



FOR
YOUR
WORLD

WWF CASE STUDY

NEWCASTLE-UNDER-LYME

SUMMARY

The constituency of Newcastle-under-Lyme is perfectly positioned to benefit enormously from the government's ambition of reaching net zero carbon emissions by 2050. Its two brickworks are a key source of local employment. Electrification of the industry is one of a number of potential decarbonisation options to ensure that they continue to play a key role, while generating significant local investment.

Extensive economic analysis has shown the benefits the green transition will bring to the constituency, including local job creation and investment in local infrastructure.

A green transition in Newcastle-under-Lyme will:



CREATE
520 - 690 LOCAL JOBS



SECURE £1,080 MILLION
IN LOCAL INVESTMENT



SEE £770 - 980 MILLION
TOTAL GROSS VALUE ADDED TO
THE LOCAL ECONOMY

WWF-UK's [Net Zero Delivery Tracker](#) applied to government spending and taxation, will help ensure that Newcastle-Under-Lyme secures the considerable benefits of the green transition.

DESPITE THE DECLINE OF TRADITIONAL INDUSTRIES IN THE AREA, THE RATE OF PEOPLE IN EMPLOYMENT REMAINS ABOVE THE REGIONAL AND NATIONAL AVERAGE

BACKGROUND

Newcastle-under-Lyme has been won by Labour at every election since 1922. At the 2019 general election it was won by the Conservatives with a majority of over 7,000 votes. The seat voted strongly to leave the European Union in 2016, with almost 62% voting for Brexit.

Despite the decline of traditional industries in the area, the rate of people in employment remains above the regional and national average and the rate of economic inactivity in the constituency remains below the regional and national average.

The constituency is home to two significant brick making plants.

While neighbouring Stoke on Trent became famous for its pottery, Newcastle-under-Lyme built a thriving industry using local clay to manufacture bricks and fireplaces. Despite remaining a significant source of employment and a key part of the constituency's heritage, the brickworks still provide significant associated CO₂ emissions¹.

Combined, the two plants in Newcastle-under-Lyme emit 35,567 tonnes of CO₂ annually. The Ibstock Parkhouse Brickworks emits 19,800 tonnes of CO₂ and the Ibstock Chesterton Brickworks emits 15,767 tonnes. These plants will need to use new technology to remove these emissions in line with the government's net zero targets.

The ceramics sector believes that electrification of the industry is one of a number of technologies, including hydrogen firing, that could be technically possible² for large kilns. There are already some highly electro-intensive ceramic companies using much-smaller specialist electric furnaces to fire at up to 2,750°C³. However progress is limited at present as electrification is not economic at current electricity prices⁴, particularly in the UK versus the rest of Europe. Coordination will also be needed in some areas to ensure that any necessary electricity network capacity upgrades are made to support electrification. Newcastle-under-Lyme tells the story of local benefits arising from the decarbonisation of a traditional industry.

1 Ibstock Parkhouse Brickworks – 19,850 tonnes. And Ibstock Chesterton Brickworks – 15,750 tonnes

2 "Electrification of kilns using low-carbon electricity could be an option to reduce fuel emissions, particularly for large kilns making bricks, roof tiles, wall and floor tiles. However, this option is not currently economically-viable due to the significantly higher cost of power compared to natural gas". Cerame-Unie – The European Ceramic Industry Association, Paving the way to 2050 The Ceramic Industry Roadmap

3 British Ceramic Confederation, response to CCC call for evidence on Sixth Carbon Budget, 2020

4 Cerame-Unie – The European Ceramic Industry Association, Paving the way to 2050 The Ceramic Industry Roadmap



NET ZERO OPPORTUNITIES

Potential economic benefits from Net Zero investment	
Total investment to 2050	£1,080 million
Direct GVA	£380 million - £490 million
Total GVA	£770 million - £980 million
Job creation	520 - 690

Breakdown of jobs created in Newcastle-under-Lyme	
Decarbonising Ceramics Industry	50 - 70
Decarbonising Surface Transport	260 - 290
Decarbonising Residential Buildings	160 - 240
Decarbonising Non-Residential Buildings	60 - 90

ELECTRIFICATION AS A POTENTIAL ROUTE TO DECARBONISE THE CERAMICS INDUSTRY

Decarbonising Newcastle-under-Lyme's two brickworks using electrification would bring significant benefits to the region. Electrification of kilns using low carbon electricity would help reduce fuel emissions, and act as a key paving stone for the ceramic industry to reach net zero. **Through the decarbonisation process, the constituency will see an investment of £140 million, creating local jobs and acting as an important economic stimulus for growth.**



"At Ibstock, we are driven by a commitment to sustainability in the communities in which we operate. Here in Newcastle under Lyme, we see significant – and tangible - opportunities for net zero to benefit the future of this constituency.

With the right Government policy frameworks in place to support the net zero ambitions, our business will have the confidence to continue to invest in that future, thus supporting local jobs, opportunities and growth."

NEWCASTLE-UNDER-LYME IS SET TO BENEFIT FROM £440 MILLION OF INVESTMENT IN LOW CARBON TRANSPORT BY 2050

DECARBONISING NEWCASTLE-UNDER-LYME'S TWO BRICKWORKS USING ELECTRIFICATION WOULD BRING SIGNIFICANT BENEFITS... THE CONSTITUENCY WILL SEE AN INVESTMENT OF £140 MILLION, CREATING LOCAL JOBS AND ACTING AS AN IMPORTANT ECONOMIC STIMULUS FOR GROWTH

LOCAL BENEFITS OF DECARBONISING TRANSPORT

Transport is the biggest sectoral source of CO₂ emissions in the UK, accounting for around one-third of total emissions⁵. Between now and 2050, around £50bn will need to be invested in new transport infrastructure to deliver the net zero target, but this cost will be more than offset by savings made as electric vehicles (EVs) are much more efficient to run.

The Autumn 2021 Budget and Spending Review provided £620 million to support the uptake of EVs and £817 million for the electrification of UK vehicles and their supply chains⁶. These welcome investments were partially offset by high-carbon policies such as reducing air passenger duty for domestic flights which drive up emissions. Implementing WWF-UK's Net Zero Delivery Tracker (explained in detail below) would help government avoid policies that increase emissions or balance them out by delivering more ambitious emissions reductions elsewhere in the Budget.

Newcastle-under-Lyme is set to benefit from **£440 million of investment in low carbon transport by 2050**. Around three-quarters of this will relate to personal forms of transport such as cars, vans and motorcycles. Total surface transport investment will include both public investment (including on deployment of public charging infrastructure) and private expenditure (such as for purchase of vehicles)⁷. Helping to significantly improve connectivity and mobility in the constituency. This investment will create an estimated 260 to 290 local jobs.

LOCAL BENEFITS OF DECARBONISING HOUSING

Changes to the housing and non-domestic building stock will be a big part of the adjustments that the public sees as we target net zero. This will include retrofitting existing homes to improve their energy efficiency and install low carbon heating options such as heat pumps. New-build homes in the constituency will need to be future proofed and zero-carbon ready.

The Autumn 2021 Budget and Spending Review provided £3,900 million to decarbonise buildings and make homes warmer and more environmentally friendly⁸. This was welcome investment, but came in a package of announcements that WWF-UK's Net Zero Delivery Tracker (explained in detail below) found did not do enough to put the UK on track for net zero.

Investing in buildings in line with the net zero target would not only make homes warmer and lower bills, it would also create local employment and grow the local economy. In Newcastle-under-Lyme, improvements to housing in line with climate targets will require investment of **£360 million in residential housing and £130 million to non-domestic buildings**. This investment will create an estimated 390 to 410 local jobs.

⁵ BEIS, 2021 UK greenhouse gas emissions, provisional figures, 31 March 2022

⁶ HM Treasury, Autumn Budget and Spending Review 2021, October 2021

⁷ CCC, The Sixth Carbon Budget, December 2020

⁸ HM Treasury, Autumn Budget and Spending Review 2021, October 2021

CONCLUSION

The world needs to decarbonise to tackle climate change - but making these changes will deliver real local benefits too. This briefing outlines why supporting the net zero transition will have significant and tangible economic benefits in Newcastle-under-Lyme, particularly as it decarbonises its traditional heavy industry infrastructure.

Reaching net zero will require significant investment from the public and the private sector. In many cases, as has been seen for example in the offshore wind sector, early public sector investment will help leverage in private sector capital.

This will require government policy to incentivise the big changes needed across the economy in industry, power, buildings, transport etc. These policies will typically be announced by government at set piece events such as Budgets and Spending Reviews. Government should be transparent at each of these occasions as to whether the policies they announce are commensurate with the trajectory for emissions reductions proposed by the Climate Change Committee and legislated for by Parliament in the five-yearly Carbon Budgets.

WWF is calling for the government to apply a Net Zero Delivery Tracker to all spending and taxation decisions in Budgets and Spending Reviews. This will ensure that areas such as Aberavon receive the significant local benefits of the green transition identified in this note, including job creation, improved local infrastructure and faster economic growth.

2 BEIS, 2021 UK greenhouse gas emissions, provisional figures, 31 March 2022

3 HM Treasury, Autumn Budget and Spending Review 2021, October 2021

4 CCC, The Sixth Carbon Budget, December 2020

5 HM Treasury, Autumn Budget and Spending Review 2021, October 2021