FUEL EFFICIENCY

CASE STUDY

Balfour Beatty

L LYNCH

INTRODUCTION

At Lynch, we're committed to data transparency and have long advocated for data transparency across the supply chain, sharing insights with our customers to drive measurable results. With our data-driven approach, we aim to **help customers reduce CO2 emissions**, **boost productivity**, **enhance safety**, and **achieve significant cost savings on their projects**.

In collaboration with **Balfour Beatty's M4 Data Analytics team**, we provided daily telematic data throughout the project, focusing on fuel efficiency. Analysing two selected months, we observed that equipment utilisation improved, fuel costs dropped, digging time increased, and idling hours significantly reduced.

DATA-DRIVEN DECISIONS

Our findings demonstrated the power of plant optimisation and asset use on site. Traditionally, hiring three machines for nine hours each led to excessive idling, as all units were left inactive for approximately six hours daily, driving up fuel costs. In contrast, reducing this to one machine operating consistently for nine hours showed considerable benefits, slashing fuel and hire costs. This shift decreased machine idling from **59%** in **Month 1** to **37%** in **Month 2**.

By addressing idling costs, fuel expenses dropped by **£38,000** monthly. Starting at **£55,000** in **Month 1**, the fuel expenditure fell to **£17,000** in **Month 2**, with annual costs projected to reduce from **£660,000** to **£204,000**. This translates to estimated savings of **£456,000** per annum – **nearly half a million pounds saved**.

ENHANCING DRIVER PERFORMANCE

Recognising the impact of our data-sharing, Lynch introduced a **Driver Behaviour Monitoring initiative**. Through toolbox talks and group briefings, we sought to educate drivers, aiming to **reduce idling further and enhance site productivity**.

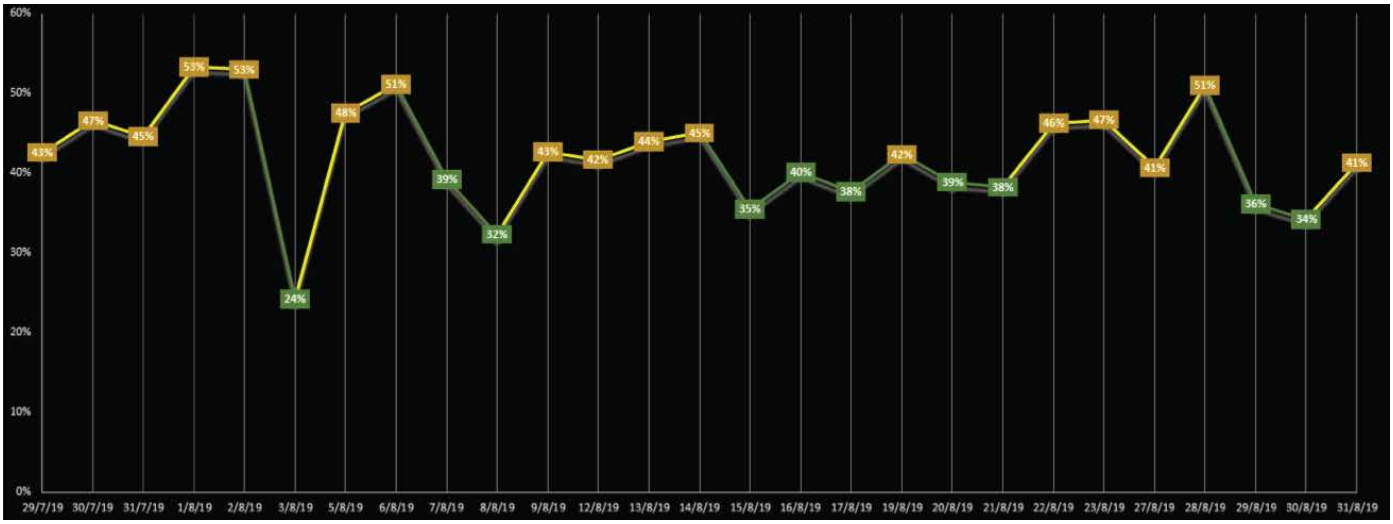
In addition to turning off engine when not in use, the toolbox talks covered the importance of completing thorough **pre-start** and **function checks** and warming the engine up prior to start of work, selecting appropriate power mode for the task and completing shut down procedures.

GROUP TOOLBOX TALKS

We conducted a group session with ten active drivers on the M4 project, achieving an average idling reduction of 4% among participants. This reinforced the value of educating drivers on fuel efficiency.

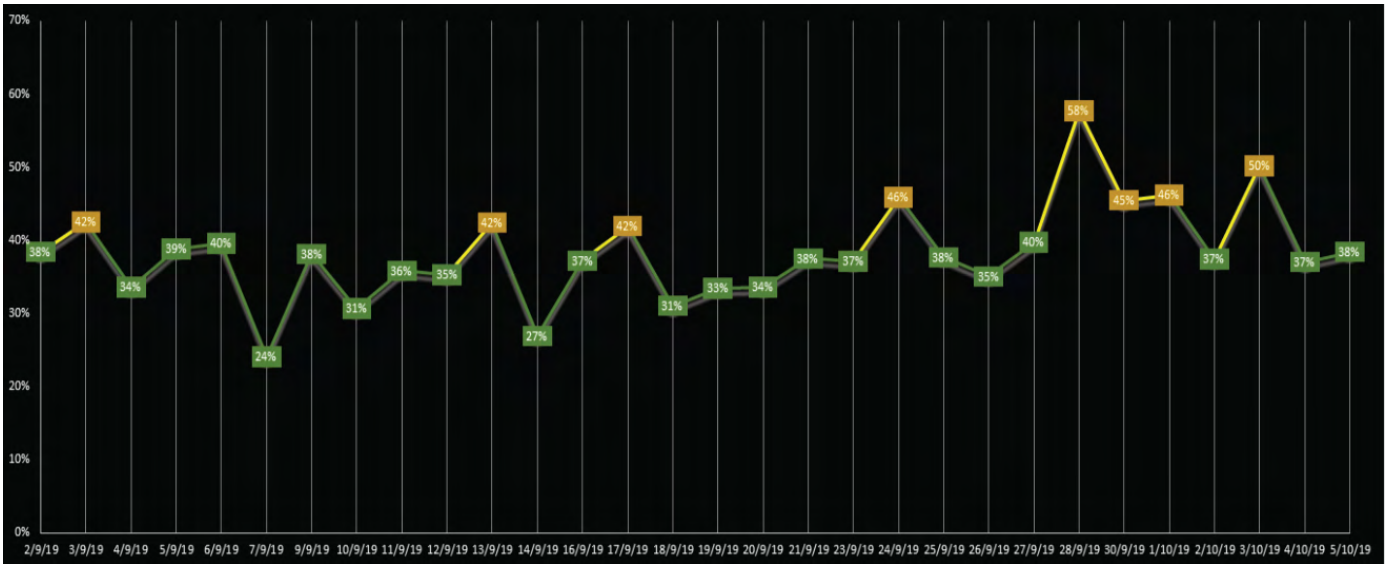
5 WEEKS BEFORE BRIEFING

DAILY AVERAGE IDLING % OF **10 DRIVERS** (OVERALL AVERAGE = **42%**)



5 WEEKS AFTER BRIEFING

DAILY AVERAGE IDLING % OF 10 DRIVERS (OVERALL AVERAGE = **38%**)

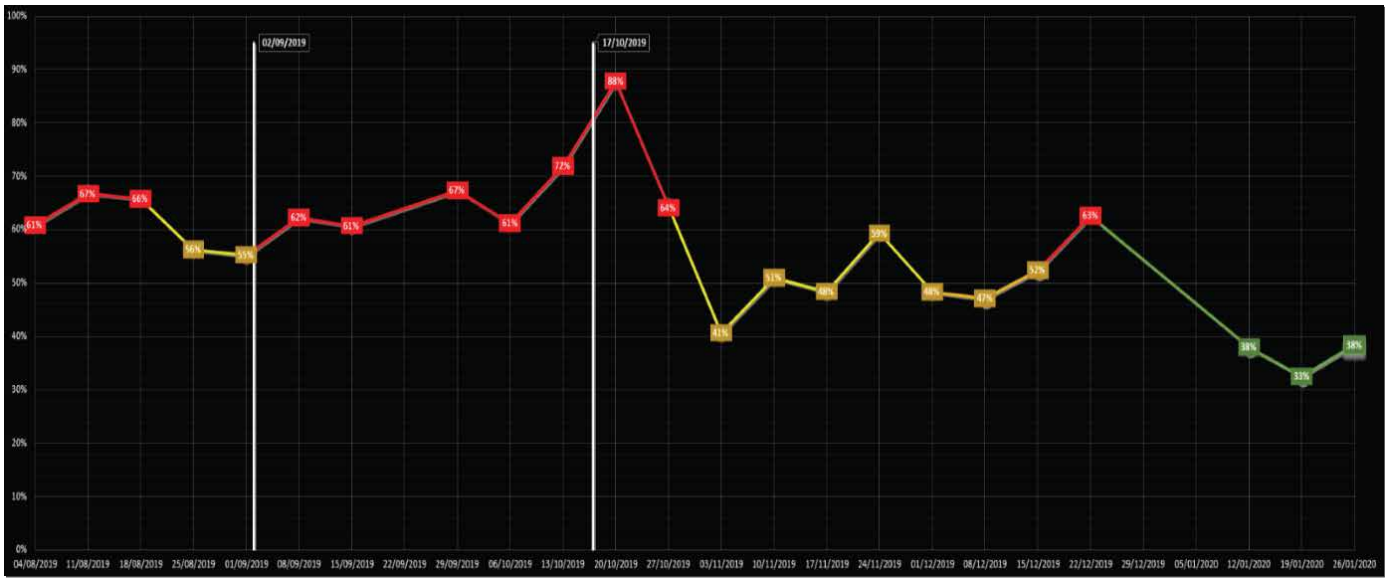


INDIVIDUAL DRIVER COACHING

While group sessions were effective, we noted that some drivers benefited more from one-on-one coaching. Valon Krivenjeva conducted a targeted briefing with a driver whose idling remained high despite the initial group briefing. Following this individual session, the driver showed a marked reduction in idling, highlighting the effectiveness of personalised support. Due to these results, we implemented one-on-one sessions for drivers flagged in the red or amber categories, allowing us to assist those with the greatest need for improvement directly.

5 WEEKS AFTER BRIEFING

DAILY AVERAGE IDLING %



DRIVER	AVERAGE IDLING %	AVERAGE FUEL USAGE
DRIVER 1	35%	54.9L
DRIVER 2	45%	43.0L
DRIVER 3	46%	42.6L
DRIVER 4	28%	52.0L
DRIVER 5	38%	45.8L
DRIVER 6	38%	45.1L
DRIVER 7	57%	41.2L
DRIVER 8	47%	38.0L
DRIVER 9	35%	49.0L
DRIVER 10	32%	44.3L
TOTAL AVERAGE	40%	41.2%

LYNCH IDLING BENCHMARK

Our idling classification benchmark categorises drivers based on **performance across various sites**:

RED:

60% IDLING OR ABOVE

AMBER:

41% - 59% IDLING

GREEN:

40% IDLING OR BELOW

This classification enables us to track driver performance against **industry benchmarks**, supporting drivers in achieving '**green driver**' status and improving site fuel efficiency.

DRIVER IDLING REPORT

To maintain data protection standards, driver names have been anonymised in the idling report. By focusing on those in the amber and red categories, we've transitioned one of our highest-idling drivers into the green category and also observed a r**eduction in overall idling** rates across the board. This case study underscores the success of targeted driver monitoring and hands-on training, paired with regular toolbox talks, which together have boosted **fuel efficiency**, **site performance**, and **environmental responsibility**, demonstrating the impact that small behavioural changes can have on our sustainability goals.

OUR PILLARS

Our strategic pillars govern everything we do,
Helping Our Customers Build Britain's Infrastructure.

This project aligns to:

NET ZERO CARBON

Our commitment to sustainability drives us to reduce our **carbon footprint** to zero by 2040.

To learn how Lynch can support your carbon reduction and cost-saving goals, contact us today!

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