 11 Pin connection of stainless steel plates to the main box girder



MATERIALS



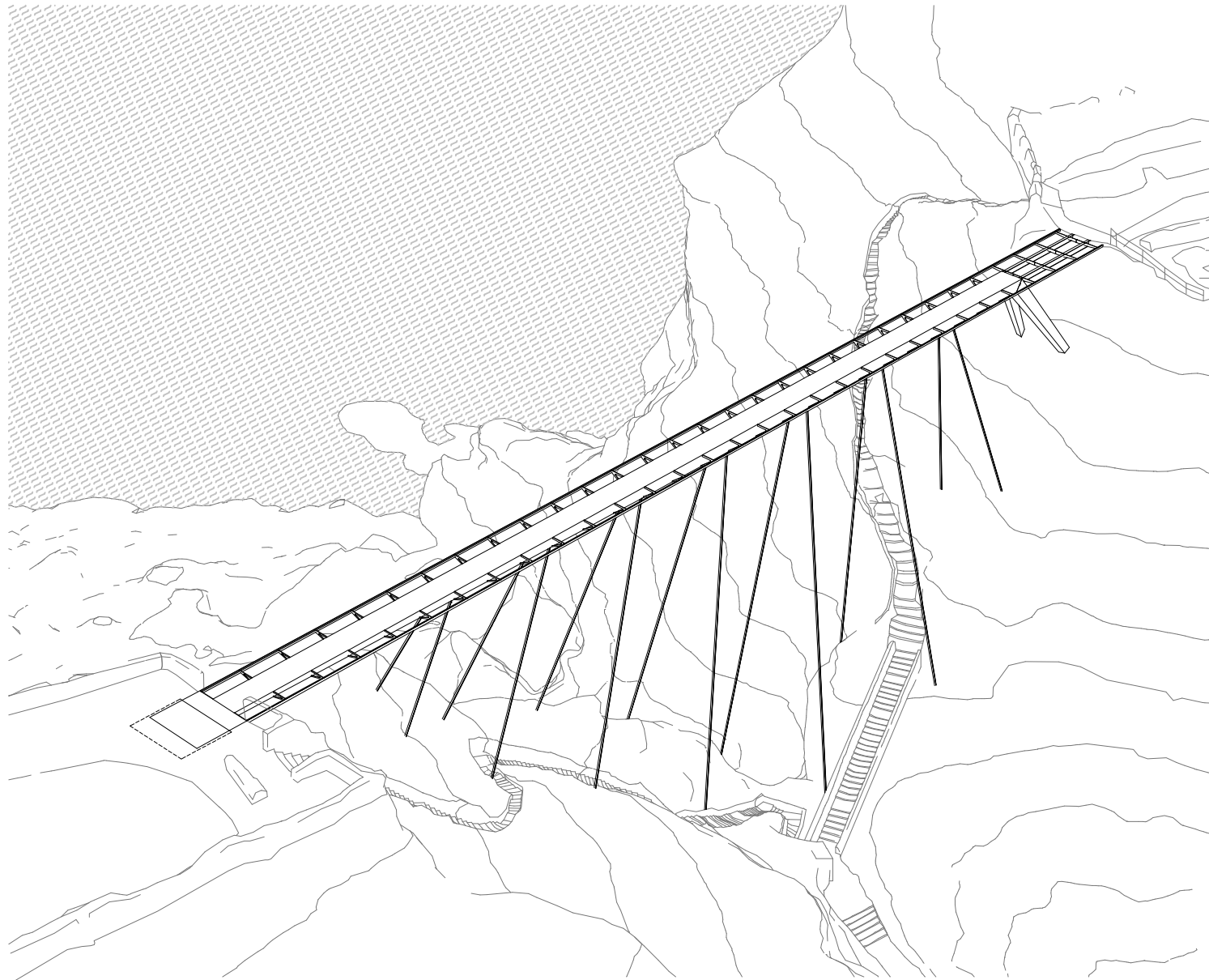
To close the bridge, a gate integrated in the path near the abutments can be lifted by a simple hydraulic piston



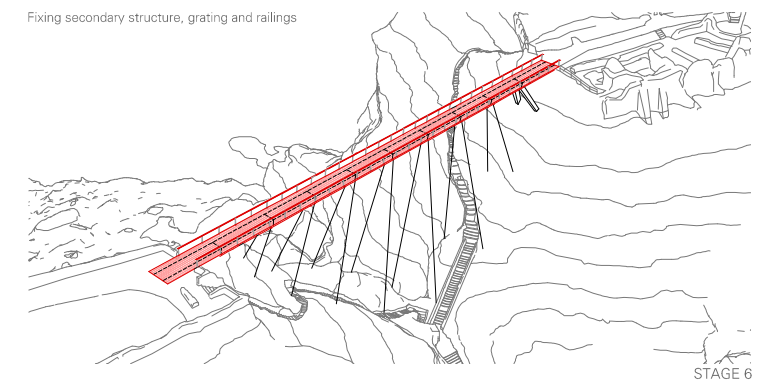
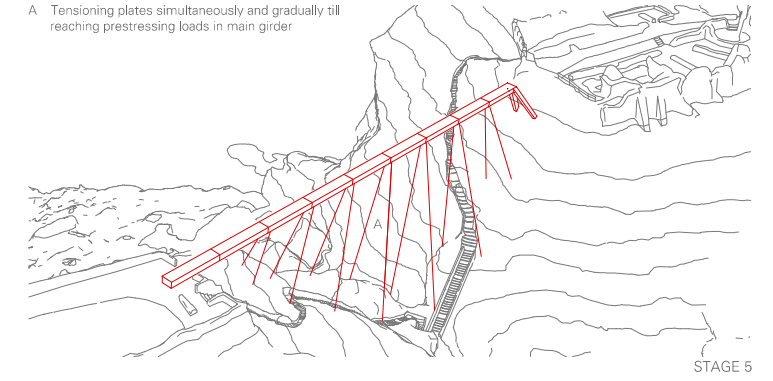
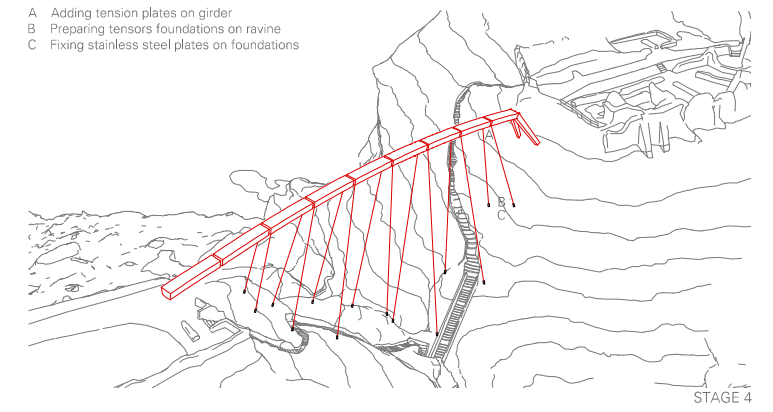
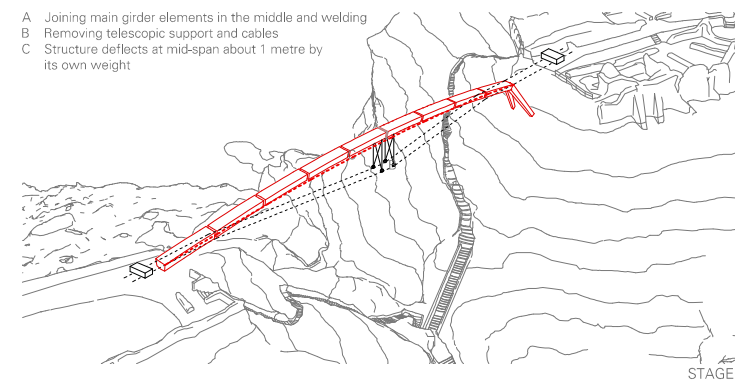
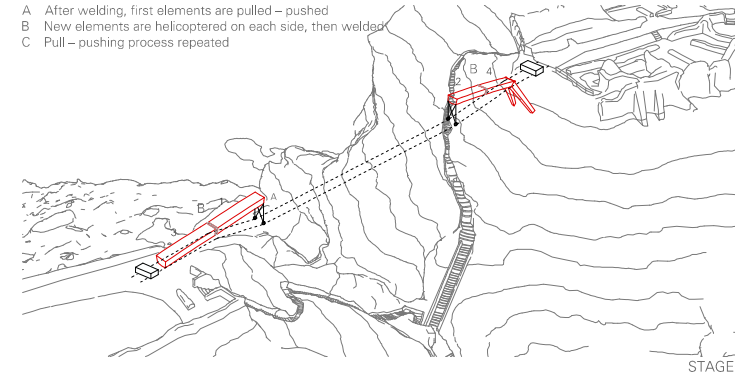
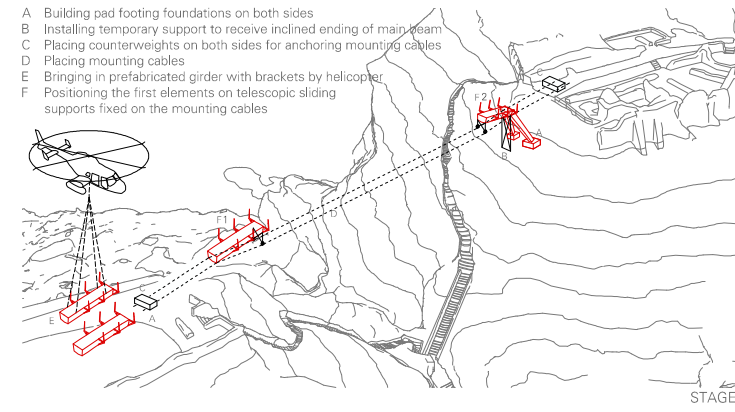
THE ALUMINIUM GRATING, A SAFE AND TRANSPARENT PATH

On the island side, the main abutments are built into the slope, keeping a comfortable distance from the upper cliff and the archaeological remains. Two secondary beams support the loads of a short span of 7.3 metres, enhancing the gratings transparency. A glass plate flooring and railing mark the entrance to the island.

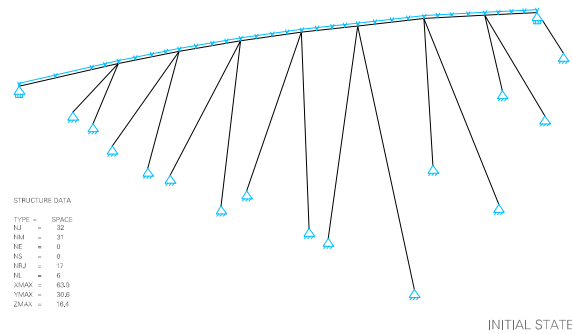
The bridge's abutment on the landward side is situated inside the lower ward, at a comfortable distance from the cliff.



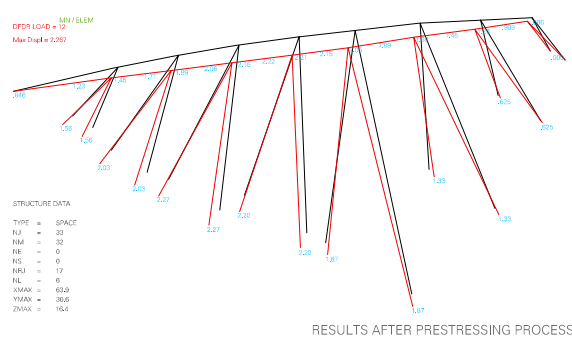
STRUCTURAL AXONOMETRY



CONSTRUCTION PROCESS

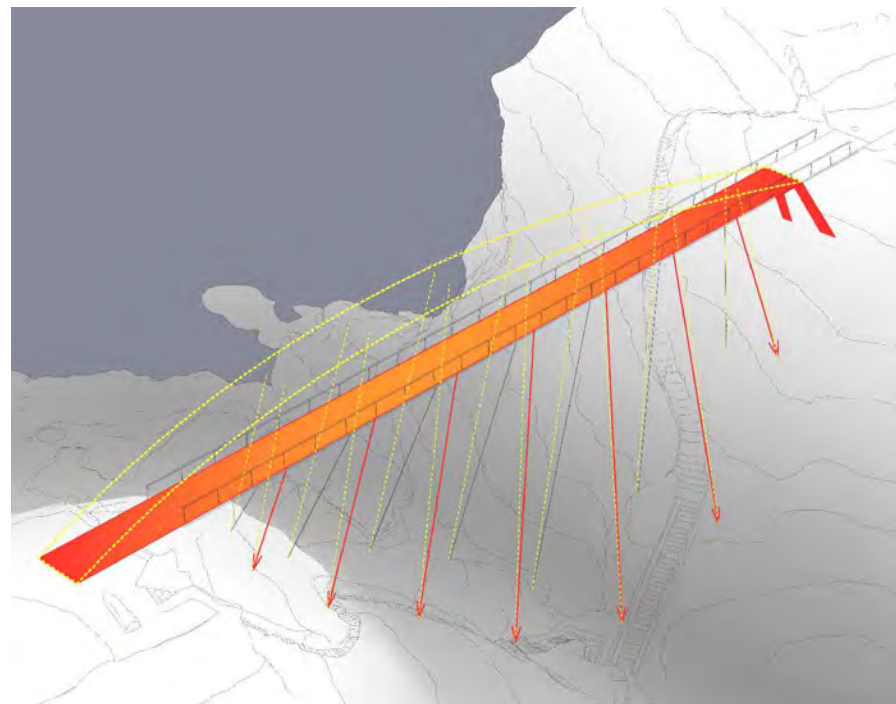


INITIAL STATE

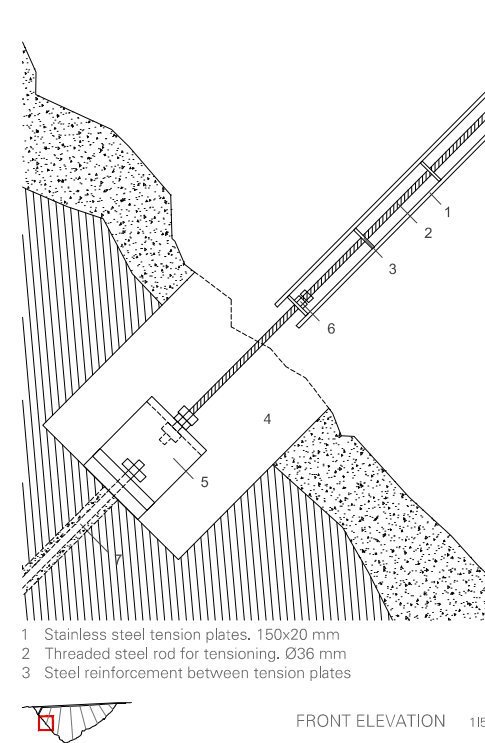


RESULTS AFTER PRESTRESSING PROCESS

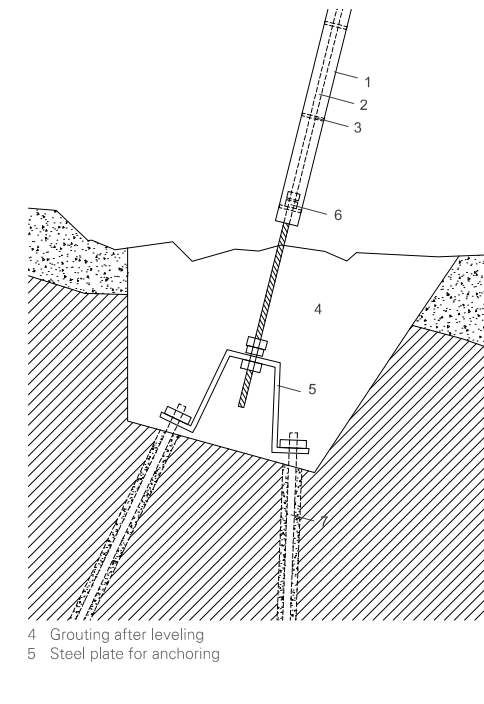
STRUCTURAL CALCULATION MODEL



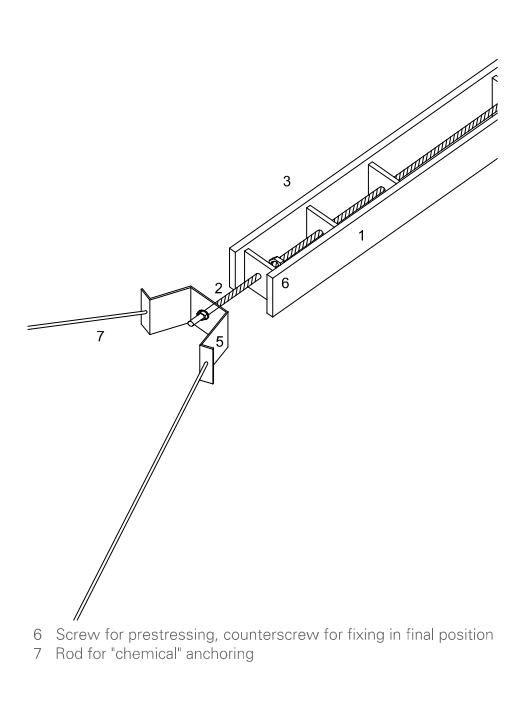
PRESTRESSING, STRUCTURAL BEHAVIOUR



FRONT ELEVATION 1:150



SIDE ELEVATION 1:150



ANCHORING DETAIL



REESTABLISHING THE HISTORIC WALKWAY TO THE ISLAND, FILLING THE VOID WITH PRESTRESSED STEEL PLATES.
VIEW FROM THE SOUTH-WEST COASTAL PATH



REBUILDING THE HISTORICAL ISTHMUS.
VIEW FROM THE ISLAND'S PLATEAU



VIEW FROM THE LOWER LEVEL TOWARDS THE LANDING OF THE NEW
LIGHTWEIGHT AND TRANSPARENT BRIDGE



A STEEL GIRDER PRESTRESSED BY CABLES ANCHORED IN THE RAVINE.
VIEW FROM THE EXISTING STAIRS ON THE LANDWARD SLOPE