Circular Economy Routemap

One Year Progress Update

West Midlands Combined Authority

WEST MIDLANDS Greener Together

Introduction

Rather than depending on linear, extractive, and wasteful processes, a circular economy encourages repair, reuse and regeneration of resources and materials as well as a transition to renewable energy. At present, the West Midlands shows a high degree of linearity in its economy, using 3.8 times more non-renewable materials to renewables. This gap will need to be addressed for the West Midlands to achieve its target of being net zero by 2041. To encourage a transition to circularity in the economy, the WMCA published a Circular Economy Routemap in September 2021. The focuses on three key sectors for the West Midlands:

- **Manufacturing** – which has the largest carbon footprint in the West Midlands
- **Construction** – the largest producer of waste in the region
- **Food** – where the region is home to international examples of best practise in food processing, as well as a significant third sector presence in food and sharing

The Circular Economy Routemap was approved by the WMCA Board, with recommendations to develop business cases for:

- A **West Midlands Industrial Symbiosis Programme** to connect waste streams between businesses
- A **Zero Waste Construction Hub** to encourage materials recovery in the construction sector

Progress

Since the Routemap was published we have made progress on the two priority action areas approved by the WMCA Board, and several other areas:

West Midlands Industrial Symbiosis Programme

What is it?

Industrial symbiosis is an approach to industrial decarbonisation which involves the direct reuse of one company's waste streams as another company's raw materials.

Why is it important for the West Midlands?

Industrial symbiosis presents an exciting opportunity for the West Midlands as it is a proven method of creating generating significant business savings, whilst also reducing carbon emissions and contributing to a region's competitiveness and supply chain resilience.

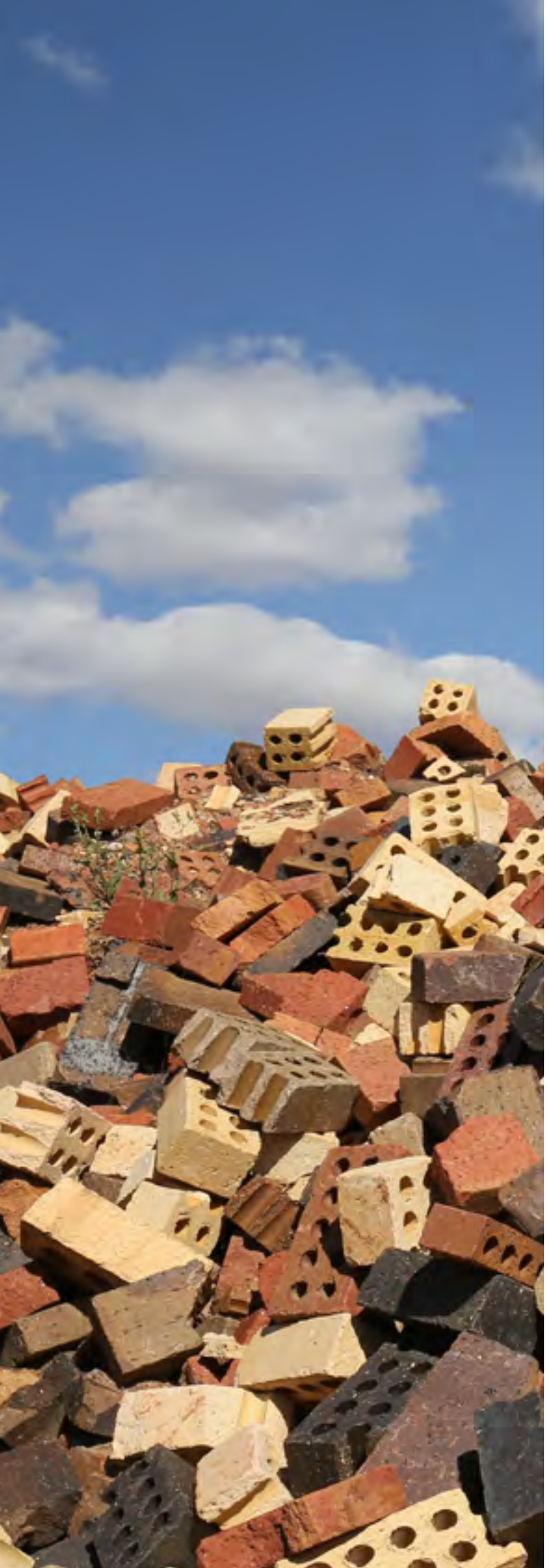
Progress made

The team has been working to develop an investment case for a regional industrial symbiosis programme.

Working with stakeholders, we have created a proposal for a blended programme which will facilitate a regional network of businesses exchanging waste. As connections between businesses become more apparent, we would expect colocation to occur, and clusters to form. As barriers to exchanges for particular waste streams present themselves, the programme would support the case for investment into innovation activity, pilot projects, and demonstrators. This has the potential to bring significant levels of private investment into the region. The business case modelling shows a strong case for investment in an industrial symbiosis programme for the West Midlands. Additionally, a programme in the West Midlands engaging 200 businesses could reduce the region's carbon emissions by 14,000 tonnes, divert 44,000 tonnes of waste from landfill, and contribute to a GVA uplift of £1.8m per year.

Next steps

Work will now be undertaken to attract investment to the industrial symbiosis programme to ensure that these proposals move beyond the concept phase to create tangible benefits for the West Midlands.



Zero Waste Construction Hub

What is it?

The zero waste construction hub concept would see a materials recovery hub operating in the West Midlands, to reclaim usable materials from building sites which would otherwise be sent to landfill, and sold on to small traders and DIYers, or donated to community groups.

Why is it important to the West Midlands?

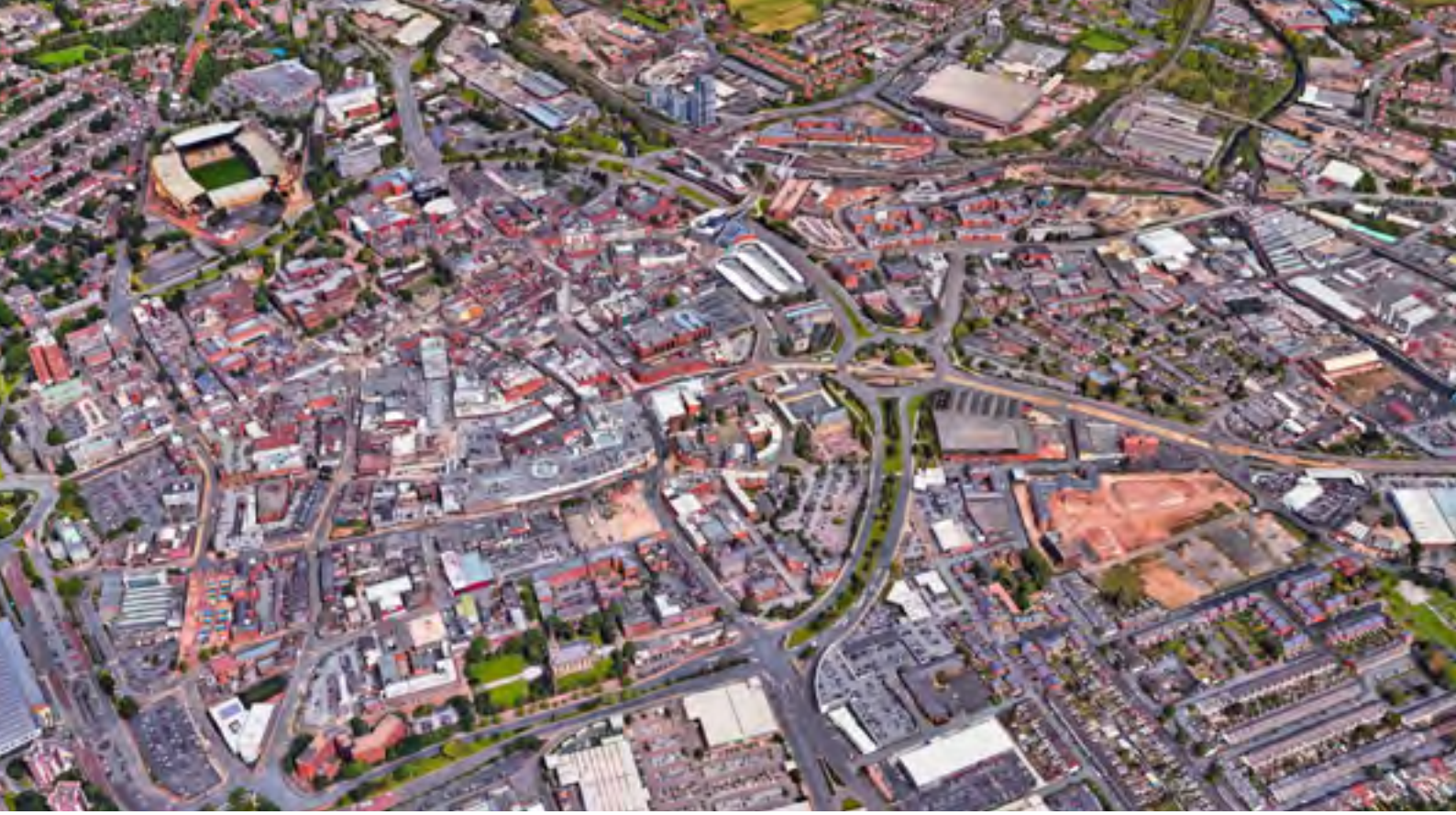
The construction sector is a significant producer of waste in the region, responsible for around 55% of all waste produced, and sending around 4.5 million tonnes of waste to landfill. It has been estimated that around 13% of waste the sector sends to landfill is usable material. Putting mechanisms in place to recover this material will create significant environmental, social, and economic benefits.

Progress made

The team is developing a business model for a Zero Waste Construction Hub in the West Midlands. The aim of the hub will be to promote materials recovery in the region's construction sector. The project will focus on understanding the scale of the opportunity for materials recovery in the West Midlands, analysing behavioural, technical, and regulatory barriers to reusing materials, and developing a data-driven, fully costed, business plan for a pilot hub.

Next steps

As the project is finalised we will identify the most appropriate delivery model and funding stream to begin implementation.



Repurposing to Zero

What is it?

Building repurposing, also called adaptive reuse, is the process of reusing an existing building for a purpose other than that for which it was originally designed. Repurposing differs from retrofit, in which the building continues to serve its original purpose, in a more efficient manner.

Why is it important for the West Midlands?

Existing buildings have large amounts of carbon embodied in the structure, carbon which is only emitted when the building is demolished. A typical post-war building can hold as much as 40,000 tonnes of carbon embodied in the structure. By encouraging a reuse first approach to buildings in the West Midlands, the region can dramatically reduce the carbon emissions associated with the built environment sector, whilst also bringing social and economic benefits through the regeneration of local centres, and by enabling a more flexible, strategic approach to the use of the built environment.

Progress made

The team conducted a study to determine the feasibility of the repurposing of buildings at scale. The study has included engagement with the public and private sectors to understand commercial and regulatory barriers to the approach, and data analysis to determine the scale of the opportunity in the West Midlands. Reporting in September 2022, the feasibility confirmed that the repurposing of buildings is a viable opportunity in the West Midlands, with approximately 650 buildings that could be repurposed in the region. Reusing these buildings would bring significant economic, social, and environmental benefits to the region.

After confirming the feasibility of the approach, a Repurposing to Zero framework has been created, which can be used to showcase best practise guidance for approaching the repurposing of buildings and the reuse of existing spaces. In doing so, the framework will help us to capitalise on the opportunity present in the West Midlands.

Additional activity

In addition to the core activity outlined above, the Environment Team has supported the development and implementation of circular economy principles into other areas of WMCA activity, including working with TfWM to understand how circular approaches to infrastructure can be developed, as well as raising the profile of the WMCA's environment programme through a number of regional and national speaking events and opportunities. The team has also worked with the Birmingham 2022 Commonwealth Games, as part of a Circular Economy Action Group, to create a circular legacy for the Games. This legacy has included the donation of media vans to The Active Wellbeing Society for use as mobile Share shacks, and the Commonwealth equipment giveaway which will see 16,000 items being donated to community groups, schools, and sports clubs in the region.

Next steps

After the work to develop business cases for the priority delivery areas agreed by the WMCA Board has been completed, there will be a need to draw down additional projects from the Circular Economy Routemap to be developed further, with a focus on food and communities.

Alongside this, significant work will be undertaken to attract investment to the Industrial Symbiosis programme, Zero Waste Construction Hub project, and Repurposing to Zero concept, to ensure that these proposals move beyond the concept phase to create tangible benefits for the West Midlands.

More detail on the WMCA's Circular Economy Routemap can be found here.