



MELLISH COURT DEMOLITION

INTRODUCTION

Mellish Court, a 19-storey tower block in Milton Keynes, failed to meet new fire safety standards and needed to be demolished. Following the successful relocation of all previous tenants in 2021, Milton Keynes City Council contracted Keltbray to undertake the demolition, one floor at a time.

With over 95% of the materials recovered from this site, combined with another tower block in Wolverton, being recycled, a huge focus for this project was on reducing the environmental impact of the works as much as possible.

Sunbelt Rentals have a long-standing relationship with Keltbray as a preferred supplier, and have successfully supported Keltbray on multiple large scale projects nationwide. Keltbray contacted Sunbelt Rentals to support with delivering this project as efficiently and sustainably as possible.



With a focus on reducing the overall environmental impact of the project, Keltbray wanted to explore options for reducing their fuel consumption and CO2 emissions, whilst managing operational costs.

To complete the demolition floor by floor, a builders hoist was required to transport essential materials and personnel up and down the building. As the project progressed and each floor was demolished, the hoist needed to be adjusted in height.

Keltbray had previously successfully trialled a Peak Power Support unit (PP200 Flywheel) to help manage the power required to operate the tower crane, and wanted to deploy the same technology to power the builders hoist required for this project to see if the same fuel, CO2 and cost savings could be achieved.

THE SOLUTION

Sunbelt Rentals worked with Keltbray to design, deploy and manage a solution that included an Alimak Scando FC 24/32 TD passenger and goods hoist powered by a 100kVA Generator, working in conjunction with the Peak Power Support unit (PP200 Flywheel). A 2,000litre fuel tank with Smart Guard telematics sensor for remote fuel management was also supplied.

The hoist was originally constructed to the full height of the tower block and reduced in size as each floor came down. As an essential part of the project it was used to transport materials, tools and personnel up and down the side of the building safely.

Typically the hoist would require a 300kVA generator to run, however by using a Peak Power Support Unit, Keltbray were able to downsize the generator to 100kVA, without interrupting the power supply. The Peak Power Support Unit worked by capturing energy that would typically have been wasted and discharging it when a larger boost of power was needed to operate the hoist.

Without a Peak Power Support Unit a larger generator would need to run on idle for long periods of the day, burning hundreds of litres of fuel unnecessarily and releasing large amounts of CO2 into the atmosphere.

RESULT

The project lasted for a total of 17-weeks, finishing one month ahead of schedule. Over the 17-weeks by implementing a clean energy solution alongside the builders hoist, Keltbray were able to reduce fuel consumption by 4,410 litres, resulting in a cost saving of £4,573, after the cost of the equipment had been taken into account. In addition the site prevented 11,907kg of CO2 from entering the atmosphere.





CONSUMPTION



COST SAVING



LESS CO, EMITTED