



**FLANNERY**  
PLANT HIRE

## CASE STUDY

### Use of Hybrid Excavator

#### Overview

**“The industry is being challenged to reduce greenhouse gas emissions by 50% - this simply cannot happen without a shift towards hybrid technology,” Patrick Flannery.**

**Flannery take on the Komatsu 20T Hybrid and pit it against a conventional 20T excavator to baseline real-world fuel savings.**

#### Background

It is 45-years since Patrick Flannery incorporated Flannery Plant Hire (Oval) Limited, the Oval referencing the company’s original location just next to The Oval cricket ground. This family business has continued to expand and adapt to the rapidly changing needs of its customers. Operating nationally from Aberdeen down to Newport with an extensive fleet of operated and self-drive equipment, Flannery machines can now be seen on almost every major project in the UK.

“It is very important that we offer more than just plant hire,” explains Patrick Flannery, CEO. “As a family business, people stand at the centre of our proposition from our team of 80-fitters, the dedication of our Product Trainers to our experienced hire controllers – they make our business what it is. We want to have the best machines, provide excellence in service, plant standards and safety. All of these aspects deliver quality and value to our customers. It does not however happen without relentless investment in our fleet.”

Flannery Plant Hire has invested £2.9million in Komatsu equipment in 2018 and were the first plant hirer to take delivery of the innovative EU Stage IV compliant Komatsu HB215LC-3 hybrid excavator. Reinforcing their commitment to hybrid technology and reaffirming their position as the largest UK operator of such equipment.

This investment brings the average age of the Flannery fleet to under twenty months, ensuring that customers have access to the latest machines and technology.

“When reviewing our options for investment we have to consider the direction the industry is moving,” explains Patrick. “The industry is being challenged to reduce greenhouse gas emissions in the built environment by 50% - this simply cannot happen without a shift towards hybrid technology. For us though while the green credentials are obviously very important, our customers are also engaged by the considerable fuel saving, improved control and enhanced productivity.”

## Background

Flannery Plant are not new to Komatsu's hybrid technology. One of the early adopters when the first HB215 Hybrid was launched, the business were clearly excited to be able to support customers drive greener, more sustainable construction projects. Aside from the Hybrid technology though there were lots of other talking points during initial discussions about this machine.

## Innovations



"Keeping people safe is so important to all of our customers," Matt Revell, National Sales Manager at Marubeni-Komatsu explains: "The team at Flannery Plant Hire were particularly pleased that KomVision™ was included as standard on the HB215LC-3 giving operators a real-time bird's-eye view on the machine monitor via four networked high definition cameras. They also really engaged with our Safe SpaceCab™ (a tubular design developed specifically for hydraulic excavators) which protects the operator even in the most extreme rollover accident."

Flannery Plant has always looked to exceed the Highways England 'Raising the Bar' plant specification on all equipment.

"We have always felt that paying to have the highest specification of equipment direct from the manufacturer is the best solution for all concerned. We have for many years had cameras and seat belt indicators supplied straight from the factory. It is fantastic to see that they are now included as part of a basic specification," says Patrick "We feel it is still important to show innovation and to exceed standards set by our customers though, and to this end all our machines come from Komatsu with MillerMate™ quick hitches (complete with in cab step-by-step instructions for the operator) and hi-visibility handrails."

Clearly though one of the biggest advantages to Flannery Plant is Komtrax™ telematics. Chris Matthew, Strategic Manager at Flannery explains: "It is no longer enough to have machine telematics, we want to turn this data into a meaningful analysis for our customers. Giving them support in making hire decisions and what will deliver the most efficient solution for them. The Komatsu system gives us lots of great information that is easy to understand and very straightforward – it helps us and our customers to deliver the most effective solution to a project."

The machines first site visit was actually for an HS2 Safety Stand Down event. "The machine was very well received – it is great to get invited to these customer events where we can talk about the advances new products bring and get feedback direct from the people using them onsite." Chris explained.

## The Trail

The Hybrid machine then moved straight onto the £1.5bn A14 Cambridge to Huntingdon Improvement Scheme. This 26-mile project is the largest Highways England infrastructure project currently under construction. "The A14 project team has really engaged with this product," says Niall Hester, Flannery Operations Manager: "they have allowed us to run a trial of the Komatsu Hybrid versus a standard twenty-tonne excavator. The machines have been working alternate days loading a scalping screener which is producing aggregate for use on the project."



## Results

As Data pulled from the machines showed that on a typical shift the HB215LC-3 consumed 70-litres of fuel (of this shift the telematics show that the machine was digging for 4.4-hours) equating to 14.46-litres per

hour digging. In comparison the non-hybrid excavator consumed 87.5-litres of fuel during its shift, 4.4-hours of dig time with a fuel consumption of 16.9-litres of fuel for these hours. That makes the HB215LC-3 19% more efficient than the non-hybrid machine. Factoring in idle time this would suggest the hybrid could save approaching 100-litres of fuel per week on this type of task.

Vinny McCabe, Section 3 Works Manager from the A14 Integrated Delivery Team, a joint venture between Costain, Skanska, Balfour Beatty and designers Atkins/Jacobs, working on behalf of Highways England, explained "It's great to see innovative machines arriving onsite and has been very interesting to see the benefits the new hybrid technology can deliver to major projects like ours. We need our suppliers to be proactive in supporting us to deliver our ambitious sustainability targets. By providing the latest innovative equipment, Flannery demonstrate that they take this as seriously as we do. It's a big bonus that this 'green' machine has proved to be as productive as a standard excavator, while delivering a 19% fuel saving. Great news for everyone concerned."

The new HB215LC-3 has clearly left a lasting impression; Flannery Plant Hire is positive that the machine's excellent start is just the beginning of their investment in this technology and their long-standing relationship with Marubeni-Komatsu.

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