



Case study Warwick

Project: Appearing void

The Problem

A large terraced property in the centre of Warwick reported a claim for a void appearing to the rear of the property. The house was tenanted and formed the entrance to a communal courtyard area to the rear and opened onto a busy shopping courtyard to the front. The property is next to a large restaurant and hotel meaning we had to be careful to minimise our activities on stakeholders all around the property.

The void was examined in more depth and it appears that the house which was constructed in the 1970's over the vaulted cellar of the original property. Leaking drainage and fatigue is believed to have caused the brick arch rings to fail and the void which extended the full depth of the property was full of collapsed masonry, causing the ground floor slab to be self supporting and the inner partition walls and staircase cantilevering the void. The tenants had been evacuated by the Local Authority and the landlord required the property to be habitable as soon as possible.

The Optera Solution

Surface water drainage was immediately diverted and we erected hoarding to the front and rear of the property to provide a works area and prevent unauthorised access. Our Structural Engineer designed temporary steelworks which comprised a series of beams which extended through the building to reaction points beyond the building with a series of needles which provided intermediate support, whilst we undertook sub floor works.

The ground floor was broken out and all of the rubble removed with conveyors transporting the spoil to the roadway where it was removed by skip.

Once cleared, we were able to assess that the surrounding natural ground was a competent sandstone. New foundations were cast and trench blocks used to bring the foundations up the existing ground floor. The remaining void was filled with C4 foamed concrete. We provided insulation to comply with current building regulations and reinstated the building to its original configuration. Drainage was reinstated and the rear courtyard repaired to allow the surrounding occupants to use their access and parking, was able to remain within the property for all but one day of the operation, minimising the inconvenience and disruption of long term alternative accommodation.

Project Conclusion

Claims of this nature will often require detailed and protracted investigation from engineering or geotechnical consultants. The impact that the problems were having on surrounding land users meant that we did not have the luxury of time to do this. We immediately set about completing the works and avoided any business interruption to surrounding businesses and inconvenience was minimised. Our involvement in this case has saved the client £600,000.00 in property value alone. No allowance is made within that estimate for potential business interruption costs, loss of rent and the many other consequential losses which would have resulted in the failure of the property.

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