# Briefing Note

CITY OF WOLVERHAMPTON COUNCIL

**Title:** **Green Economy** **Date: 3rd February 2023**

**Prepared by:** **Regeneration Directorate**

**Audience:** **Economy & Growth Scrutiny Panel**

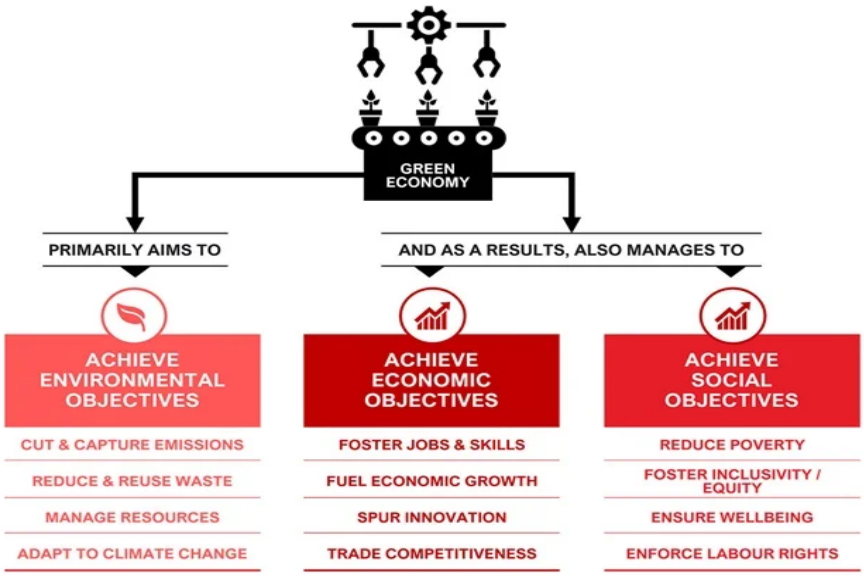
Internal ☒ Partner organisation ☐ Public ☐ Confidential ☐

## 1.0 Purpose or Recommendation

1.1 To provide an overview of the emerging areas that contribute to the developing Green Economy agenda in Wolverhampton. This includes an update on the emerging green economy policies, initiatives, citywide projects and education and skills opportunities.

## 2.0 What Is The Green Economy?

2.1 The Green economy is where economic activity is underpinned by socially responsible and environmentally friendly practices, such sustainable consumption and efficient reuse and recycling of land and materials that minimises resource waste, and which is powered by clean and renewable sources of energy.




2.2 A green economy is indeed about far more than emission reduction. It also builds our capacity to adapt to climate change, develop circular systems and reduce waste and material consumption. It leads to greater reuse of materials and not just protection but promotion of greater biodiversity.

2.3 But the green economy can and should provide economic and social benefits as well. As the graphic above shows, a green economy is also meant to foster greater prosperity,

boost local growth and innovation and foster competitiveness, as well as providing a more just and inclusive society.

## 3.0 The climate challenge – how Wolverhampton can help address this?

3.1 The UK's climate commitment of 2050, and its subsequent strategy require greater action at a local level. The 2041 Net Zero target set by the WMCA and adopted by the City, is a science-based target directly aligned to a 1.5oC warming scenario.

3.2 To achieve this ambition, the City of Wolverhampton must make significant short-, medium- and long-term steps to cut emissions, aiming for a 70-80% reduction by 2030, and to stay within a local climate change budget of ~6 million tonnes by 2042. Currently the City emits 900 thousand tonnes of CO2 each year.

3.3 The next step for the City is the creation of a partner led City wide Net Zero Strategy and action plan that helps to not only decarbonise but deliver against the wider economic and social ambitions of the council and stakeholder across the city.

3.4 This will include establishing a Green City partner board that will coordinate development and delivery of the agreed strategy and the measures required for a planned transition to a green economy.

3.5 Domestic & commercial/ industrial Retrofit: the 110,000 homes and 8,000 business within the city all contribute to continued demand for fossil fuels, and subsequent release of greenhouse gases. The 5,000 retrofits required each year will help to drive growth in emerging technology markets (heat pumps, hydrogen, battery storage, insulation, sustainable construction) that present significant opportunity in terms of skills, jobs, and economic potential.

3.6 Electric Vehicle Manufacturing and ChargePoint deployment: Wolverhampton is part of the heart of the UK's automotive manufacturing industry. The electric vehicle market has witnessed exponential growth in recent years along with advances in charging networks. With JLR committing to phasing out production of its diesel drivetrains by 2026 and the government's commitment of "no new petrol or diesel vehicles after 2030", the increasing commercial viability of the electric vehicle ChargePoint network in light of the 110,000 registered vehicles within the city, should be considered.

3.7 Research from the British Business Bank found that, whilst awareness of net zero is becoming significant (at nearly 60%), only around half of smaller businesses say decarbonisation or reducing environmental impacts is a near-term priority, with 76% of small businesses having yet to implement decarbonisation strategies, capabilities and actions. Some of the barriers preventing businesses to take action are:

- Costs to transitioning to net zero, particularly upfront capital costs.
- Feasibility of implementation, such as lack of appropriate technology, infrastructure or vehicles, or lack of control due to tenancy agreements.
- Inability to find information on net zero, challenges around the scope and language of climate and carbon reduction / carbon jargon
- Lack of understanding of how to secure investment from local energy schemes, and how to access impartial advice and expert guidance on programmes and funding.

- Lack of understanding of the potential finance implications inherent in transitioning to a low carbon economy.

3.8 The current Business support environment is undergoing a number of significant changes. The Council is currently developing a new employer support model for the city that will be informed by local business need and the business offer from the region and other partners including the private sector.

3.9 In its approach, the Council will take into consideration the Green Economy opportunities and challenges in the model to support the sector development in Wolverhampton, new and existing business to develop their offer and create new jobs and skills alongside key stakeholders.

3.10 As part of the Smart Cities programme, the Council has recently invested in smart street lighting which has the potential to reduce electricity use by up to 80% by adjusting output based on ambient light levels and weather. Smart streetlights can also monitor traffic, pedestrian crossings, and noise and air pollution, as well as incorporate electric car chargers and telecoms infrastructure.

3.11 Building on the city's success with the rollout of futureproofed digital infrastructure including full fibre broadband and 5G, Wolverhampton Digital Infrastructure Strategy outlines our ambition to become a Gigabit and Smart City. Its theme digital innovation is developing and innovate services including addressing key challenges and priorities such as climate change. The Council are exploring an Internet of Things Platform which will collate and analyse data from Smart City devices. Microsoft has offered to do a specific workshop I looking at ways that technology can be used to support our net zero ambitions.

3.12 The Council is currently engaged in delivering a series of initiatives linked to some of the above growth areas:

- Domestic Retrofit. £10M contract for delivery domestic retrofit works over a 3 – 5-year period, and £4.2M of short-term funding through the sustainable warmth competition to delivery of the next 3 years. The Council is also working on a retrofit programme with Wolverhampton Homes to commence upgrades to the social housing stock.

- EC Charging Points: 80 EV chargers are being installed on-street across 40 residential areas, to encourage adoption and facilitate charging of EV's in neighbourhoods which typically lack off-street parking. Plans for a further 170 in line with the Black Country Ultra Low Emission Vehicle Strategy are expected.

- Solar Farms: A 6.9MW solar farm is being delivered at an ex-landfill site at Bowmans harbour in Wednesfield, that when finished later this year, will provide green lifesaving power directly to new cross hospital offsetting almost all of their energy needs.

## 4.0 Physical Projects with Green Credentials

4.1 Green Innovation Corridor (GIC) will support growth of new green industries, turbocharging economic prosperity and closing the productivity gap. It was submitted as part of Levelling Up Round 2 and forms part of the Trailblazer Devolution Deal.

4.2 The GIC is a key priority building upon the city's strengths in sustainable construction and circular economy. It will support inclusive growth, transforming our local economy and creating quality jobs and skills capital for local people in emerging green sectors.

4.3 The Corridor is a "place-based" approach connecting the Springfield Campus with Wolverhampton Science Park introducing new development opportunities, incubation space, and improvements to the City's connectivity. It will stimulate wider regeneration along the Corridor acting as a catalyst for additional private sector investment in the Science Park, unlocking brownfield sites for sustainable and mixed-use development, improving the canal and overall connectivity.

4.4 The key elements of GIC include development opportunities at Springfield Innovation Hub, Cross Street North and Wolverhampton Science Park enabling.

- 6.4 hectares of brownfield land remediated
- to provide 22,762 sqm of commercial floorspace,
- creation of 1,220 jobs
- demonstrating a total of £225m Gross Investment.

4.5 The GIC programme will be delivered in partnership between the Council, University and private sector investor (s), maximising impact of government funding. It will support new business starts, scale up, products and services aligning to the City's existing strengths in high value manufacturing, green technologies, and digital innovation.

4.6 The i54 Business Park accommodates the Jaguar Land Rover (JLR) Engine Manufacturing Centre UK, production facilities for Moog, Eurofins, Cartor Security Printers, ERA Home Security Ltd, global engineering manufacturer Atlas Copco and more recently Bilco Access Solutions. These companies are expected to be joined by a tech-enabled international sustainable energy business whose principle of "Sun to Wheel" is responding to the climate emergency through an integrated technology focus: solar energy + energy storage + electric vehicles = completely Net Zero.

4.7 The National Brownfield Institute (NBI) is located within the University of Wolverhampton's Springfield Campus that is home to the new school of Architecture and Built Environment.

4.8 NBI research soil and groundwater contamination and ways of regenerating contaminated land using knowledge from other research centres to help assess and identify new remediation technologies and construction methods to promote advanced manufacturing / sustainable construction and a brownfield land first approach to regeneration throughout the region, thus protecting much valued greenfield sites.

4.9 NBI adds to the offer at Springfield Campus, including architecture and built environment super-campus home to the West Midlands Construction UTC, University of Wolverhampton's School of Architecture and Built Environment and National Brownfield Institute. Future phases will create opportunities for business growth and start-ups

around the epicentre of the National Centre for Sustainable Construction and delivered to carbon neutral standards.

4.10 Canalside South. The Council alongside strategic partners Canal and River Trust, have entered into an exclusivity agreement with Legal & General Modular Homes (LGMH), a subsidiary of Legal & General Capital (Legal & General), to build the regions first Net Zero Regulated Carbon residential development at Wolverhampton's Canalside South – a 17 acre former industrial site located minutes away from the city centre and transport Interchange.

4.11 LGMH ethos and business model is centred around carefully designed and built homes to keep energy and water consumption, greenhouse gas emissions and household waste to a minimum, while maximising comfort, interior daylight, and space for occupants. Sustainably sourced materials are used during the construction process and developments are landscaped to support biodiversity.

4.12 Around 400 precision-engineered homes will be delivered at Canalside South, each will include an air source heat pump, PV panels and Electric Vehicle charging point as standard – all supporting the city's climate change commitment to be net carbon neutral by 2041.

4.13 These homes will have major impact on individuals' energy bills as the homes are 60% more efficient to run for the homeowner than a Building Regulation compliant new build home and the apartments are up to 30% cheaper to heat and run than the average apartment.

4.14 I9 Interchange District. Energy efficiency has been integral to the design process, from controlling the solar gain through passive measures to incorporating low and zero carbon technologies to reduce day to day emissions. This is demonstrated through a commitment to achieve a BREEAM 'Excellent' rating.

4.15 The external envelope of the building is sealed to minimise air leakage. Fresh air is provided by mechanical means, and the heating and cooling operated via a four pipe fan coil system, which uses hot and chilled water to efficiently regulate the air temperature for optimum occupant comfort. In addition to external shading provided by the deep facade profile and high performance glazing, internal blinds will be used to provide another layer of solar control and prevent glare for occupants, reducing the loading on the mechanical system.

## 5.0 Education and Skills opportunities

5.1 To demonstrate the scale of the challenge and opportunity regarding skills consider the following statistics.

- To upgrade the 110,000 homes within the city, 5000 Homes need retrofitting every year demanding Labourers/ energy assessors & auditors/retrofit assessors/ coordinators/ designers
- 110,000 homes require Heat pump transition or alternative heating catalysing a shift away from traditional gas boiler engineers with upskilling needed for heat pump installers, and service & maintenance engineers.

- Installing the equivalent of 2kW roof top solar power across the 110,000 homes per household across the city would offset up to a third of the City's current Carbon emissions. Investing in these areas will drive demand for solar installers, upskilled electricians to carry out regular testing and conduct service & Maintenance
- 250 public EV chargers across City by 2025, and up to 1000 across the city by 2030, demanding a greater number of installers, engineers & service & maintenance personnel.
- 7.5% of vehicles to be EV by 2025 (8,250): mechanics Upskilling, Battery recycling & 2nd life applications e.g., grid storage (circular economy)

5.2 A general shift to "electric" will necessitate greater adoption of physical sciences such as physics and electrical engineers, plus availability of accessible courses for upskilling in these areas

5.3 The changes and projects outlined above will see a transition to green skills that will transform the labour market. The need for "green skills" is not just about new green jobs in sectors such as construction, engineering, and manufacturing, but also "greening" existing roles such as project management, leadership, communications.

5.4 The Learning and Work Institute recently completed research on how the UK skills systems can help young people acquire the high quality technical skills needed to support the UK's transition to net zero carbon emissions: GreenSkillsReport-2022_v3b.pdf (worldskillsuk.org)

5.5 The research showed a disconnect between an increasing demand from employers for green skills and the lack of knowledge amongst young people about what green skills mean. It also highlighted the need to ensure qualifications and training deliver the skills employers need to meet their low carbon efficiency targets.

5.6 The local response to meeting the skills needs is being developed together with the WMCA, which is funding green skills bootcamps in retrofit construction and electric vehicle technology. The WMCA has recently secured £15.2 million in government funding to expand its skills bootcamp provision by 4,000 places until 2024, specifically in retrofit, green and sustainability sectors. The bootcamps are free for participants aged 19 plus, at level 3 (equivalent to A levels), last up to 16 weeks, and guarantee a job interview at the end. If a participant is on Universal Credit, they can join a bootcamp and not lose their benefits.

5.7 The City of Wolverhampton College is at the forefront of green skill provision, with courses in both electric vehicle technology (delivered at its new state of the art facility in Wednesfield) and retrofit, from level 1 to level 4. It is also planning new courses in environmental sustainability, levels 1 to 4.