

Cardiff Barrage, U.K.

Contractor—Balfour Beatty/ Costain Joint Venture

Owner—Cardiff Bay Development Corporation
1999



Proserve Ltd.

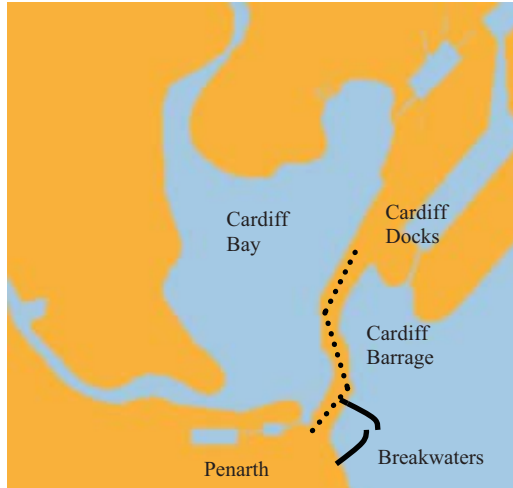
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Fabriform

Cardiff Bay is a sheltered inlet covering about 200 hectares on the Bristol Channel at the mouths of the Rivers Taff and Ely.

The Cardiff Bay Barrage is 1.1 km long and extends from Cardiff Docks in the North and Penarth in the South. It has created a freshwater lake with over 13 km of waterfront



Location Plan



Cardiff Barrage Breakwaters

To the south end of the barrage a protective harbour of 2 curved breakwaters was constructed to protect the locks. The breakwater arms were constructed from a series of massive pre-cast caissons each 17 m high and weighing between 2,500 and 4,500 t. These caissons were individually cast in a dry-dock in Cardiff, and floated into place onto a rock filled trench. Once in location the caissons were filled with sand, and the gaps between them sealed using Fabriform Seals as shown below. The pairs of seals were located in protective recesses and allowed mass concrete filling of the caisson joints



Seal Being Filled



View Down Filled Seal