CASE STUDY

USE OF TELEMATICS AND ECO OPERATOR TRAINING TO REDUCE MACHINE IDLE TIME

OVERVIEW

We were asked by our Client CSJV working on behalf of HS2, to assist them with a solution to reduce fuel wastage and Co2 emissions on site. Once involved we identified idle time as the first target for a large reduction in wasted fuel consumption and began to establish a baseline for the site as a whole so that the results of our endeavours could be measured through our telematic data.

ACTIONS

We used our existing telematic data to establish a baseline for our equipment on site, whilst the site average baseline for idling time by plant suppliers and sub contractors was 40.52%, M O'Brien's baseline for May 2020 was 25%. The nature of works was a contributing factor to this, with M O'Brien Plant supporting the project in its self delivery of the earthworks and any bulk excavations, the sub contractors working on civil and demolition activities. The project sought after a 20% reduction in idle time as a target to be achieve in the following 3 months.

M O'Brien created an ECO operator training syllabus that can be delivered on site in around 2 hours to a group of operators. Key learning points are around the reduction of idling, economic driving to engine load when excavating. More importantly the course explains to the operative why the reductions matter.

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USE OF TELEMATICS AND ECO OPERATOR TRAINING TO REDUCE MACHINE IDLE TIME

ACTIONS

Once the importance of carbon reduction was explained to the operators and what it means for the future and future generations, we noticed more buy in from the operators. Following on from the training the operators were informed that a leader board was to be created for the operators with the best idle time score, this created a novel competitive element to the exercise and also boosted some camaraderie amongst them when results were read out.

It is important to note that Idle time was selected as it is a metric that does not have an impact on productivity and the main focus is for the machine to be switched off when not working, and once the machine shutdown procedure has been completed.

RESULTS

Over the next three months, along with CSJV we monitored the operators idle time performance and published a monthly leaderboard between contractors and between individual operators. The operator with the best reduction in idle time from the previous month won a £50.00 voucher.

Between may and July the project saw its idle time baseline reduce from 40.52% down to 34.52% an over 10% improvement over the 3 months. Site wide, the improvement to plant meant that over the course of those 3 months idle time was reduced by more than 146 hours, saved more than 1500L and £800 of fuel, and reduced carbon output by 4 tonnes.

M O'Brien's specific reductions over the 3 months were from a baseline of 25% and this reduced to 17.61% by July a 40% reduction in idle time. We were highly commended by the JV for our contribution to the reduction of their baseline and it was agreed that we would deliver our eco operator training to the operators working for their subcontractors going forwards to help achieve a better overall idle time figure.

The data gathered from the oem telematic systems show that the training module has a positive effect on the drivers behaviour, we can also see that a new operator to the project that hasn't yet received the training has a high level of idle time initially when compared to operators that have received the training and are a part of the leader board system.

For more information on our fuel and carbon saving initiatives, please contact your account manager to arrange a demonstration.

DATA

The tables below show the performance of suppliers against the baseline and how they have been incorporated into a toolbox talk to promote further savings on site. The right hand table shows the 3 leading operators, and also a new operator to site, demonstrating the effect of the training.

Telematic data has played an important role to make our targets measurable and demonstrate attainability.

ENABLING WORKS CONTRACT | SOUTH

Safety, Health, Wellbeing & Environment Strategy
To ensure we minimise environmental impacts and aim to enhance the world in which we live by delivering sustainable solutions

Tool Box Talk – Carbon Strategy 2020 - Idling Action Plan **Reducing our impacts on air quality, noise and emissions.**

July Idling Performance

CSJV continue to contribute strong performance in the 2020 Idling Reduction Campaign with a Project Performance of 34.52% in July.

Whilst this is slightly up from June (32.60%) it is again a significant improvement against the Historic Baseline (40.52%)

With 3 months of data collected, this brings our 'new' Rolling Baseline since the campaign launched to 36.16%, which represents an overall decrease of 10.76%.

Applying this to excavators, that means that of the 3361 hours of work in the last 3 months, we have reduced idling by more than 146 hours, saved more than 1500L and £800 of fuel and reduced our emissions by 4.16tCO2e.

A reminder, if you see a machine idling when it isn't in use, ask if it can be switched off.

July Idling Performance by Supplier

Supplier	%
JMS	46.13%
John F Hunt	40.39%
O'Brien	17.61%
Lynch	48.89%
McGee	53.89%

Baselines: 40.52%, 36.16%, 34.52%, 30.39%

Legend: % Engine on vs Idle Time — Target Baseline — July Project Performance — Rolling Baseline — Historic Baseline

• Package by Package Idling Reduction Leaderboards	• ABC Behavioural Workshops	• Specific Idling TRMs
• Driver Idling Reduction Leaderboards with Vouchers for Greatest Reductions	• Driver Awareness Campaigns	• Regular Updates and Feedback

Who to contact

Simon Mintoft – Euston Environmental Manager 073920098920, simon.mintoft@csjv.co.uk

Serena Ward – Route Environmental Advisor 07467485599, serena.ward@csjv.co.uk

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July M.O'Brien Idling Performance

M. O'Brien continue to surpass the Project Idling Target percentage with an average Idling Percentage of just 17.61%.

The best performances of the month are Dura (10.55% down from 21.41% in June) and Jacob (down to 12.74% from 25.46% in June and 29.43% in May)

Both drivers have more than halved their Idling Figures and saved nearly 400L of fuel in July (Dura – 221L, Jacob 170L)

The overall July Project Performance (34.52%) brings the new Rolling Baseline down to 36.16%

M. O'Brien - July Idling

Machine	May	June	July
PH511 - Dura	18.74%	21.41%	10.55%
PH503 - Jacob	29.43%	25.46%	12.74%
PH502 - Shay			18.16%
PH520 - Johnny	25.42%	8.33%	27.52%
PH600 - Dwayne			33.98%

Baselines: 40.52%, 36.16%, 34.52%, 30.39%

Legend: May — June — July — Historic Baseline — Target Baseline — July Project Performance — New Project Baseline

• Package by Package Idling Reduction Leaderboards	• ABC Behavioural Workshops	• Specific Idling TRMs
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