

UK's Largest Privately Funded Glass Wall Flood Defence System.



Gimblet Rock Holiday Park in Pwllheli, is a popular family holiday destination offering a wide range of activities to entertain both young and old, including sports and leisure facilities, golfing and sea fishing.

Gimblet Rock's popularity as a holiday destination has seen the site grow in recent years but due to its coastal location, there is a constant risk of flooding.

Although the site had in place an existing sea defence wall, it suffered extensive damage after tidal storm surges struck in Winter 2014 (Hurricane Ophelia) and again in Autumn 2017 (Storm Brian). With the ever-present flood risk, there was a possibility that future insurance cover might be withdrawn and as a result, Haulfryn Group, owners of Gimblet Rock Holiday Park, chose to upgrade the existing flood defence system to protect the park from future

tidal surges, whilst making sure seafront customers would still enjoy the magnificent coastal views.

After much detailed work with their own team, Haulfryn issued an invitation to tender to selected contractors for the provision of a suitable glass wall system, the contract for which was ultimately awarded to IBS Engineered Products.

The basis for the proposal submitted by IBS arose from discussions and correspondence between the park owners and the insurers, whereby continuing insurance cover for the park was reliant on the park owners offering a level of protection of 1:200,

which equates to a 0.5% annual probability of flooding in any given year, plus an allowance for climate change.

In the role of principal contractor, IBS's specific task was to design, supply and install a 173m long x 1.3m high glazed flood wall/ spray screen, fixed to the top of the existing sea defence wall (which itself required extensive re-profiling) and that would provide protection to the holiday park and the seaward facing holiday homes directly adjacent to the wall.

The clear glazed flood wall was essential to minimise the visual impact and aesthetics of any flood defence system – the client specifying that the seaview be preserved as much as possible, whilst not compromising the protection the system would provide.

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Sector:
Flood

Location:
Coastal

Client:
Haulfryn Group

Main Contractor:
IBS Engineered Products Ltd

Product/s:
Glass Wall

Size:
173m long x 1.3m high



Following the tender process, work commenced on site in November 2018, with IBS providing a construction phase plan in accordance with Construction Design & Management (CDM) requirements. Pre-design and installation works were undertaken to test the wall, by installing a number of bolts along the length of the wall and carrying out 'pull tests' to prove the strength of the existing concrete core. A drone survey of the existing wall to ascertain levels and orientation was undertaken, allowing for subsequent detailed design and drawing work of the complete glass system, including special angled panels and corner posts for the sloping section of the wall.

On site, IBS established a compound for welfare and equipment storage, and then proceeded to set out the glass wall defence line; The top of the very uneven existing sea wall required significant levelling work to provide

a suitable surface for the new glass system to sit on. Equipment deliveries were managed in stages to suit progress on site and using a specialist sub-contract partner, Floodsafe Projects, the installation of the glass system was executed in co-ordination with the park management team and their specific requirements.

The installation work itself required a variety of equipment, including mechanical lifting gear, a spider crane, glass suction lifter, specialist scaffold for hard-to-access areas,

core drills, safety lines and a pull testing rig.

The project and work undertaken by IBS was a great success, being completed in April 2019, on time and within budget, but more importantly, to the full satisfaction of all parties, including the client and holiday homeowners alike.

As an added bonus upon completion, the project has earned Gimblet Rock the 2019 award for Risk Management from insurance broker Leisuredays.

