

# R&D Case Study: Construction Ceiling Client

**Our client, a construction contractor that specialises in the installation of dry-lining and suspended ceilings, has managed to recover in excess of £110,000 by way of overpaid corporation tax following a claim for research and development relief.**

Whilst much of our client's core business is standard installation work, during the accounting year our client has worked on a number of contracts where adherence to standard methodology has not been possible.

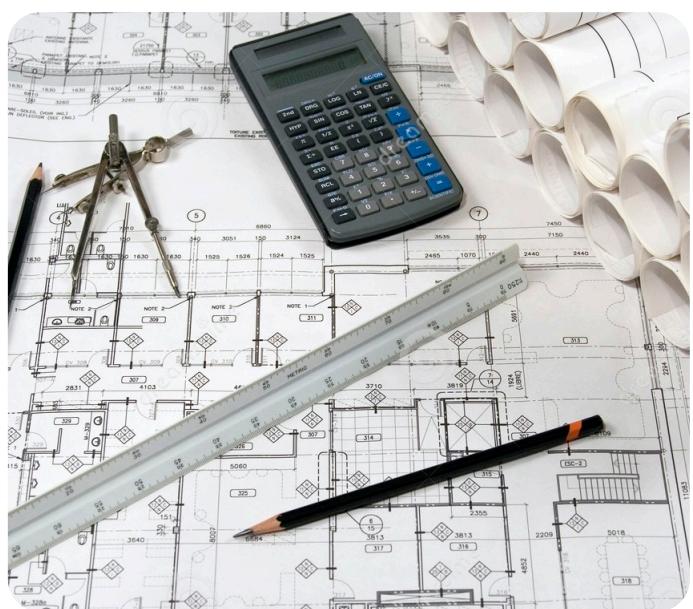
On account of there being no existing technical solution that could be used or adapted to fit a particular set of circumstances, our client has had to spend time and resource in trying to develop a new approach to enable the contract to be performed.

In many instances, this work has amounted to a technical advancement beyond what was possible previously. One of the R&D projects involved our client being tasked with designing and installing partitioning and ceilings into a 150-year-old office building which was to be converted into apartments.

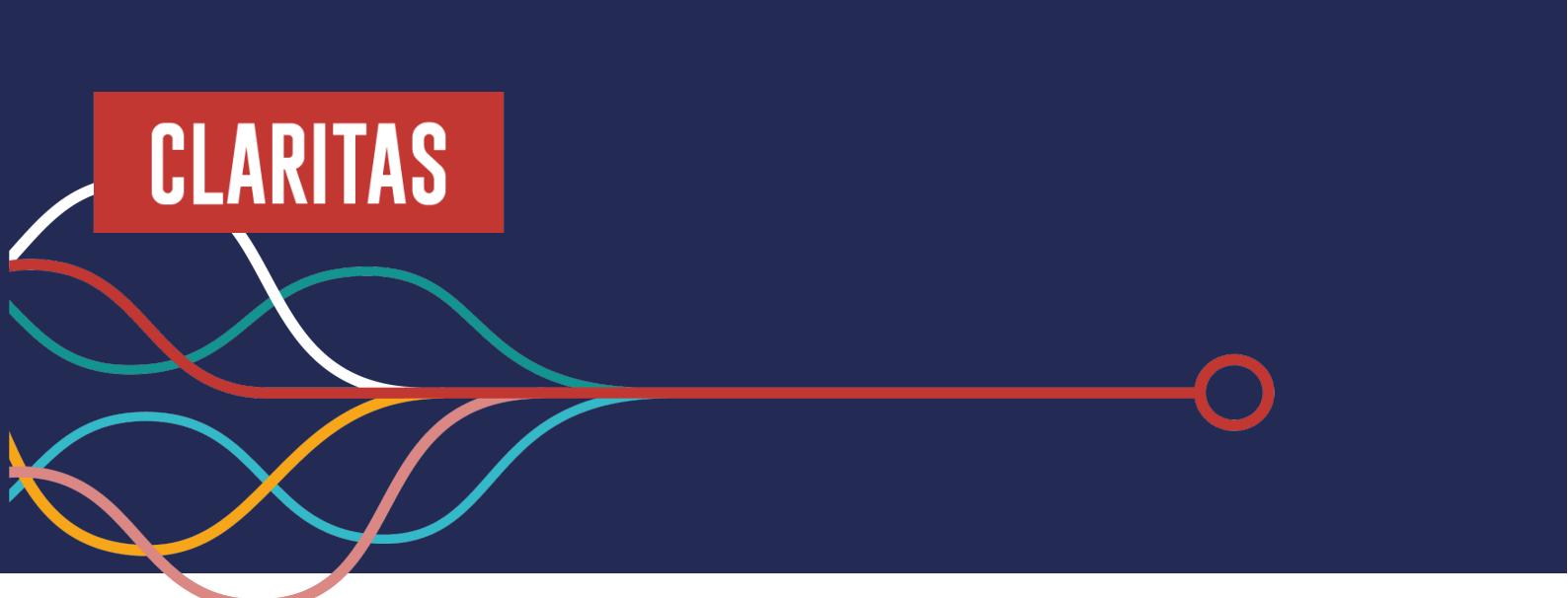
The original ceiling was a coffered ceiling, comprised of multiple recesses of 600mm x 600mm. The project's

architect's proposal involved the installation of two new ceilings; the first ceiling to cover the coffered ceiling, with the partitioning running from the ground to this ceiling and the second ceiling to be suspended below the second ceiling.

The two-ceiling structure had been proposed to achieve the intended acoustic performance and fire protection standards.



# CLARITAS



By covering the coffered ceiling completely, the proposed solution would counter the unwanted acoustic effects (such as amplification) caused by the coffers. The additional material would also provide additional 'burn-time' and protect the partition.

Our client considered the Architect's approach was too costly due to the amount of material and installation time required. It was the standard approach at the time in terms of mitigating against the risk of problems identified however our client was not able to readily identify an alternative technical solution.

Our client resolved to carry out research and development activity with the aim of attempting to create a new method of achieving acoustic performance and fire safety that would use less material and be more economical than the two-ceiling arrangement.

Research and development activity was carried out which resulted in the development of a new method, involving a combination of different but fewer materials, to achieve acoustic performance and fire safety.

There were substantial cost savings as a result. The research and development activity comprised analysis of the

problem, drawings of possible alternative solutions, assessment of new materials and combinations of materials, prototyping and testing for acoustic and fires safety performance.

Another of the R&D projects carried out by our client during the accounting period involved activity to improve partitioning methods so as to reduce environmental impact.

Standard partitioning methods involves combining different third-party materials; principally plasterboard, insulation material, fastenings and adhesives to a wooden frame.

The partitioning is then secured to the masonry using fasteners and adhesives. Activity has been carried out to investigate how plasterboard produced from recycled material may be used as a substitute for 'virgin' plasterboard.

Work has been carried out to determine how standard insulations and adhesives should be modified and used in combination with recycled material to achieve desired security and insulation properties whilst ensuring that the environmental impact is kept at a minimum.

# CLARITAS

The research and development activity has involved assessment of the comparative qualities of the recycled material; in particular, with regards to rigidity, insulation, and acoustic performance.

Work was carried out to determine a method of reducing the volume of insulation material within the partitioning and use mechanical fasteners as an alternative to chemical adhesives.

Prototyping was prepared- samples of new partition comprising different dimensions of plasterboard and insulation with trialling and testing to assess whether the prototype met the desired strength, acoustic and fire safety requirements.

**The outcome of this project was a 100% success.**

## Meet the Claritas Team:

For more information or to discuss any of the issues raised in this document, please contact one of our R&D experts below:



**Matt Hodgson,**  
Partner  
**E:** matt.hodgson@claritastax.co.uk



**Caroline Walton,**  
Senior Manager  
**E:** caroline.walton@claritastax.co.uk



**Mark Cuppello,**  
Tax Assistant  
**E:** mark.cuppello@claritastax.co.uk



**David Nolan,**  
Associate Partner  
**E:** david.nolan@claritastax.co.uk



**Faith Ross,**  
Manager  
**E:** faith.ross@claritastax.co.uk



**Sam Giles,**  
Tax Assistant  
**E:** sam.giles@claritastax.co.uk