Why Impact Testing Affects your Choice of Material

What are soft and hard body impacts?

Surface materials receive a large amount of exposure to the outside world and are therefore more liable to damage, especially impact damage. There are two types of impact damage; soft body impact and hard body impact. A soft body impact usually refers to a heavy cushioned item falling onto or against a cladding material. Hard body impacts are usually linked to contact with smaller items, e.g. a piece of building equipment being dropped onto a cladding material. Although both forms of impact can have an influence on a material, it is considered more challenging to protect materials against hard impacts as these occur regularly.

Why are impact tests so important?

Cladding panels fall victim to a large range of impacts, including cleaning and maintenance, deliberate vandalism, accidents from human impact and even debris carried in the wind. To avoid cladding panels getting damaged and to ensure they are less susceptible to impacts, both hard and soft body impact testing should be carried out on the material. As there are a large number of precautions we can take to increase the materials strength and resistance to impacts, impact tests highlight these potential risks and help depict what actions should be taken to avoid damage. Impact tests help ensure the correct material is chosen from the word go and sustain or even increase its in-service design life performance.

How does this affect you?

When choosing or specifying stone, it is suggested that there tends to be a considerable amount of focus on its overall aesthetics. It is encouraged that all designers need to consider Impact test results wherever possible and should aim to have some petrographic understanding of the stone or material they wish to use. Would you buy a car without test driving it? The same attitude should be applied to the process of choosing materials, especially stone. All should strive to understand their materials performance and it is advised to request all information available on Impact testing.