



This dramatic opening pedestrian and cycle bridge, known as Lykoben or “Wishbone” bridge, is part of planned developments at Hammerby Sjöstad south of Stockholm’s city centre, and spans 80m across a busy shipping channel. The navigation clearance is 12m in the closed position, but the bridge is required to open to allow large vessels to pass. One of the technical challenges was to provide disabled access at a maximum gradient of 1:20 without excessively long access ramps, for which there was little space, and to link the quaysides directly, and this led directly to the geometric form of the bridge.

A sculpted concrete stair arches over the canal, in a form reminiscent of Stockholm’s other arch bridges, but this apparent arch is not an arch at all because of the opening configuration. The bridge opens at midspan and the tip of each half-bridge is tied back by a cable to a raking mast acting as a counterweight. A high level lightweight steel deck is hung from this cable and reached by a platform lift running up the inclined masts, providing access for disabled users and those with bicycles or pushchairs. When closed, the bridge appears to be a combination of an arch and a suspension bridge, but the structural surprise of splitting such an arrangement at midspan lends drama and excitement to the opening event.

The weight and angle of the raking masts provide sufficient counterweight to keep the system balanced. The centre of gravity of each half-bridge falls within the central area of the 8m diameter turntable under all combinations of self weight plus imposed load.

The design was developed in collaboration with Wilkinson Eyre Architects and was the winning entry in an international design competition held by Stockholm City Council in 1997. The council regrettably decided not to go ahead with this scheme and so the bridge has not been built.

Client:
Stockholm City Council

Location:
Hammerby Sjöstad, Stockholm

Service Dates:
1997-1998

Services:
Concept design

Architect:
Wilkinson Eyre Architects

