



The Social Impact of the Woodhouse Colliery Project

September 2020



**Copeland
Local Plan
2013-2028**



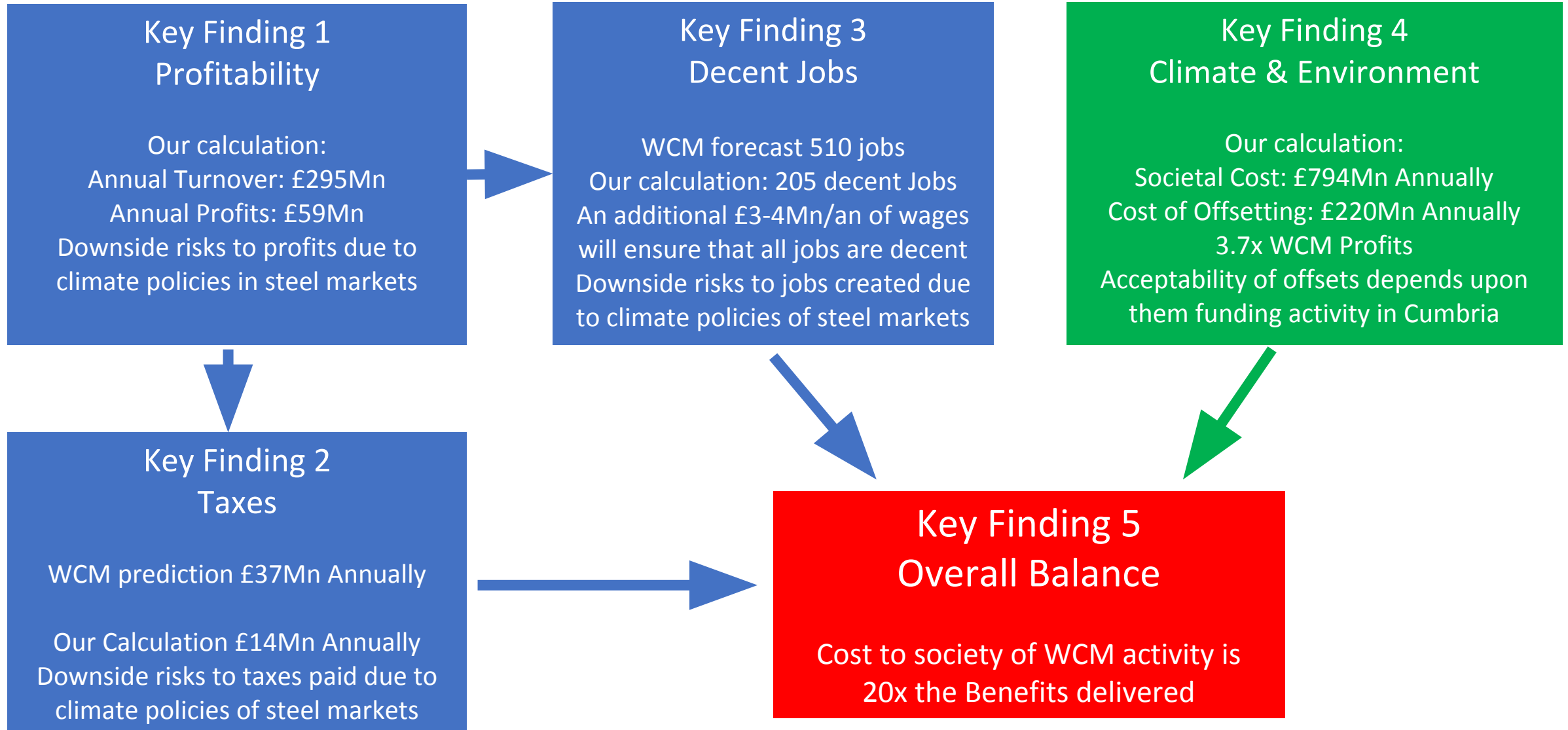
The Social Impact

This presentation provides an analysis of the **social impact** of the proposed investment by West Cumbria Mining in a Metallurgical Coal Mine in Copeland in West Cumbria. It considers the impacts of the project upon the environmental and human health; jobs & skill levels; and taxes. The analysis is based upon publicly available data and an analysis of statements by WCM. Details are provided in the Annexes.

This analysis is intended to inform the debate on the benefits of the mine, and particularly the benefit of jobs created versus the damage to the environment due to climate change. The two are of course not directly comparable, but one way to do so is to calculate and compare the monetary values behind these impacts. This analysis does this by assessing the claims by WCM, and calculating the value of jobs, business activity and damage caused to the climate and environment.

The analysis also scrutinises the mitigating measures that WCM has proposed.

Summary of Findings



Key Findings 1 & 2

Profits & Taxes

- We have calculated a WCM annual Turnover of £295Mn, with Profits of £59Mn and Taxes of £14Mn.
 - We estimate that tax rates are less than half the (new) forecast of WCM
 - WCM claim a tax payment of £300Mn in the first 10 years (we assume 8 years of £37Mn). At current coal prices that implies a 50% profit margin which looks high.
 - The Cayman Islands registered ownership suggests that taxes could be lower.
- There are two key downside risks that would reduce profits & taxes
 - There is some considerable uncertainty on the long term demand for metallurgical coal. In the last 12 months, as a response to climate change, interest and investment by industry in hydrogen as a fuel source is accelerating.
 - The imposition of a carbon tax (at levels under current discussion*) would potentially double the tax paid. It would however reduce the after tax profit that can be reinvested in the business, undermining its financial viability.

* UK Zero Carbon Commission

<https://static1.squarespace.com/static/5e1ee218fbeca217fe06a421/t/5f67b4bcc9621301a2109c9c/1600632008945/Zero+Carbon+-+How+carbon+pricing+can+help+Britain+reach+net+zero+emissions+by+2050.pdf>

Key Findings 3

Jobs

- Not all jobs are positive. Working poor are not able to live decent lives, and many still rely upon Government support. We therefore use 'decent income' as the threshold for determining if the jobs are positive.
- The estimate of the number of jobs that provide a decent level of income and decent livelihood is 205.
 - Increasing the wages & salaries by £3-4Mn to £30Mn annually would ensure that all jobs deliver a decent levels of income and livelihoods.
 - Alternatives to increasing salaries would be to make interest free loans and home improvement grants to improve the housing stock. This would further improve livelihoods and meet Copeland goals.

Key Findings 4

Climate

- The societal impact of GHG emissions associated with WCM is £794Mn annually*. This is 20x the value of taxes and salaries to be paid by WCM.
- The Proposed Offsetting by WCM will not compensate these emissions
 - The offsetting cost is £220Mn annually – over 3.7x WCM's annual profits
 - The scale of the offsetting needed is unrealistic given the limited opportunities for tree planting

* Sources:

1. Small World Consulting for GHG emissions

2. A wide variety of studies have calculated a societal cost for carbon (impact upon human health, environment & economic activity). The consensus figure used by industry is €100/T CO₂e. We use the UK£ equivalent

Key Finding 5

Overall Balance

- This analysis has demonstrated that the cost to society of the WCM business is 20x the value that it will generate.
- We estimate that tax rates are less than half the (new) forecast of WCM
- For the argument that the jobs to be created are positive for Copeland, we estimate that WCM will need to increase its wages & salary bill by £3-4Mn
- To compensate for the GHG emissions would require WCM to invest 3.7x of its profits
- Offsets are only acceptable where they are relevant to the business – in this case by investment in regeneration of local nature.
- There is considerable downside risk because of climate change to WCM, as steel companies invest in alternative energy sources & production systems, and policy makers develop fiscal and legislative measures. These will favour renewable energy over coal impacting negatively upon future profits of WCM and the claims on jobs, taxes and ability to fund climate mitigation efforts.

More Information

duncan@dpollardassociates.eco



Annex: Background Data

Climate & Environment

- There are two considerations
 - GHG Emissions due to WCM operations (Scopes 1&2)
 - GHG Emissions due to coal burned in the UK (Scope 3)
- GHG emissions associated with WCM operations will be 420kT CO₂e per annum. Applying a societal cost of £90/T of CO₂e* gives an annual cost to society of £38Mn.
- GHG emissions of coal usage (Scope 3) will be 8.4 MnT CO₂e annually*. 14% to be sold in the UK, 86% in Europe. Applying a societal cost of £90/T of CO₂e** gives an annual cost to society of £756Mn.
- Total Annual Cost to Society: £794Mn

* Small World Consulting

** A wide variety of studies have calculated a societal cost for carbon (impact upon human health, environment & economic activity). The consensus figure used by industry is €100/T CO₂e. We use the UK£ equivalent

Compensation through Carbon Insetting

This is a massive undertaking

- WCM have announced that they would invest in carbon offsetting projects – tree planting and peat restoration.
- For this to be acceptable WCM will need to invest in insetting – investing in projects, geographies and communities connected to its operations in Cumbria, then progressively investing in other regions connected with its value chains
- These could include: native tree planting, peatland and wetland restoration, regenerative agriculture, energy efficiency programmes and retrofitting ground sourced heat pumps in the housing stock, in Copeland and across Cumbria.
- Best practice being followed by other companies is to take responsibility for Scopes 1,2 and 3 emissions. This would generate additional value for customers and differentiate WCM coal.
- Good quality carbon offset programmes cost in the region of £20-30/T CO₂e. The cost is likely to increase as demand for projects increases. The total annual cost for WCM would be £176-264Mn (Mid point £220Mn).
- To inset Scope 1&2 emissions through land use within Cumbria would more than double the LULUCF already achieved in the County* Alternatively it would need to fund a roughly 50% reduction in Cumbria's domestic energy emissions*
- To inset Scope 3 this will require an annual UK tree planting scheme of 42Mn trees for Scope 3. This is over 10 times current rates of tree planting in England. Alternatively the Committee on Climate Change has recommended that 2.5Mn homes in the UK have heat pumps installed by 2030.

* Source Small World Consulting:

<https://slacc.org.uk/wp-content/uploads/2020/06/Cumbria-Carbon-Baseline-Report-2019-200229-Final.pdf>

The Impact of Taxes

- WCM originally forecast a tax contribution of £500Mn over the next 10 years. Their updated (September 2020) figure is £300Mn. We have been unable to replicate this figure
 - Based on the production of 2.8 Mn T of coal per year, over 8 years (to account for the 2 years construction), at a price of US\$135/MT gives £295Mn of revenue per year.
 - Assume a profit margin of 20%, gives £59Mn profit per year. Corporation taxes of 19% = £11Mn per year, so £89Mn for the first 10 years. Employment taxes add a further £29Mn for the first 10 years.
- However, there are other considerations
 - A production based carbon tax as applied in Canada could be introduced in the UK. Using a figure of £15/T CO₂e and applied to Scope 1&2 emissions would provide £6Mn annually. The Zero Carbon Commission has recommended a figure of £75/T CO₂e by 2030*. This would increase the tax rate to £31Mn annually by 2030. A staged increase would imply a total carbon tax of £144Mn by 2030. As this is not yet public policy we do not believe that WCM have built this into their calculations.
 - WCM is owned by a Cayman Island registered company. This suggests that the corporate tax paid in the UK will be lower than a purely UK registered entity.
 - There is some considerable uncertainty on the long term demand for metallurgical coal. In the last 12 months, as a response to climate change, interest and investment by industry in hydrogen as a fuel source is accelerating.

* UK Zero Carbon Commission

<https://static1.squarespace.com/static/5e1ee218fbeca217fe06a421/t/5f67b4bcc9621301a2109c9c/1600632008945/Zero+Carbon+-+How+carbon+pricing+can+help+Britain+reach+net+zero+emissions+by+2050.pdf>

Jobs

- The positive aspects of jobs comes from their ability to provide a decent standard of living for the household. The importance of decent living is that this level (unlike minimum income) reduces the dependency of the household upon social & community services, allowing budgets to be focussed on the most needy*. It will also facilitate an increase in the quality of the housing stock (in line with the Copeland Local Plan).
- We calculate that the family income needed to provide a decent standard of living in Copeland is £50,000. This is based upon calculations from the Joseph Roundtree Foundation, adjusted for housing costs that is 'more aspirational' in line with the Copeland Plan.
- We calculate that the median salary of WCM is lower than the current Copeland median salary**. 205 jobs would have high enough salaries to form the basis for a decent household standard of living (assuming a second wage earner).
- We calculate the total annual wage& salary bill of WCM to be £26Mn. Increasing this to £29-30Mn would ensure that all the jobs would be above the decency threshold. This increase in wage costs of £3-4Mn annually should be seen in the context of profits of £73Mn annually.
- With housing costs being a significant factor, an alternative approach to improve livelihoods would be to offer targetted home improvement grants/interest free loans.
- A second positive impact would be created by employing people who were previously unemployed (thereby reducing the burden upon the Government). There are no figures from WCM on this. The actual benefit would depend upon the jobs they are able to take up (ie above or below the decency threshold)

*<https://www.theguardian.com/sustainable-business/2015/apr/20/taxpayers-spend-11bn-to-top-up-low-wages-paid-by-uk-companies>

**Median salaries are a more important indicator than average salaries.

Assumptions on Decent Living Levels

- Aspirational Housing
 - New 3-4 bed houses in Copeland cost £200-250,000
- Unemployment Rates
 - 2040 People unemployed in Copeland.
 - Of whom 1255 male, 785 female
 - 235 in the 18-24 age range
- Gross Pay for Copeland based Citizens (median figures)
 - Per Week £686 (£728 male, £592 female)
 - Annual £35672 (£37856 male, £30784 female)
- Joseph Rowntree Foundation
 - Decent Living Calculation: ±£50000 per family including Aspirational Housing in Copeland

Sources:

Housing – Rightmove


Employment – Government Statistics

Joseph Rowntree Foundation

Jobs

- WCM Wage Bill (av £51250x510) = £26.1Mn
- NI (tax) = £3.61Mn
- Assumed median £34000 (Copeland median £35672)
- 205 jobs deliver a decent living (JRF data adjusted for decent housing)
- Increase wage bill to £29-30Mn, increases all the jobs above a decency threshold
- New median of £41000

Jobs & Salaries

 Average of Starting Salaries likely to be between Min & Mid-Point to provide opportunity to increase over time as experience increases

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

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 $\pm 20\%$ variation from mean. Estimates made for Management

Apprenticeships

- The positive aspect of Apprenticeships is that training allows people to be able to reach their potential – by improving family income levels and through that, opportunities to improve quality of life. Increasing skill levels are also the basis for attracting new investment in the region. The most valuable would be those that would advance the Copeland Plan priorities of ‘the Energy Coast’ and ‘Tourism’.
- The high level of apprenticeships on offer (50 on top of a workforce of 500) is a positive, and provides a ready supply of new entrants to the company. It is noted that the minimum wage for Apprentices is £4.15. A concern about the high number of apprenticeships is if this translates into a source of low wage jobs.
- The value of these apprenticeships will be seen when they provide a stepping stone to a career and decent wage. For Copeland the apprenticeships of most value are those with transferable skills to other industries. We have not attempted to place a value on this as it requires more detailed insights and assumptions.