



**Customer** MAVI Properties Ltd

**Location** Llangollen

**Value** £250k

**Contract** NEC4 Option A (Design Option)

**Project Duration** 14 weeks

**Completion** Sept 2021

### Project Highlights

Acting as Principal Contractor, Knights Construction's Civil Engineering division were contracted to repair the collapsed river wall at the iconic Royal Hotel.

The damage was caused by an extremely bad storm and subsequent high river levels in early 2019. Further erosion exacerbated the damage in the time taken to arrange permits, gain access to the river and manage the demolition of part of a listed building.

Access to complete the works created the biggest challenge. Knights Construction were able to complete the advanced demolition works, required for the next phase of refurbishment to the Hotel, in order to erect a mobile tower crane with a 40m reach. This was fundamental to the safe delivery of the scheme. It allowed materials and safety equipment to be lowered into the river and debris from the collapsed wall to be removed.







### The Royal - River Wall



#### The Solution

Following the demolition of the modern extension to the hotel, a large concrete foundation slab was installed as a working platform for a tower crane.

Once the crane was in position, Knights own operatives were trained to operate the crane in-house. This allowed the repair works to commence!

With the vegetation cleared, the true extent of the collapse became apparent. To safely access the work area, large sand bags were placed into the river to stem the flow of water and protect the works from rising river levels.

The loose material was carefully removed from both the wall and the river bed, and the damage assessed in conjunction with the Structural Engineer. A solution was developed which included constructing a 60m section of reinforced concrete foundation and retaining wall, including under-pinning sections of the existing wall. These were anchored into the underlying bed-rock, and in total 120m<sup>3</sup> of self-compacting concrete was poured into the retaining structure.

Once the retaining wall was complete, the wall was faced with local stone to ensure it was aesthetically in-keeping with the local area.

The wall is within an area of national historical and ecological importance, and the project planning required collaboration with the Local Authority, Conservation Officers, CADW and NRW.

The completed wall ensures the stability of the embankment, and paves the way for the refurbishment of the Royal Hotel - Knights Construction's Build Division's upcoming project!

The client, MAVI Properties Ltd, praised the team for their excellent work in an extremely difficult environment.

