Water Resource Associates

A network of consultants in hydraulics, hydrology, groundwater & environmental issues

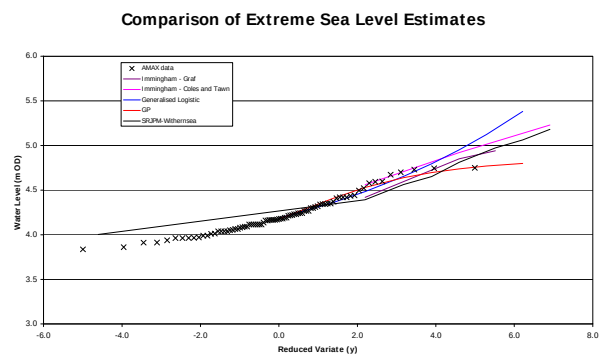
Project title: **Flood Study for Killingholme Power Station on the Humber Estuary**

Summary: Analysis of the potential risk of flooding at the South Killingholme power station owned by NRG.

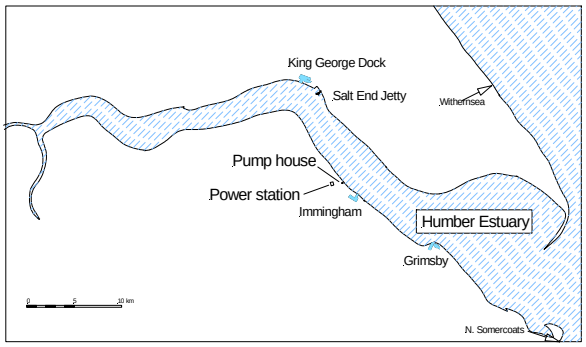
Client: Stone & Webster Consultants	**Financed by:** NRG
Period of assignment: 2001-2002	**Location**: United Kingdom
Project Value: £ 18 950	**WRA services**: Flood risk assessment

Background

Killingholme power station is located 1 km from the Humber estuary but the pumping station for cooling water is only 50 m from the coastal flood wall. As part of a review of the power station undertaken after a change of ownership, WRA was asked to give expert advice on flood risk. This involved determining the relative risk of river and coastal flooding. In the case of coastal flooding, data on maximum tidal surge levels were collected, including a few levels from the 19th century, and these were analysed to assess the frequency of flooding which might occur at the power station and the pumping station. Tidal surge analysis was combined with Humber river flood analaysis to produce joint probability estimates of extreme flood levels at the power station for a range of conditions.



Killingholme power station



Location of the Power Station on the Humber Estuary

Killingholme power station

Cooling Water pumping station

Project Number 000088

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