



COAL UPDATES

David Smith



Coal Update -Topics

- What have we been doing?
- The Current Situation – Where are we at?
- Looking to the Future – Forming Partnerships
- One Potential Partner's view
- The Options
- Summarising the situation
- Trials



What Are We Doing?

- Looking – For reliable and suitable sources of fuel
- Talking – To suppliers and potential partners
- Developing – Helping define the specification for new, and alternative fuels for road steam use
- Trialling – Finding out from Users what works and what doesn't
- Lobbying – Joining with NTT in its 'Mobilising Mobile Heritage' campaign



Current Situation

- ▶ 10 years ago, circa 15m Tonnes of coal was mined in the UK
- ▶ 5 years ago this had dropped to circa 1m tonnes
- ▶ Today we are seeing the last few thousand tonnes coming from the likes of Ffos y Fran whilst they are still permitted to mine
- ▶ By the end of 2022 there will only be 1 mine left in the UK - mining Anthracite not Bituminous Coal
- ▶ Current Position: coal supply in the UK is tight - but it is available
- ▶ Moving forward: there is uncertainty as we move through the season around availability, price and quality
- ▶ There are other alternatives readily available

‘Ffos-y-fran’



- No Extension to Licence Terms
- Set to Close in October 2022
- All output now being crushed for use at TATA Steel
- Likely-hood of lump coal being resumed – Zero
- RIP Ffos-y-fran

‘Trevithick Welsh Steam Ovoids’



- New to market in February 2022
- A full Anthracitic Coal – no bituminous content
- Not for the rookie user
- Burns well when there is a good draught
- Experiences vary – Coal Trials

Stocks on the Ground



- Very limited stocks of Scottish Coal - mainly at coal merchants
- Columbian Coal is available – expensive and reckoned not economical as a steam raising coal
- Substantial stock of Russian Coal with Hayes Fuels in Belfast; will only ship in 29 tonne loads
- **Substantial stocks of manufactured Ovoids used by the domestic market**

Looking to the Future



- Reducing number of companies importing, prepping and distributing coal
- We are talking with an Australian supplier
- CPL – UK's largest manufacturer of smokeless fuels
 - Innovative, creating new fuels
 - Can vary the composition of their fuels
 - Offer of trial loads to help create a 'traction engine' fuel

Forming Partnerships



About CPL

- ▶ British manufacturing business with a heritage stretching back 300 years.
- ▶ Employ 650 people with a turnover in excess of £160m
- ▶ Have 3 manufacturing plants in the UK and Ireland capable of producing 500k tonnes of smokeless fuel per annum - We are the largest smokeless fuel manufacturer in Europe
- ▶ One of the UK largest importers of Coal and Anthracite - in excess of 250k tonnes per annum with a £2m state of the art Parnaby Cyclone Wash plant
- ▶ Have a network of 28 depots offering nationwide delivery from a single bag to 100's of tonnes
- ▶ Are the only solid fuel manufacturer capable of producing smokeless solid fuels containing Biomass - Ecoal 50
- ▶ Have a continuous focus on R&D to develop the fuels of tomorrow, particular emphasis on achieving a 100% waste to energy fuel.



How can CPL help the Heritage Sector



- ▶ We are committed to working with the Heritage sector to find a suitable fuel(s) to future proof the sector
- ▶ Our main aims are as follows
 1. Produce a fuel to replace Coal currently used which mimics the performance as closely as possible
 2. Make it as kind to the environment as possible - Go from Smokey to smokeless, from Bituminous to Biomass
 3. Make it future proof - all the ingredients must be widely available and the end product must adhere to all environmental legislation
 4. Make it easy to purchase - UK manufactured widely available regardless of quantity required - 1 bag to 100's of tonnes

To Summarise



- ▶ We are committed to help develop future fuels with the NTET
- ▶ CPL has the manufacturing, distribution and R&D capabilities to cater for all the heritage sector fuel requirements.
- ▶ Coal availability is currently tight
- ▶ Coal pricing is increasing
- ▶ Uncertainty remains on supply for the second half of the summer
- ▶ Smokeless ovoids offer an immediate and affordable solution



COAL TRIALS

Tom Attwood



COAL TRIALS

The **purpose** of the “Coal Trials” are to allow everyone to participate in sharing experiences and conclusions in a way that is comparable across all the coal (and ovoid) types that are now available, in light of the diminishing supply of the “established” coals of choice.

COAL TRIALS



The **objective** is that this will help owners, operators and event organisers make the best informed choices on coal or ovoid type for their application based on common criteria gathered from real use in **road steam**.

COAL TRIALS



The immediate challenge - Some of the activities are now reactionary to the ever developing situation around “established” coal supplies either ceasing, pausing or under threat to the heritage sector sooner than planned.

Therefore this is a working development and on an accelerated timeline.

COAL TRIALS - STRUCTURE



The “Coal Trials” are split into **3 activities**, where possible these will run in conjunction with each other to gather and respond to the data as quickly as possible.

However, this is anticipated to take the majority of 2022 to complete in full. The more engagement and support, the more likely we can complete this sooner.

COAL TRIALS - STRUCTURE



The **3 activities** as below, showing how they will overlap during the year. Each are covered in more detail on the next slides.



1. ANECDOTAL

“COAL TRIALS DIARY SHEETS”

Purpose: To gather feedback and experiences to share for all.

- A simple diary sheet and questionnaire.
- Capture individuals experiences with various fuel types in a way that can be easily compared with each other.
- Present the data in a way that is easy to understand.

Who can take part?: Open to any road steam user.

Who is the data for?: Anyone looking for fuel guidance.

Complexity: Easy & Free/Cheap.

Expected Timescale: Launched 16th Feb + 6 Months.

STARTED!



COAL TRIAL DIARY SHEETS

How this works:-

- Any road or stationary steam user can submit a diary sheet.
- If you wish to help, complete a diary form during or after a steaming.
- This records some engine details, type of steam activity undertaken and the fuel used.
- The questionnaire section is specifically about the fuel and its behaviour.
- There is an open comments section.
- You can then email or post your diary sheet(s) to the details given.



COAL TRIAL DIARY SHEETS



How this works:-

- We use your experience and conclusions in a way that allows to compare (as fairly as possible) with other users experiences of the same fuel.
- We can also then compare across the different fuels.
- This data will be available for all to use, once completed.
- The more data we have, the more accurate and representative it will be.
- The feedback will help guide the “Back to Back Trials.”

COAL TRIAL DIARY SHEETS



The Diary Sheets are available online at :-
<https://ntet.co.uk/ntet-coal-trials-diary-sheet/>

Replies can be emailed to:-
coal.trials@ntet.co.uk

Or posted to “Coal Trials, NTET, 4 Church Green East, Redditch, Worcestershire B98 8BT

THIS IS LIVE NOW -It is open to all, members and non-members, any scale and type of road steam and stationary steam applications - that uses coal as their primary fuel!

NTET Coal Trials - Diary Sheet																																																																												
<p>The NTET is keen to be able to advise owners and crew of road going and portable engines and measures of the availability, suitability and economics of using the various types of coal currently on the market and in the future.</p> <p>If you feel able to assist in this process please complete a copy of this diary sheet each time you steam for the next five or six occasions and send it on each occasion via email to coal.trials@ntet.co.uk. You may also post it to Coal Trials, NTET, 4 Church Green East, Redditch, Worcestershire B98 8BT.</p> <p>NB: All data provided will remain anonymous and will not be used elsewhere</p>																																																																												
Section 1: About the Engine	Make and type of engine: e.g. 10hp 1000cc side valve Include scale if a miniature	Cylinder Arrangement: e.g. single cylinder side valve	HP or weight	Scale																																																																								
Section 2: About the Activity	<p>This section is to understand what type of activity you are undertaking with the engine and selected fuel in the trial. E.g. a road run, winchrunning, low activity trial steaming etc.</p> <p>Date of Activity:</p> <p>Type of Activity Undertaken:</p> <p>Weather conditions:</p> <p>Distance Covered:</p> <p>Type of Terrain:</p> <p>Approximate weight of load(s):</p> <p>Time to Raise Steam: Mins</p> <p>Time to Run: Mins</p> <p>Time to Stop: Mins</p> <p>Total Time to Steam: Mins</p> <p>Total Coal Consumed:</p> <p>This section is to understand the fuel type being used in the trial</p> <p>Fuel Type: Solid Coal / Run Fuel</p> <p>Coal Brand Name/Source:</p> <p>Cost of Fuel /Tonne:</p> <p>Observations/Comments:</p>																																																																											
Section 3: About the Fuel	<p>This section is to help capture consistent observations of the fuel behaviour in the trial. Mark as appropriate where 1 = Poor to 5 = Totally Acceptable</p> <table border="1"> <thead> <tr> <th>Observation</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>How the fuel burns</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (solid)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (run)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (solid)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (run)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (solid)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (run)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (solid)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (run)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (solid)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How the fuel burns (run)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Observation	1	2	3	4	5	How the fuel burns						How the fuel burns (solid)						How the fuel burns (run)						How the fuel burns (solid)						How the fuel burns (run)						How the fuel burns (solid)						How the fuel burns (run)						How the fuel burns (solid)						How the fuel burns (run)						How the fuel burns (solid)						How the fuel burns (run)					
Observation	1	2	3	4	5																																																																							
How the fuel burns																																																																												
How the fuel burns (solid)																																																																												
How the fuel burns (run)																																																																												
How the fuel burns (solid)																																																																												
How the fuel burns (run)																																																																												
How the fuel burns (solid)																																																																												
How the fuel burns (run)																																																																												
How the fuel burns (solid)																																																																												
How the fuel burns (run)																																																																												
How the fuel burns (solid)																																																																												
How the fuel burns (run)																																																																												
Section 4: Comments	<p>This section is for any additional observations or comments that are not covered above.</p>																																																																											

2. DEVELOPMENTAL

Launching
Now



“ECOAL DEVELOPMENT TRIALS”

Purpose: To develop an “alternative” option to bituminous coal.

- Work with the developer to test and refine the “ecoal product” in pursuit of creating a solution that works for road steam.
- Report out on the results after development is completed.
- Aim to have a product that is good, readily available and **may** also offer a “greener credential” particularly if bituminous coal is difficult to source.

Who can take part?: Inviting participants now!

Who is the data for?: Developer, then for all.

Complexity: Medium & Developer Costs.

Expected Timescale: Launching now + 6 months.

ECOAL TRIALS



How this works:-

- A manufacturer and distributor of ecoal products is extremely keen to work with us, to see if they can develop an ecoal that works well in road steam applications.
- We require some participants to conduct trials with their current and revised products.
- You will need to provide feedback in a similar way to the diary sheets. (Details on this will be shared with those taking part.)
- Ecoal will be distributed to the participants chosen location, to carry out the trials in their own environment.
- Feedback is provided to coal.trials@ntet.co.uk.

ECOAL TRIALS



If you are willing to help in the ecoal development activity, we are inviting you to volunteer via coal.trials@ntet.co.uk.

This is open to all, members and non-members and any type or scale of engine.

We will need to select a fair cross-section of engines and usage. We are limited by the number of trials that can be conducted, so please do not be disheartened if you are not selected.

NOTE: We are keen to get this activity underway as soon as possible, so please consider if you and your engine are available to conduct trialling relatively soon. Sceptics are welcome!



3. "SCIENTIFIC"

"BACK TO BACK TRIALS"

Purpose: To test identified fuels in a "controlled" manner.

- Conduct a series of repeatable tests, where the "variables" are controlled or measured.
- Test the fuels across the broadest range of road steam applications practical, to give fair representation.
- Present the data in a way that is easy to understand.

Who can take part?: Inviting participants (in the future.)

Who is the data for?: Anyone looking for fuel guidance.

Complexity: Most difficult & Costs involved.

Expected Timescale: After first Diary Sheet Review.

Proposed



COAL TRIALS - CONCLUSION



The landscape of (readily) available coal is now ever changing and more volatile than I think anyone could have predicted it to be a few months ago.

Sadly, we will likely need to get used to this uncertainty in 2022.

A lot of people's regular "go to" coal will disappear from supply in the coming weeks, months and years, if not already.

COAL TRIALS - CONCLUSION



The purpose of the activities discussed here and underway is to help us all make informed choices around what is available now (this year) and what may be available in the coming years.

This is all about providing information relevant to road steam, for you to make decisions on what will **work best for you**.

COAL TRIALS - CONCLUSION



Closing Message:

2022 is going to be “experimental” in terms of fuels that we may need to try or are issued at events.

Please consider the importance of sharing that feedback via the Diary Sheets to help others learn from your experience and also helping provide information to event organisers.

Questions & Answers



We have a separate document containing 10 questions and answers which are designed to provide a more detailed understanding of the what this session has been about.

It will be published later today and will be found under the Owners and Drivers tab on the NTET Website.

www.ntet.co.uk