



CONSTRUCTION
EQUIPMENT
ASSOCIATION

Dave Luscombe

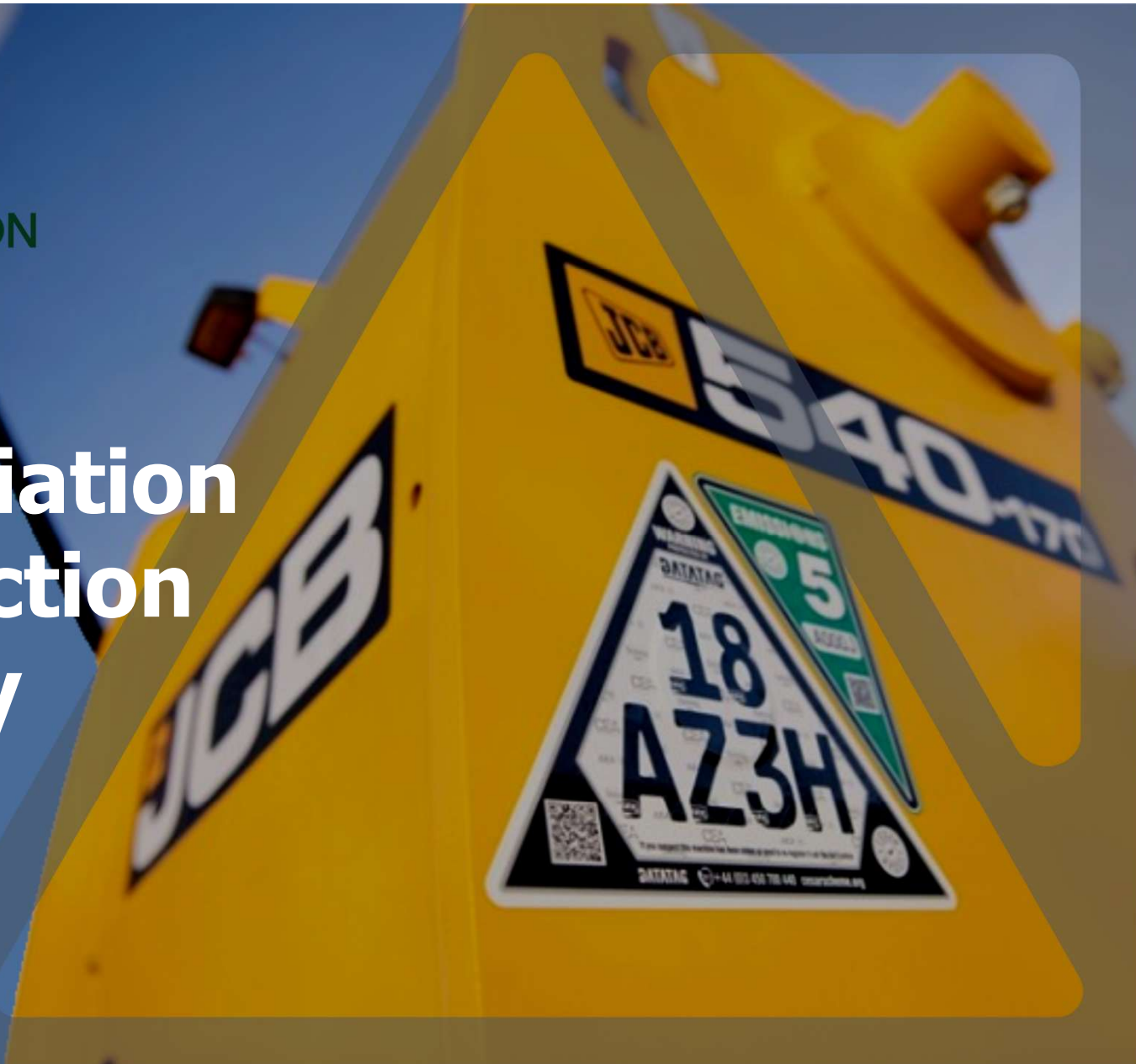
*Special Projects Consultant,
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CONSTRUCTION
EQUIPMENT
ASSOCIATION

UK Trade Association for the Construction Plant Machinery Manufacturers





CONSTRUCTION
EQUIPMENT
ASSOCIATION

**Representing the UK
construction equipment
industry since 1942.**

**Recognised by the UK
Government as
the voice of the industry.**





Construction Equipment Security and Registration Scheme





Emissions Compliance Verification 'ECV'



An Overview

- The environment & Non Registered Mobile Machinery (NRMM) emissions
- The challenge for companies and contractors
- Site auditing
- An industry solution – CESAR & CESAR Emissions Compliance Verification (ECV)
- Industry partners
- The ECV Mobile: QR
- Summary



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Engine Emissions & The Environment

- Emissions a growing concern
- Air quality & carbon dioxide
- Road vehicles managed via automatic number plate recognition cameras



Engine Emissions & The Environment



- **Automatic Number Plate Recognition cameras read vehicle licence plates to 'police' road vehicle emission standards**
- **DVLA database is populated electronically from data supplied by manufacturer at point of registration**
- **Data includes engine emission data**
- **Cameras used to establish emissions standards by reading VRM and matching data to DVLA data**



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Low Emission Infrastructure Projects



- How to police NRMM?

HS2



**GREATER
LONDON
AUTHORITY**



Department
for Environment
Food & Rural Affairs

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The Challenge for Contractors

- Old process was 'paperwork' heavy
- Relied on human data input
- Large volumes of engine/machine data collated was submitted for each machine
- How do we verify what actually happens on the ground/on site?

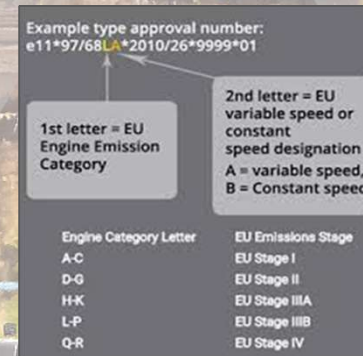


Engine Data Plates

- EU engine type approval numbers
- Different number formats
- Plates damaged or illegible
- Stage verification challenging

Health & Safety risk for auditors

- Challenging environment
- Hot, dirty machines
- Interruption of work



CESAR; An Industry Solution



- **CESAR is owned by Construction Equipment Association and fully supported by the Agricultural Engineers Association**
- **Launched in 2007**
- **The industry's own security and registration scheme**
- **Fitted by most leading manufacturers during manufacture**



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Industry Standard Security Solution

- **CESARs unique triangular identification plate is synonymous with plant security in the UK**
- **CESAR is recognised by the industry, insurers, finance and the police**



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Solution to NRMM Challenge?

- Over 650,000 Construction Plant & Agricultural machines securely registered
- CESAR is the largest database of its kind in the world



Datatag Certificate No. 665a/01
Certified to LPS 1224 Issue 3



Assessed to ISO 9001
LPCB ref. no. 665

CESAR ECV – How It Works

- **CESAR now includes an emissions stage label**
- **The unique ECV number is linked to the CESAR number**
- **Engine emissions data is held alongside machine details on the secure database**



CESAR ECV

- Available as OE fit for new plant
- Retro-fit option for existing plant



Visible Verification

- Enables first line visual assurance of machine standard



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Visible Verification

- Detailed asset and emissions data via QR code





Engine Details

ECV CODE: A35AK
CESAR ID: 05BL2B
MAKE: JCB
MODEL: CEV 5
FUEL: Diesel
ENGINE NO: FN320/41537 U3021223
STAGE: 5

EU Type Approval Number

e13*2016/1628*2020/1040EV4/D*0385



Manufacturers Who Fit CESAR ECV for UK



**WACKER
NEUSON**



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CESAR ECV : HS2

"We are happy to confirm that we would accept the ECV as part of the registration process for plant to work on HS2 sites and would consider it suitable for compliance assurance purposes."

Andrea Davidson
Air Quality Lead, Phase One
HS2 Ltd

HS2



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CESAR ECV : HS2

- Issued ECV notification to all subcontractors
- Included ECV option in 2021 tender documentation
- Promoted ECV in meetings with GLA and DeFRA
- Supported ECV in social media posts
- Worked with the CEA to design audit body interface



HS2



Balfour Beatty



- **Mandating ECV on all newly purchased/hired in plant from 2021**
- **Working with Datatag to design ECV contractor interface**
- **Assisting the trial of ECV self installation on fleet of JCB loadalls**
- **Working with CEA & Energy Savings Trust around DPF&SCR systems**
- **Actively promoting ECV across the sector**

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LYNCH



- **First Plant Hire company to install ECV**
- **Supporting roll out at HS2 and BBV**

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- **Shared CESAR Database (Construction)**
- **Helping to inform Ricardo research to inform UK Government research**
- **DeFRA working to help Government build an informed picture of the UK NRMM fleet**
- **Government want to make informed decisions regarding a future NRMM emissions legislation**

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Merton Council; Cleaner Construction London: Site Audit Function

- **Merton Council conduct audits with a 4 man team**
- **Inspectors now accept ECV as an initial visual verification of engine emission stage**

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Future Developments

- Adding additional static machine information
- Data added at manufacture or distribution sales



Future Developments

- Adding additional static machine information
- Data added at manufacture or distribution sales
- Accessible through ID plate QR Code scanning on any smartphone

Engine Details

| | |
|------------|--------|
| ECV CODE: | A2EVX |
| CESAR ID: | 74BI6E |
| MAKE: | Volvo |
| MODEL: | D8M |
| FUEL: | DIESEL |
| ENGINE NO: | 589066 |
| STAGE: | 5 |

EU Type Approval Number

e5*2016/1628*2016/1628EV6/D*148

CESAR ECV - Summary



Work *Smarter* not Harder...

- Existing industry recognised scheme
- Simple, highly visible, secure ID plate
- Simplifies; compliance for contractor
- Simplifies; registration pre-site
- Simplifies; verification on-site
- Fitted as standard by many OEMs
- Retro-fit solution for existing fleets



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Understand your fleet's air quality impact!



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THANK YOU

