

## Regent Street Disease

a.k.a. **Deansgate Disorder**

STEEL FRAME, DEFECT, CORROSION

**A significant defect found most typically in buildings constructed with a steel frame, where a combination of corrosion of the frame and the close fixing of masonry/stonework to the façade leads to cracking and failure of the elevation finishes.**



### THE CAUSES

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The onset of Regent Street Disease starts with moisture absorption through cladding material (e.g. Portland Stone, etc.) which forms a façade on a given steel-framed building. The absorbed moisture then reacts over time with the steel frame causing corrosion.

The corrosion causes the steel to expand significantly, pushing outwards against the cladding material, in turn causing cracks to form. In turn, this progressively allows further moisture to penetrate and the issue to exacerbate until the corrosion/expansion is severe enough to cause substantial failure

During the 19th and early 20th Century, such cladding was typically fixed tightly around the steel frame of a building, where the lack of cavity then results in there being no tolerance for such expansion and then leads to the cracking and failure described.

Regent Street Disease is not geographically limited to Regent Street, London, or even the UK. It's most common synonym in the UK is 'Deansgate Disorder', based on the famous Manchester nightspot.

### THE CONSEQUENCES

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Regent Street Disease is a progressive and serious building defect which is difficult and costly to resolve. As with any defect involving water ingress, the resultant damage can quickly worsen and spread. After cracks to the façade start to form, these areas are likely to worsen and may also then appear in other locations, including beams and adjacent elements.

Left unattended, the issue exacerbates and can lead to masonry displacement (masonry falling off buildings) causing significant risk issues to public safety, with a serious risk of injury or even death.

### THE REPAIRS

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There are various repair options to consider should Regent Street Disease occur in your property, but early detection and action is required. This work is costly, and can require significant rebuilding work, though *cathodic protection* can be considered as a less invasive option.