

Further information:

**Edenvale Young Associates**

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**Project Description number:**

EVY0350

**Project Type**

Flood Risk/Consequence  
Assessment

Flood Forecasting

Detailed Design

Calibration & Optimisation

Flood Map Challenges

Scour & Geomorphology

Water Framework Directive

Environmental Impact  
Assessment

Training

**Key Words:**

Scour Protection Design

Development of tidal / Surge  
boundary conditions

Hydrology (FEH)

TUFLOW Hydraulic Modelling

TUFLOW FV Modelling

Geomorphological Monitoring

Flood Risk Management

**Client and other Organisations:**

Gwynedd Consultancy

Network Rail

Hochtief Construction

Hewson Consulting Engineers

Beazley Sharp

Nick Stilwell Associates

## Pont Briwet, Detailed Design

Edenvale Young's responsibilities included the:-

- The detailed design and specification of rock revetment structures. This included: evaluation of rock deterioration during the lifetime of the bridge; assessment of wave conditions against the approach embankments and design of falling toes at the base of the structure.
- Design of scour protection under the bridge and localised scour protection to the piles using the results of the TUFLOW FV modelling.
- Preparation of a water quality monitoring strategy which included sampling and testing before during and after construction.

### Project Details

In May 2013 Hochtief Construction was successful in winning the design and build contract for the Pont Briwet Bridge in North Wales. Edenvale Young, Hewson Consulting Engineers (Bridge Design), Beazley Sharp Railways and Nick Stilwell Associates (Highways) were appointed to undertake the design of the bridge.



*Illustration 1: Pont Briwet (Existing Structure)*



*Illustration 2: New bridge structure (Under construction)*



*Illustration 3: Rock Armour Protection to embankments*