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Raising the bridge

The Great Wharf Road Bridge, designed to provide new access to Canary Wharf in London's Docklands, has had a massive hydraulic cylinder installed allowing it to be raised, so letting ships to pass in and out of West India Quay.

The north end of the 800t, 67m long structure will be raised 18.2m by the 40t ram to allow a 15m by 15m navigable channel beneath. Designed and manufactured by Hunger Hydraulic



in Germany to a brief from consulting engineers Bennett Associates, the hydraulic ram is believed to be the largest installed in the UK.

The telescope ram is a two-stage unit with 800mm and 910mm cylinders inside a 12.9m long by 1.235m o.d. outer casing and is powered by three 132kW power packs to enable the bridge to lift in 555secs and lower in 390secs. Trunnion bearings at the base of the ram and a pivoting clevis at the top allow a 7° rotation of the ram either side of vertical as it raises and lowers the bridge.

The architect was Wilkinson Eyre with Gifford & Partners acting as lead consultant and structural engineer for the project.

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