

Co2nstruct Zero Case Study

Using Flywheel innovations to reduce fuel, carbon and cost.

Punch Flybrid Flywheel System managing the power supply of our hoist requirements at our Mellish Court demolition works

Our works at Mellish Court, on behalf of Milton Keynes City Council, display an excellent example of Keltbray's efforts to reduce the environmental impacts of construction works whilst improving project efficiencies and managing operational costs.



The floor-by-floor demolition works required a hoist to transport essential materials and personnel up and down the building.

Keltbray previously trialled a Punch Power 200 to help manage power requirements for a tower crane on one of our sites with positive results. Our teams saw the opportunity to apply this technology towards the hoist requirement for the project.

The equipment was supplied by Sunbelt Rentals, along with a 2,000-litre fuel tank with Smart Guard telematics sensor for remote fuel management.

Typically, a hoist would require a 300kVA generator to run, however by using the Punch Flybrid Peak Power Support Unit, we were able to downsize the generator to 100kVA without affecting the power supply.

The Punch Power 200 captured energy that would typically have been wasted and discharged it when a larger boost of power was needed to operate the hoist.

The project lasted for a total of 17-weeks finishing one month ahead of schedule. Over the course of the 17-week project, fuel consumption was reduced by 4,410 litres, compared to using a 300kVA generator. Including the cost of hiring the Punch Flybrid unit, the cost saving was £4,573.

This prevented 11,907 kg of carbon dioxide from entering the atmosphere.

At Keltbray we actively look to trial the latest innovations to drive project efficiencies and deliver sustainability initiatives, all whilst balancing the needs of our business.