

A13 Cycle Bridge & Eco-Crossing



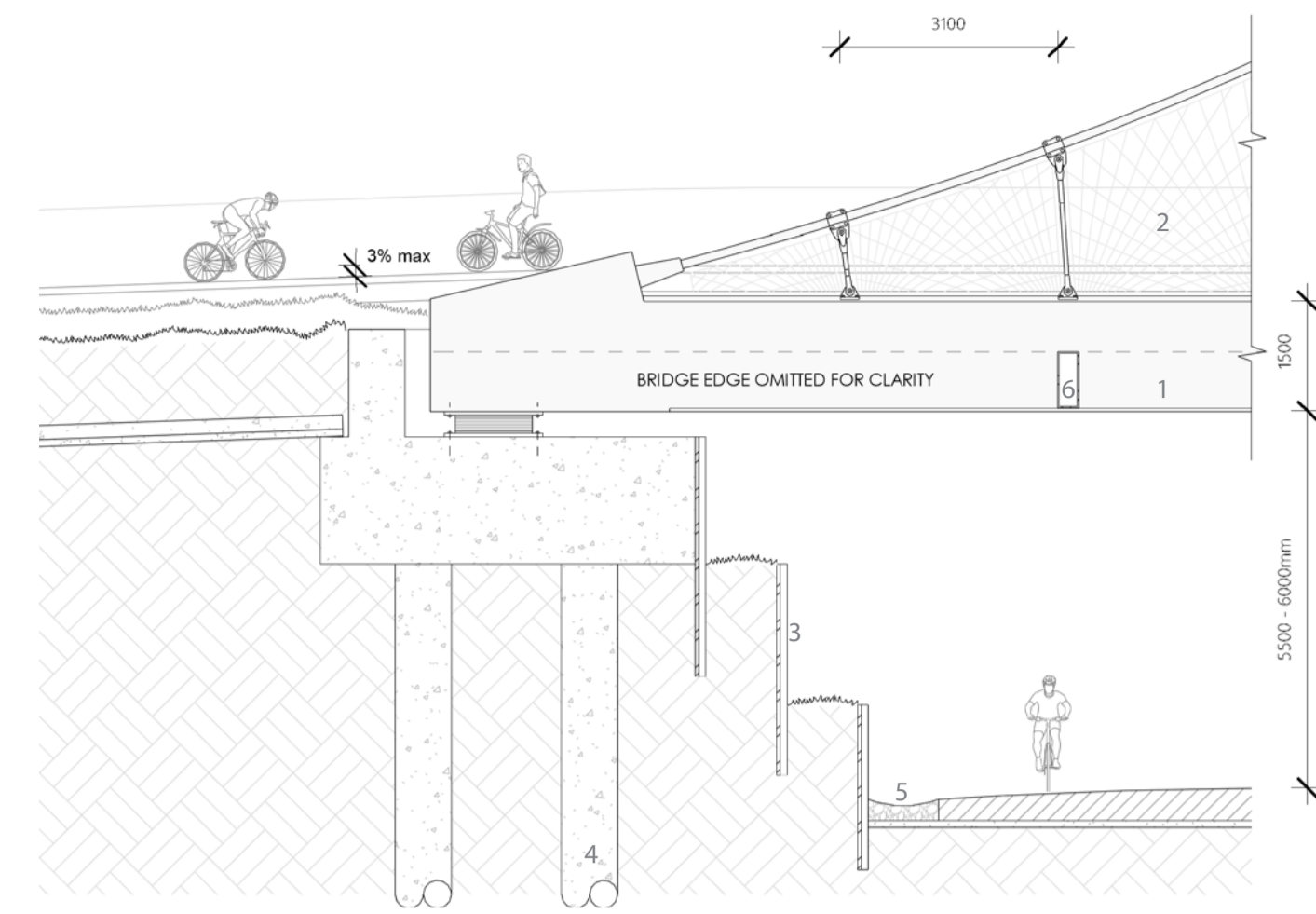
VIEW FROM A13 MOTORWAY FACING SOUTH



PLAN
SCALE: 1:500



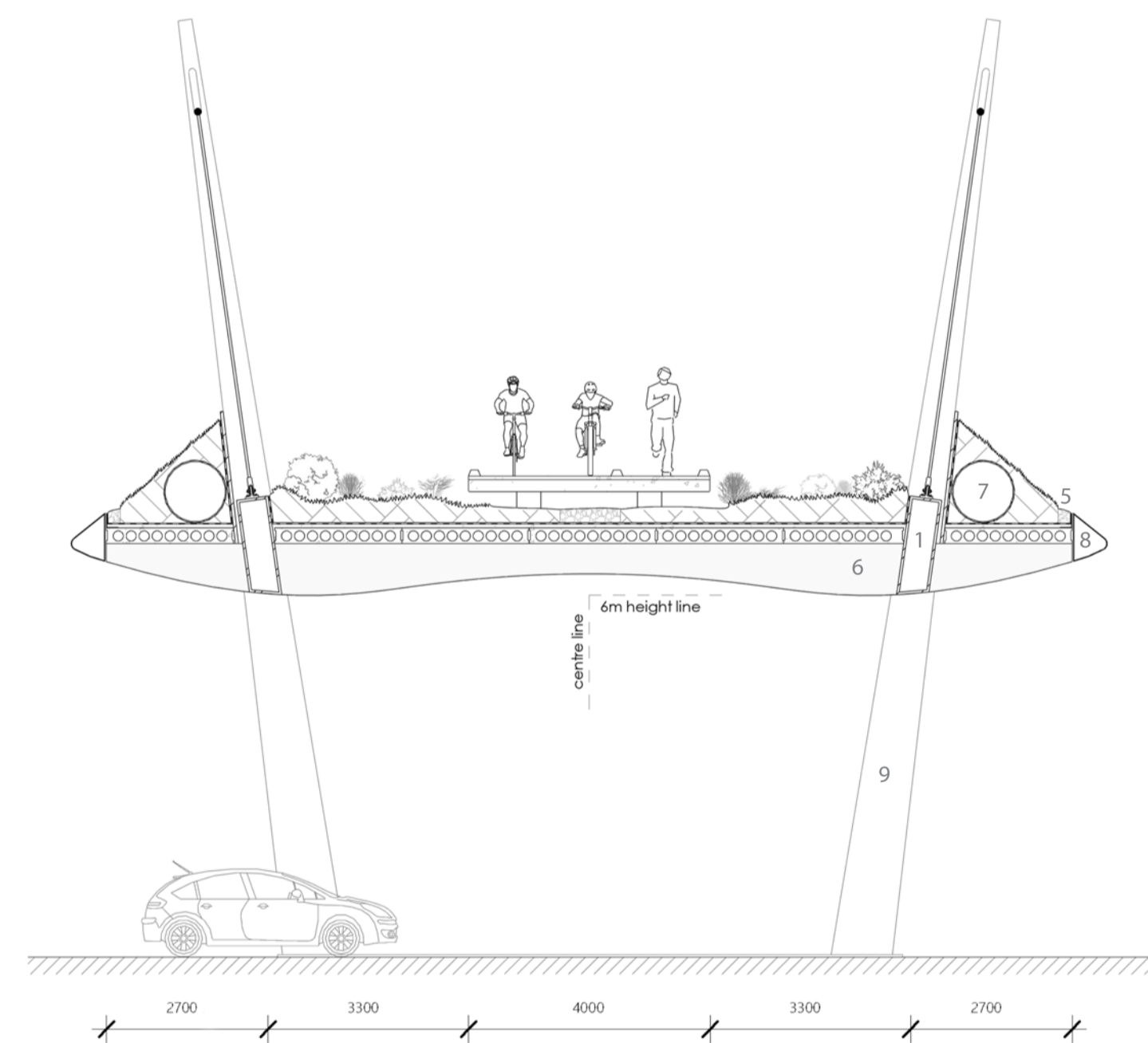
ELEVATION
SCALE: 1:500



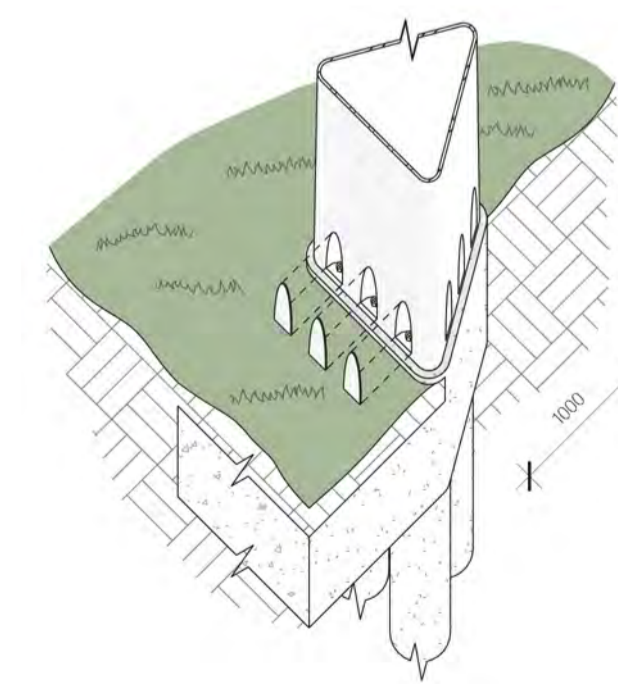
SECTION A-A
SCALE: 1:100

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|-------------------------------|-----------------------------|--------------------------------|
| 1. Longitudinal beams | 6. Steel cross-beams | 11. 600mm deep ground beam |
| 2. Safety cable barrier | 7. 1000dia animal tunnel | 12. Bolt connections concealed |
| 3. Steel sheet retaining wall | 8. Copper edge extrusion | 13. Steel starter bar |
| 4. 400dia concrete piles | 9. Triangular steel support | 14. Insitu concrete column |
| 5. Stone drainage channel | 10. Precast concrete deck | 15. 60mm concrete screed |

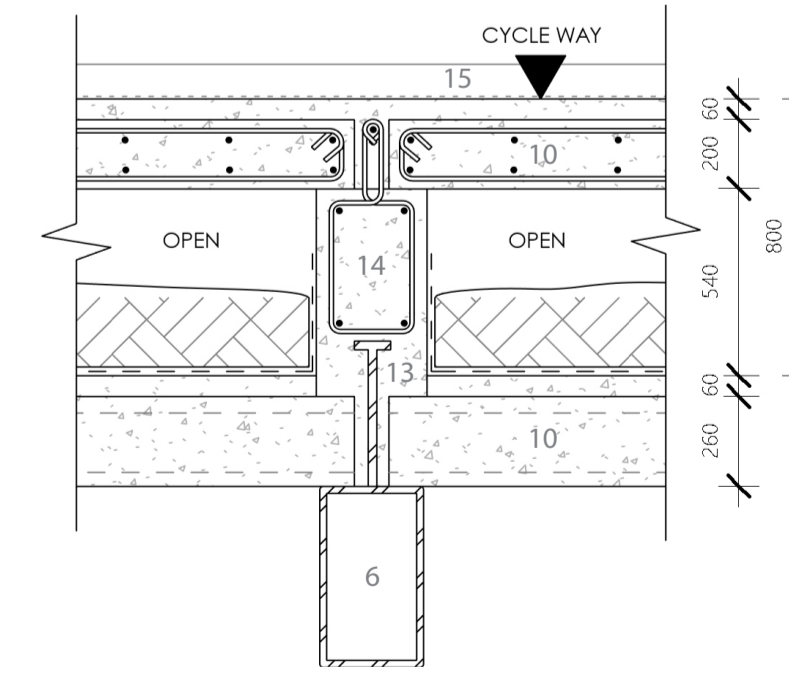
DRAWING LEGEND



SECTION B-B
SCALE: 1:100



TYPICAL PYLON BASE
SCALE: 1:50



TYPICAL DECK CONNECTION
SCALE: 1:25



VIEW FROM DECK FACING EAST

Introduction - The new eco-crossing, pedestrian and bicycle bridge crosses the A13 motorway approximately 2km from Delft and TU Delft University. The Midden Delfland and South Polder of De Waal, also known as Central Park, is a unique green area framed by the urbanization of the Randstad. The area is characterized by leisure, nature, culture historical and agricultural values. The new bridge is at a strategic location to connect two nature reserve areas which were previously divided by the motorway. The structure acts as a icon for the landscape and a double gateway: first for animals and people between nature reserves, and second for vehicle traffic into, and out of Delft.

Construction - The construction has been chosen to express a mid-point between the urban and the organic – between Delft's innovative image [TU Delft] and that of the nature reserves. The bridge is a steel cabled suspension structure which is self-anchored to two longitudinal steel beams. The curves of the main cables coupled with the radial arrangement of pylons and secondary cables emphasises the relationship of technology and nature. The lattice of steel cross-beams and longitudinal beams is flush and expressed on the underside of the deck. The cross-beams have been arranged perpendicular to the motorway. A copper moulding is fixed to the sides providing a seamless curvilinear surface between the structure and landscaping.

Arrangement - The integrated arrangement of structure, landscaping and cycleway, is suitable for this specific location due to the relatively low frequency of bicycles and pedestrians and the nature of the animals – people cross mostly in the day-time and animals cross mostly in the night-time. Therefore, no lighting has been provided. A secondary green berm each side of the bridge provides crossing for small creatures while also creating an uninterrupted green band visible to motorists.

Details - The cycleway deck is 4m wide, suitable for emergency and small maintenance vehicles. The deck is divided into 1m for pedestrians and 3m for 2 lanes of cycleway. The maximum slope of the ramp is 3%, suitable for wheelchair accessibility. The clearance above the motorway is 6m and 5.5m over the side road. The functional width of the eco-crossing is 10.6m + 2.7m wide berms.