From Copeland to the Cayman Islands

August 2020
This presentation provides an analysis of the proposed investment by West Cumbria Mining in a Metallurgical Coal Mine in Copeland in West Cumbria. It raises Serious Questions about West Cumbria Mining (WCM), and the Benefits, Stability & Prosperity that it can deliver for Copeland and Cumbria. The analysis covers four areas:

- The Developer & Ownership
- The Environmental Statement
- The Demand for Metallurgical Coal
- The Priorities for Development of Copeland

The analysis is based upon publicly available data and analysis of statements by WCM.
WCM controlled by a Private Equity Company Based in the Cayman Islands

• West Cumbria Mining - a Company registered in England
  • Owned by West Cumbria Mining (Holdings) Ltd: UK Registered
  • In turn owned 82.1% by EMR Capital Investment (No 3B) Pte Ltd, a Singapore Registered company; and 17.9% owned by 61 individuals, pension funds and investment companies
  • ‘Ultimate parent company’ is EMR Capital Resources Fund I LP

• EMR Capital Resources Fund I LP
  • Registered in Cayman Islands. A jurisdiction with no corporate taxes, and potential to direct sales to reduce tax liabilities in countries where operations located
  • US$140Mn Private Equity Fund: to date US$6.5Mn raised from 2 (unknown) investors
  • Promoter is EMR Capital Resources, a company with offices in Hong Kong & Australia

• EMR Capital Resources
  • Specialist Resources Private Equity Company focussed upon Asian Markets
  • Business Model: “Own, Operate... find Investors & Partners... Develop & Execute Exit Strategy”
WCM Environmental Statement
Based upon “professional views”

• Key Consultant: Dr Neil Bristow
  • Principal/Managing Consultant at H&W Worldwide Consulting
  • Rudimentary website has little information on competencies and work
  • Dr Bristow claims expertise in Metallurgical Coke. His profile on the internet refers to his membership of committees, chairing conferences, and a few links to public presentations

• Environmental Statement is not an evidence based study
  • Quote: “This expert statement comprises my professional views”
  • Much of the argument of WCM – the rationale for the mine and the need for metallurgical coal – is about the need for steel, and its production process.
  • The expert statement does not include input from a steel expert. There is no discussion of recent industry developments - the pressure on the industry from investors to de-carbonise, and the industry response to move away from coal.
Environmental Statement
Contains weaknesses, inconsistencies and raises doubts on the future of coal

• Expert Statement relies upon out of date/incomplete analyses
  • Reference 6 is to a report from 2010. FOB cost curve for WCM and other world mines uses 2016 data.
  • There have been significant changes in steel and energy markets in the last 10 years, and the pace of change in the last 24 months has been rapid
    • 2019 cost data is recommended. US/UK exchange rates have varied by 15% since 2016.
    • Recent investments of US competitors (Warrior Met Coal, Arch Resources) are investing in their low cost status.
    • No data on CIF (Europe) prices. Just broad statements on transport distances

• Inconsistent Statements raise doubts
  • Dr Bristow states: “It is forecast that there will be strong demand for metallurgical coal until at least the end of the century”. However, in public he is on record pointing out the oversupply of Metallurgical coal.
  • Dr Bristow states: “…the availability of WCM coal will have no material impact on steel industry or other research initiatives to become more efficient, nor will it have a materially adverse effect on incentives to de-carbonise the steel industry”. This statement can be seen as the consultant ‘hedging his bets’, implying that UK and European steel manufacturers will show no loyalty to coal
Environmental Statement
Full Scope GHG Emissions arising from WCM would be Significant

• WCM claims that for every tonne of coal it extracts, a mine elsewhere will leave same tonnes in the ground - so that WCM's coal won't add to global emissions. This shows a poor understanding of economics and a lack of concern for climate issues.

• The denial of responsibility by WCM for full scope GHG emissions sits uneasily with the local, regional and national priority being given to climate change.

• WCM’s production will increase coal supply and increase global CO2e emissions by 9 to 10 million tonnes per year (for upto 50 years).

• This is 2% of the UK GHG emissions*. This will increase in future as total UK GHG emissions reduce. Considering the global carbon budget, this is also a significant amount globally. International attention is likely especially around COP26.

* Source: UK territorial emissions. UK Govt June 2020
Coal & Steel Sectors are undergoing significant evolution due to actions by Investors, Government Policy & Societal Expectations

- **ClimateAction 100+**
  - Investors with US$40 trillion under management
  - 5yr programme to pressure companies to align with Paris Climate Agreement
  - Targetting high emitting sectors eg oil&gas, industrials, mining&metals
  - ArcelorMittal, ThyssenKrupp (key European steel companies) are a focus

- **Campaign to stop financing coal investments & companies**
  - 22 global banks, including all 4 major UK banks
  - Primary focus is thermal coal, however:

- **Mission Possible**
  - Influential report on how to reduce GHG emissions from (inter-alia) steel
  - Highlights circularity (scrap steel) to reduce demand, as well as hydrogen & biomass as alternative energy sources to metallurgical coal
Major Steel Producers are Responding by Investing in Different Business Models & Production Systems

Press Release

Hydrogen instead of coal, thyssenkrupp Steel launches pioneering project for climate-friendly steel production at its Duisburg site
- State government funds first test phase at Duisburg steel works
- Project is the first funding under the initiative IN4climate.NRW
- Project partner Air Liquide is supplying the hydrogen

CLIMATE CHANGE DRIVING NEW BUSINESS MODELS

Today, climate change is the biggest risk facing ‘hard to abate’ sectors such as steel. However, Tata Steel sees this as an opportunity to take a leadership role in the steel industry by reducing its environmental footprint. Tata Steel Jamshedpur is already a national benchmark in CO2 emission. We have constituted a Centre of Excellence on Climate Change to implement various technology-enabled projects for CO2 reduction (use of hydrogen as a potential alternate fuel, carbon capture and use, beneficiation of low-grade raw materials, etc.). Tata Steel has also ventured into the steel recycling business to explore an alternative business model that will leverage India’s expected increase in scrap availability to produce steel with a lower carbon footprint. These initiatives will not only strengthen our future readiness but also provide a competitive edge.

2019 Annual Report
• Growth in demand for steel to come primarily from ‘end of life scrap’

• Corporate strategy is based upon: scrap/recycling; clean energy sources; and carbon capture & storage

• Hydrogen is seen a attractive because of 5-10 year commercial horizon

• Forecast implies a reduction in coal use

Circular carbon technologies

In 2018, we launched a €40 million Torero demonstration project at Ghent, Belgium, to convert 120,000 tonnes of waste wood into biocoke for use in iron ore reduction in place of fossil fuels. The technology has the potential to work with a variety of society’s waste streams. We’ve also been running an industrial pilot of IGAR technology in Dunkirk, France since 2017 to reform waste carbon gases so they too can be reused for iron ore reduction. Both technologies will reduce the amount of coal and coke needed in the blast furnace and lower associated CO₂ emissions.

Clean power technologies

ArcelorMittal is exploring iron ore reduction technologies using hydrogen and electrolysis, both of which could deliver significant carbon reductions if powered with clean electricity. In March 2019, we launched a €65 million pilot project in Hamburg, Germany to test hydrogen steelmaking on an industrial scale, with an annual production of 100,000 tonnes of steel. At the same time, we have been exploring direct iron ore reduction using electrolysis for a number of years. We lead the EU-funded Siderwin project, which is now constructing an industrial cell to pilot the technology.

Our target in Europe is to reduce our CO₂ emissions by 30% by 2030 over 2018 and be carbon neutral by 2050. Across our global portfolio our ambition is to significantly reduce our carbon footprint.
Copeland Local Plan has a clear set of Strategic Development Priorities

• ‘The Energy Coast’ – based upon energy sources of the future – onshore wind, biomass, small scale hydropower, & microgeneration

• Developing Enterprise & Skills, especially in Green Business Practices & Green Industries. An energy related research facility supports the ‘Energy Coast’

• Renaissance through Tourism

• Investment in ‘more aspirational’ Housing Stock

• Community facilities & services, Green Infrastructure with better Transport & Communications

• Climate Change highlighted as an existential threat for Copeland
Contribution of WCM Coalmine
Unlikely to form a solid foundation to bring prosperity for Copeland

- WCM Salaries are Low
  - Median salary in Copeland is £35687
  - Estimated WCM Median salary is £34000

- Decent Standard of Living
  - Estimated that only 1/3 of jobs would have high enough salaries to deliver a decent household standard of living and could form the basis for increasing demand for housing that is ‘more aspirational’ in line with Copeland Plan

- Skills & Individual Development
  - Impact also depends upon numbers of unemployed provided with jobs. No data is available
  - 50 Apprenticeships will make positive impact if the skills are transferable (ie not mining-industry specific)

- Uncertain Future will likely begin within 2-4 years
  - Declining market for Metallurgical Coal, will force a focus on costs and force mechanisation
  - This would reduce jobs, limit salaries and undermine above calculations

- Local Government support to WCM diverts (and will divert) attention from seeking more stable, future-focussed investments better able to deliver upon the Copeland Local Plan
Summary: There are Serious Concerns about WCM
Political effort should therefore focus on attracting credible, forward-looking industries to build a broad based resilient local economy

• The Cayman Islands and Private Equity Connection
  • WCM is controlled by a Private Equity Fund in the Cayman Islands. It is unclear who the majority owners & investors are. Minority investors are individuals and pension funds in Australia with no interest in Copeland
  • EMR Capital is the developer. It develops resource projects that have clear exit options. This introduces uncertainty about the long term commitment to the region.
  • The denial of responsibility by WCM for full scope GHG emissions sits uneasily with the local, regional and national priority being given to climate change

• A Weak and Inconsistent Environmental Statement
  • The EMR Capital consultant’s report contains inconsistencies and is based upon out-of-date data sources.

• The Demand for Metallurgical Coal will decline
  • Steel producers are investing in a future based upon new production methods and low carbon fuel

• The Project will not further strategies to deliver upon Copeland Local Plan
  • WCM will be a low cost operation. Median salaries estimated to be lower than current Copeland median.
  • Some of the jobs likely to deliver a decent standard of living and improve relevant skills for a few years
  • However the instability of the sector, due to declining market for Metallurgical Steel and need to survive by focussing upon costs, will lead to insecure jobs as wages are minimised and operations mechanised
More Information

duncan@dpollardassociates.eco
Appendix 1
Sources on Ownership of WCM

- https://beta.companieshouse.gov.uk/company/07143398/filing-history
- https://data.vcfund.me/company/emr-capital-co-investment-1-lp
- https://www.sgpbusiness.com/company/Emr-Capital-Investmentno3b-Pte-Ltd
## Jobs & Salaries

<table>
<thead>
<tr>
<th></th>
<th>Numbers</th>
<th>Max Salary</th>
<th>Mid Point Salary</th>
<th>Min Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/G Supervisors</td>
<td>30</td>
<td>60</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>U/G Production</td>
<td>326</td>
<td>45</td>
<td>37.5</td>
<td>30</td>
</tr>
<tr>
<td>U/G Support</td>
<td>61</td>
<td>40</td>
<td>33</td>
<td>27</td>
</tr>
<tr>
<td>Coal Processing</td>
<td>36</td>
<td>27</td>
<td>22.5</td>
<td>18</td>
</tr>
<tr>
<td>Surface Support</td>
<td>26</td>
<td>25</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Technical</td>
<td>10</td>
<td>40</td>
<td>33</td>
<td>27</td>
</tr>
<tr>
<td>Management</td>
<td>15</td>
<td>150</td>
<td>80</td>
<td>30</td>
</tr>
</tbody>
</table>

### Assumptions:
- Total Jobs forecast by WCM. %ages provided by WCM to provide detailed numbers. U/G Supervisors estimated
- Max salary forecast by WCM. Mid Point & Min estimated based upon ±20% variation from mean. Estimates made for Management
- Decent standard of living estimated at £50,000/household (Source Joseph Roundtree Foundation, based upon housing costs based upon new 3-4 bed housing in line with Copeland ‘aspirational housing’ priority)