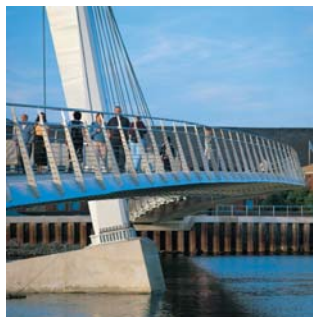




The design of this landmark bridge incorporates a curved steel deck supported by stay cables along one side and a 50m high inclined steel mast. The bridge provides an essential crossing for pedestrians and cyclists from the city centre to the new Port Tawe Innovation Village.

The deck is supported along one edge by 70mm spiral strand stays in an attractive semi-fan array. A slender steel box girder carries the cycle track and provides the torsional stiffness necessary because of the eccentric cable support, and cantilevered ribs support lightweight aluminium decking for the footway along the outside of the curve. Tuned mass dampers have been designed and installed to control potential dynamic movements under large crowd loading, and aerodynamic fairings are included on the upstream side to prevent large wind-induced vibrations.

The Sail Bridge is one of two river crossings constructed by Balfour Beatty with steel fabrication and erection by Rowecord. The other crossing is over the tidal barrage downstream and comprises a large 80m long steel truss over the weir and a double leaf swing bridge over the lock for which M&E specialists Bennett Associates provided design services.



**Client:**  
Welsh Development Agency

**Architect:**  
Wilkinson Eyre

**Location:**  
River Tawe, Swansea

**Service Dates:**  
2002 - 2003

**Services:**  
Detailed design, erection analysis, dynamic analysis, development of contract documents, maintenance manuals, planning consent, construction supervision & post construction monitoring.

**Awards:**

- The Lord Mayor's Design Awards 2003
- The Civic Trust Awards 2004
- ICE - Wales Region George Gibby Award - Joint Winner for team work 2004
- The Structural Steel Design Awards 2004