

A Just Transition and Recovery – in a Post-COVID World

Lisa Trickett Bryan Nott Places in Common 2021





About Places in Common

Places in Common is a co-operative working in public policy with a view to driving system change and leveraging the power of the collective commons on behalf of communities. We seek to work with others to deliver policy innovation and challenge in areas such as climate change, energy, education (including special educational needs and disability) and equalities.

Through a process of mutual support and understanding we hope to bring about a shift in the power relationships that play out across our communities in line with our co-operative values.

About Birmingham Energy Institute

Birmingham Energy Institute (BEI) is developing and applying the technological innovation, original thinking and new ways of working required to create sustainable energy solutions and support the regional, national and global transition to a zero carbon energy system.

A research focussed institute, we are driving change in the way we deliver, consume and think about energy. Bringing together interdisciplinary research from across the University of Birmingham and working with government, industry and international partners our research is solving societal issues and addressing challenges relating to energy poverty, the circular economy, transport systems, cooling, hydrogen, energy storage and the decarbonisation of heat.

The global community is consuming more energy than ever. As we run out of time to contain climate change the BEI is upscaling their innovative technology solutions for applications here in Birmingham and across the globe.

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of a just transition and post-COVID recovery for East Birmingham. We would like to thank in particular colleagues at Birmingham City Council and the West Midlands Combined Authority for supporting the development of the report's vision. We would also like to

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Table of Contents

Executive summary Making the Change Draw on COVID Shock Community Learning Platforms Test and Learn Use of the Commons Retrofit Heating Just Transition/The New Economy Modal Shift New Ways of Learning/Skills	4
EB the Place to Be	8
Introduction	10
Our Changing Context	12
A Just Transition	18
So, given the scale of complexity where do we start?	19
Taking forward an approach in common	20
What would a community that took a commons-based approach need to do?	25
What would an organised community look like?	26
Community Learning Platforms and the Test and Learn Areas	27
Delivering for Climate and Community	29
Housing retrofit and regeneration Where to focus the test and learn?	30
New Economy Canal regeneration SMEs The workers and innovators united will not be defeated! Reconciliation of the past, present and future Community enterprise	35
The Green Way Green Mobility Hub	40
Skills, Employment and Learning Pathway	43
Bibliography	46

Executive summary

This report poses a challenge to those who are the incumbents of the current system of improving the lives and life chances of local people, developing communities and regenerating neighbourhoods. Too often the need to make big changes leads to action on a scale that fails to reach and engage the whole community. The inherent differences between the various actors involved in a process in terms of power, knowledge and experience risk skewed processes that have the appearance of impact but which it is either difficult to sustain or to make pervasive. Problems that beset marginalised and poorer communities have not been solved despite many decades of trying. This report seeks to persuade the reader that there are radical options for the way in which communities achieve local economic success and resilience – in this case, how East Birmingham does so.

Seeking to solve big problems with large scale solutions is not wrong but whilst it creates opportunities it does not fix every issue or take down every barrier. We need to acknowledge that this is the case and that not doing so leaves communities fragile and vulnerable. Smaller scale intervention seeks to address disadvantage and deprivation at a different level and there is often an intention for such intervention to be community led. The reality is that whether it is the public sector, voluntary agencies, or business that step into the space occupied by such communities they do not do so as equals. It is not simply a deeper knowledge or wealth of experience that is brought with them, those who seek to bring about change in communities are typically constrained by parameters set by funders, predetermined output requirements, project

expiry limits and similar factors that put the community on the colloquial back foot.

At one end of the spectrum of typical community interventions would be activity which was simply 'done to' a community without even consultation. Where there is an open desire for community involvement there will inevitably be a degree of negotiation as those who hold the remit from funders attempt to agree how community aspirations can be fitted into the constraints that have been established at the outset of the process. This will typically result in a form of positional negotiation where the interveners have their system driven constraints and the community have expectations or demands that cannot be met. A directional negotiation where both parties work towards a solution that benefits everyone is a better approach, but such an approach needs a rebalancing of the dynamics of these processes.

Part of the difficulty in terms of communities who seek to negotiate the interventions into the space which they have occupied in the past and will continue to inhabit in the future is that they can be seen as passive recipients of public or private largesse. To change the dynamic, we need to see the assets and value within communities and if they do not already do so, they need to see them also. There needs to be a conscious shift in the approach of those who occupy positions of incumbency so that, as far as is possible, all meet on equal terms. Rather

than looking at the problems in a community and how to solve them, there needs to be an approach of seeking out the existing assets and building upon them.

It is believed that taking the approach set out in this report will create long term processes in a community that will be self-sustaining. Local economic resilience is needed if communities are to avoid the experience of past transitions as we collectively respond to the urgent need for action on climate change. At the same time our whole society has, through the response to the coronavirus crisis, been put through one of the deepest and most rapid transitions in living memory. The weakest communities will be at risk of suffering the greatest impact from that sudden, unplanned transition. As recovery programmes are rolled out there is a realistic prospect that those will be large scale interventions that leave little room for negotiation.

There is an urgency in the need to address the gaps that exist between some communities and society. Constructing an approach that can be self-sustaining should be imperative. Identifying the assets already held within a community – the commons – can be the foundation of that approach. External actors and residents can come together as equals with the right support to ensure that dialogue and engagement can take place with confidence in terms of both self-esteem and mutual respect. Support for the process is important and needs to offer



mediation and maintenance of frameworks for equitable collaboration. Such an approach does not have to be cautious or conservative. It can be risk-taking, curious and ambitious. Funding should be sought to bring forward the approach and process set out in this report.

Making the Change

- To address climate change there is a need, at the same time if not before, to address the needs of communities who are marginalised or disadvantaged.
- We need to look beyond the current systems of regeneration so that communities of place, practice or interest can engage with commensurate power and status. Those who exercise authority or control the incumbents need to cede power to those communities as part of the process of engagement.
- Leadership of the process cannot be nominal and leaders need to accept the need to do things differently. It is not just about telling the truth and 'acting now' but acknowledging that they hear and see the evidence in terms of the cumulative impact in terms of the economy and inequality.
- Currently, it is still far too much the case that local, public or private organisations that intervene in communities are the 'providers' and communities are the 'client, customer or beneficiary' and the latter need to develop the ability to act together. One way in which communities can become more powerful actors is to make greater use of organising theory and to draw on the lessons from other spheres such as trade union organising in the workplace.
- To better understand scalability and replicability a common language and shared understanding of the different spatial scales and their interface with the various spheres of governance needs to be further developed.

The challenges we now confront require us to see, think, hear and do things differently

 the community learning process is put forward as a mechanism to assist in this and the test and learn projects are the immediate steps that can be taken to begin to make the change and build community confidence.

Draw on COVID Shock

- COVID has been a shock to the system across very many aspects of society and will lead many businesses to close. Subsequent action on climate change may be the tipping point for many of those that have survived.
- We can draw on networks such as Brum Together and other lessons learned during COVID in order to construct a just transition. Given that we need disruptive change to address climate change we should embrace the shocks and challenges to the system that COVID has provoked in order to create both a just transition and a just recovery.

Community Learning Platforms

- To address the imbalance of power that exists between communities and organisations, and authorities which intervene in those communities, the concept of community learning platforms (CLPs) should be developed.
- Participants within the learning platforms need the space and time to gain confidence that it is acceptable to challenge what has gone on before and that their previously unheard voices will be heard and acted on.
- CLPs will offer a space for residents, workers, innovators and industry to explore opportunity, share knowledge and define future approaches and innovation. CLPs should provide for a learning framework that will allow policy makers and participants to look at key social and economic issues in a holistic way. This will entail the sharing

- of knowledge, negotiation of outputs from proposed activity and an increase in skills on the part of all participants. Learning from the activities (test and learn) is as important as the activities themselves.
- The development of new business models and the drawing in of innovative forms of finance to underpin a new economy will be informed by early engagement within the community learning platforms and wider investor community.

Test and Learn

- Evolving or new approaches to regeneration can get lost at a city or regional level and more should be developed and tried at a local level. Large scale responses tend to have a single system approach a place base approach, which cannot respond to the sophistication that exists at smaller scales. A local test and learn approach allows an understanding of the impact of many competing strategies and underlying drivers within a community, which can be adapted as it is scaled.
- We should create a series of test and learn 'no regrets 'projects that enables policy to be developed, learnt from and replicated in real time.

Use of the Commons

- Technology alone will not achieve the necessary carbon reduction to avoid climate catastrophe and a shift in behaviour is necessary. The concept of the commons can play a role in both the response to climate change and the recovery from COVID. In an urban context there are a broad range of assets that can form the basis of a commons approach and a means and methodology of identifying those assets.
- There is a need to counter competition with an everyone thrives approach. We should facilitate growth but to generate greater

resources to create a permanent, just and sustainable change in society. In doing so we should look to build upon, as well as protect, existing local assets staying within carbon and other boundaries.

 A new deal for cities and regions on climate change should be pursued – not to accept things as they are but to work on the assumption that they can be different.
 East Birmingham offers a chance to test and learn the aggregation of resources to support pathfinder projects connected to TEP broadening out to the large scale opportunities in the City and region.

Retrofit Heating

- Leadership on the issue of domestic heating retrofitting cannot be left to national policy, or action will not be taken in time. We need to better understand the determinants for effective action in terms of time lags created in the procurement and installation process. Given the lack of impetus for change in home heating we need to properly understand what can create that impetus for action and develop the necessary supply chains and skills.
- There has been a loss of subsidies from the Green Deal Home Improvement Fund and where action on domestic heating is taking

- place there is confusion as to whether programmes are based on poverty reduction or carbon reduction. There is also a loss of strategic knowledge and experience across the public sector and an absence of private sector stock condition surveys both of which are impediments to progress.
- As a matter of urgency, we need to bring forward a retrofitting and adaptation programme that enables approaches to be tested out across housing eras and lived experiences. We cannot cherry pick easy actions to generate a sense of momentum, we need to move forward more broadly across all tenures and building types. We need to target those who have choice and control over their homes and actions on reducing carbon as well as those who do not.

Just Transition/The New Economy

A just transition away from a carbon dependent economy and an unequal society is the only way in which we will avoid climate catastrophe. We need to change the public conversation and connect it to the reality of people's day to day lived experience. We also need to look through the lens of frontline communities and their experience of multiple transitions over the past forty years.

- For action on climate change, in time those with least choice and control need to shape the agenda, own the problem and benefit from the solutions. Investment and innovation in social foundations has to be on a par with cutting edge technology. Upfront funding or new forms of financing will be needed to ensure a just transition.
- There needs to be active development of transitional schemes for the carbon dependent and economically marginal, not least to avoid creating populist oppositional narratives. It is possible to learn lessons from global action on air quality and the consequences of states acting too late. We should test out a new approach that accepts clear social and environmental limits to driving and securing economic resilience and growth.
- It is essential to address the concerns of workers in carbon dependent employment in partnership with representatives and trade unions to avoid this becoming a focus of industrial tension. SME businesses are acutely underprepared for the impact of actions to address climate change and we need to facilitate the creation of succession planning and workforce redeployment as part of a wider preparation of all sectors for transition.



- There are a number of deliverable but significant opportunities in the area that could draw upon the symbolic and legacy capital around Tyseley Energy Park, the canals and railways, and combine these assets with the significant, underused green space to evidence benefit and provide for an immediate return for the community in participating in a green recovery.
- Major infrastructure programmes (HS2, East Birmingham Metro extension) are decades in the making and there is a need to address the current generation and the challenges they face. A business model that is iterative in terms of realignment of investment should be developed. Risk assessments need to assess the ability to monitor and respond to the key levers of change as much as the strength of the original business case.

Modal Shift

We should bring forward investment in modal shift, promoting cycling and walking as alternative transport solutions. The use of green/blue corridors for transport should be coupled with a more effective and holistic management of green space. Investment in such approaches will mitigate concerns regarding the clean air zone and maximise out-turn from investment already undertaken in relation to cycle pathways. The develop of electric car and ebike opportunities and infrastructure offers one strand of an approach to post-COVID rebuilding that can have strong foundations in the East Birmingham area.

New Ways of Learning/Skills

- We need to develop education and training that builds a cooperative or collaborative approach within communities just as much as it creates the potential for individual success and meets the needs of the economy. This is an important change in approach if we are to overcome the barriers to securing collective change.
- Further education and adult learning is complex and at times cumbersome. The transfer of adult education and further education budgets to WMCA offers an opportunity for pragmatism and new thinking.
- We should seize the opportunity for a local green skills programme that can set the pace for driving change. Within East Birmingham there is the potential for an urban Centre for Alternative Technology or Schumacher College combining the space within an area such as Ackers with the development around the Tyseley Energy Park.

Recognising that for education to succeed at all levels, including for children and young people still in school, communities need to be resilient and confident, a reimagined sure start programme ('Sure Start Plus') should be developed that seeks to rebuild the social foundations and the skills required to underpin intergenerational wellbeing in the community.



EB the Place to Be

The story below is an articulation of 'what could be' written from the perspective of Miriam a representation of our 'future generation'. It draws upon community dialogue and engagement with communities of place, practice, and interest in East Birmingham. Its framing reflects the principles set out in EBIGS and the aspirations of the civic community with whom we have engaged. It looks at how the current assets and identities that shape East Birmingham could be built upon to provide for a better future place.

Just imagine growing up in an area where for centuries pioneers have come, broken down boundaries and given rise to new settlements and businesses. An area once known for its farmlands and woodlands, a legacy now retained in many names and greenways - like Glebe Farm – some great history there – and Kingfisher Park – an amazing place to explore. Anyway, the old settlements evolved and were at the forefront of Birmingham's growth as a centre of manufacturing. We still have factory buildings and families from those early days with the 300-year-old manufacturing site of Webster and Horsfall and the family business being very much part of my generation's future but more of that later.

It was here in Small Heath that the Windrush generation put down its roots and in the early days helped keep the buses running and then (as now) our hospitals working. Like my Nan's friend Mama Cope, her daughter is something big at the local hospital, whilst across the way in Alum Rock you can still find uncles who first came here from villages in the Mirpur to work in the factories and be part of the post war expansion of Birmingham. If you stop by on the Coventry Road or jump the 11 bus (its ace, it takes you all around Birmingham) you are sure to find someone who has a tale or two to tell of nights spent in The Gary Owen.

Migration made our area what it is, not just in terms of those of us who came from abroad but those post war pioneers who were rehoused in new districts as they cleared more and more of the 'slums' in the city in the 50s and 60s. Overspill and growth created a fair few monstrosities in the 70s but no worries we got rid of the worse of that: even then we knew

how to organise around these parts and fight for better housing.

Did you know that World War 2 was won from here? Well that is what Sam's granddad says. The Spitfires, the ones that were in the Battle of Britain, were built at Castle Vale would you believe, and the old BSA factory on Armoury Road was essential to the War effort. Guns are no cause to celebrate in our community anymore, quite the opposite to be honest. Cross the canal (and I guess you already know we have more canals than Venice) and you come to Tyseley Locomotive Works where even today you can grab a steam train and if you feel the need take in a bit of Shakespeare. My sister and I did Macbeth last month on a young person's culture pass. A lot about those days I get but as we say around here you need to know where you are from to be part of where you are going to.

Anyway, back to that old factory site and the Webster and Horsfall lot. Back when concerns about air quality and climate were just starting to kick off and suddenly it was all about clean energy they took up with University of Birmingham. They set up an 'energy park' - the TEP - but for me and my mates it's just 'the BIC' (Birmingham Energy Innovation Centre). That's the place to hang, there you can test out amazing things. There are big things happening there but there's opportunities for us to chase our dreams in the way that our forefathers did. We can rub up against and learn from the big players. My brother's new business is also up there. It's in one of the work stay units on the Grand Union. Carry on down the canal and you come to Birmingham City University, Aston University and Birmingham Metropolitan

University – not to mention Curzon St home of HS2, which is still a bit marmite and to be honest; a 'no no' with the climate squad but whichever way you look at it is the greatest investment this area has seen and means more track space for the EB Hydrogen fuelled trains!

Across from my brother's mooring there is this massive park where you can take up the many cycling and walking routes. They stretch from the City Centre out to Solihull right through East Birmingham so people can use them for work or just play. There is a new 'zero carbon' housing scheme that is plugged into the district heating scheme, which is being put into more and more homes round here. My aunt said to me 'we're all on one boiler now!' Have I mentioned Ackers? You can just about try anything legal in the outdoors there - even learn to ski and when you're finished or if you weren't in the mood there's a world of cuisine on your doorstep. All of this makes us one of the best places to be.



Strange thing is back then they didn't always see it like that. We were a problem area with weaknesses that they said they would address, but never quite got to it. Well that all changed at the time of the first pandemic when my Dad says we got organised, stopped letting the suits call the shots and looked at how we could build back better. We set out what we expected if you come to live, work, or invest around here cause that's what we wanted: a new social solidarity building out from the strong, but village-like, social networks that existed. This guy at last week's geography lesson referenced the Radburn lay out as a factor and there was me thinking it was because we all came from the same village in Kashmir!

Not only did we get organised - we got educated and built bridges - literally across the canal and river but also between the communities connecting them to the legacy and evolving assets that surrounded us.

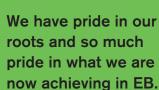
Early on anyone who was anyone or wanted to do anything went through one of these Community Learning Platforms. Dad says it was to learn how to organise, collaborate and contribute so that we could all change to make things better. Anyway, we got ourselves good advice and made sure that whatever happens in the area gives us a good return. We have now invested in urban farms, local energy and some community housing schemes that have come out of the urgent need to build more homes and we retrofitted the ones that have been around since the early days. The greenways and waterways took us from our doorstep to the opportunities around us - that's how my eldest sister surprised us all and got to University, took her first step through a green apprenticeship.

Me? I reckon I'm going to do my first work experience at the depot at Tyseley works and the bike repair workshops offered in the Green Mobility Hub then onto the BIC to give me the step up I will need to get onto one of those really competitive engineering apprenticeships. Even my Mum is at it - working her own kitchen garden space on the canal and sharing her cooking skills at the pop-up global cafes and events that happen on the greenways.

The other day Sir said that EB is known as the place to be because we've managed to reconcile Birmingham's 19th century colonial roots and industrial legacy with the 21st century requirement - to urgently act on climate and health inequality. Well deep I get but you see we have pride in our roots and so much pride in what we are now achieving in EB. And you know what, no matter what happened up at Perry Barr, I reckon it's because of what's happening at EB that Birmingham continues to be known as a 'commonwealth city'.

Miriam









Introduction

This report explores how the established asset base and the 'commons' within the East Birmingham North Solihull (EBNS) Corridor could be framed, harnessed and connected to the communities of the East Birmingham area to drive system change and the delivery of climate action, and economic resilience and recovery in a post-COVID world. In doing so, this report seeks to address the twin imperatives of the need to act now to stay within the 1.5 degree ceiling for global warming and the need to address inequality and economic injustice, evidenced by the widening gap between people's health in deprived areas and the health enjoyed by those in the more affluent areas of the city and region.

The Intergovernmental Panel on Climate Change (IPCC) landmark 2018 Report¹ and the collective power of the youth climate strikers, visible in their thousands, have in this region, bought the issue of the climate crisis to the fore, prompting the West Midlands Climate Authority (WMCA) and Birmingham City Council (BCC) to declare climate emergencies. The frame for this report initially arose from these declarations and the acknowledgement that the delivery on climate action within the system, as designed, would put communities at risk of economic injustice, cementing in place further patterns of inequality and deprivation within the city and region. Clearly life and the local context have changed beyond recognition in the ensuing months.

The public's understanding of what constitutes a crisis and its impact, is now all too real given the experiences of COVID-19. It is inevitable the experiences and impact will frame policy, political priority, and public concern for the foreseeable future. This is not to diminish the absolute requirement to act now to prevent catastrophic climate change but is a recognition of the new context. The reconciliation of the competing and conflicting drivers of the communities engaged will be fundamental to a system change and building back to a better, more resilient future that delivers relevant and real impact for both climate and community. The high number of coronavirus related deaths from this area in recent months have shone a light on the absolute need for urgent

concerted action to address the prevailing inequalities and absolute poverty in this area.

The East Birmingham North Solihull Corridor serves as the overall spatial context reflecting the WMCA's sphere of governance and strategic interest, with the East Birmingham Inclusive Growth Strategy (EBIGS) and East Birmingham Board providing the corresponding frame and sphere of influence for Birmingham City Council. Importantly, the EBIGS acknowledges that, for Birmingham City Council, East Birmingham is a priority and considered first in terms of the piloting of new approaches and improvements to services. The development of low carbon and sustainable technologies are a key priority for investment - given the potential to contribute to action on climate change - supporting the Council's ambition to be zero carbon by 2030 and improving air quality and biodiversity.

There is no shortage of data and research that sets out the challenges facing East Birmingham and the wider East Birmingham North Solihull Corridor. A range of policy perspectives are offered from looking at the impacts of proposed transport investment, in particular the Metro and HS2², to how the transition to clean energy and climate innovation could frame a better future for the area. An ambition underpinned by a suite of reports commissioned through the Tyseley Energy Park and University of Birmingham³ plus the Regional Energy Commission Chaired by Sir David King⁴. The ambition for a low carbon future and a spatial context

for inclusive growth for East Birmingham is further set out in Birmingham City Council's EBIGS.⁵ In this report, the embedded energy cluster at Tyseley Energy Park (TEP) and the spatial frame provided for through the Tyseley Environmental Enterprise District (TEED) provides the frame for intervention and innovation at a local level. This is not to ignore the potential impact of HS2 or other major developments but to provide a connectable and manageable space to test out and operationalise talk on inclusion and climate action.

A desk top review of relevant literature has been undertaken to pull out the consistent themes and areas in common, pooling this knowledge alongside the perceptions and understanding of the communities of place, practice and interest that comprise the East Birmingham Corridor. Understanding and insight has been gained from formal stakeholder engagement both virtual and in person, and pre-COVID through the R20 (Route to Zero) Community Dialogues, Community Assembly and Climate Taskforce. As an economic frame this report draws upon Kate Raworth's Doughnut Economics⁶. In addition, CLES's work on local wealth building in Birmingham and beyond⁷, and the RSA's Inclusive Growth Commission⁸ have informed the approach taken. Local insight has also been gained from the New Policy Institute's report on The State of Economic Justice in Birmingham and the Black Country9 and a review of the findings and thinking put

forward by the Bishop of Birmingham's Social Inclusion Process¹⁰.

Building an economic recovery that is resilient to COVID-19 and climate change will require those who hold formal and informal power within current institutions, systems and communities to cede power in whole or part. There is a need to look beyond current formal systems of governance that favour the status quo and the current incumbents to a regenerative process that enables communities of place, practice and interest to engage and organise in a way that addresses imbalances of power and influence. It is not the intent in setting out such a requirement to decry individuals' commitment or down play technological or creative endeavour. It is just that for climate we are not moving quickly or deeply down the curve to zero carbon and the patterns of extreme inequality that have become, in recent decades, huge scars across our city and region are evidence enough that collectively we may have got a few things wrong. There is a need for those who have held the pens and the power to not just 'tell the truth' and 'act now' but to collectively demonstrate that they hear and see the truth in terms of the cumulative impact that the economic system has had of cementing in inequality and contributing to climate breakdown.

When we talk about Birmingham as a city, the West Midlands as a region and 'Inclusive Growth Corridors' we are talking about a significant space. In terms of comparable size, the WMCA as a unit of governance is as big as the Czech Republic, whilst Birmingham is equivalent to 5 London boroughs and the East Birmingham North Solihull Corridor encapsulates an economic strategic space that is equal to the city of Nottingham. It would be very easy given the scale of the challenge, speed and complexity of change required for the various route maps and strategies to become the surrogate for action, with the policy consequences and opportunities misplaced across a range of spatial scales.

In terms of national Government there is an opportunity to evidence how innovation and technology embedded in a cluster such as TEP or a district/campus such as TEED was envisioned and could underpin the delivery of circular neighbourhoods. This is an approach that can be scaled and reflected in different business models across a corridor, a city and/or region. Whilst the approach is scalable and replicable to other areas the test and learn areas are distinct and different to what you may do in other cities as they are embedded in what is distinct and different about East Birmingham (EB). The breadth and depth of that distinctiveness starts and ends with the local community and a key objective is to evidence how a zero-carbon pathway can underpin a more socially just future.

Whilst it is accepted that effective place leadership and system change require relational, networked and collaborative approaches, it is also understood that public bodies such as WMCA and BCC are creatures of statute and, as has been evidenced with recent events, command, control and clear accountability are necessities in times of crisis and uncertainty. The key is to be able to adapt behaviours and draw on different capabilities at the point of shaping the recovery and the future state. Using EBIGS and the East Birmingham Board as the frame, we will consider how we can think differently and test out and learn in a way that makes us responsive to the changing needs and requirements of communities and the city region in a fast changing, complex and fragile context.

This report does not seek to act as another strategy or exposition of technical innovation these already exist and provide valuable contributions to the shared knowledge pool. Rather this report looks to bring these together within the wider body of knowledge and engagement recently undertaken in relation to climate action and answer the critical: 'So what?' and from the local community perspective 'What does this mean for me'.

This report seeks to set out a process whereby these key questions can be answered and a process within which a shared understanding can be shaped to help anchor and drive system change. Whilst technological advancement and the wealth of innovation and cutting edge expertise, particularly in the field of clean energy, are central to the shaping of a resident and sustainable economy, it is not 'smart' to try and drive system change by these alone. Politics, power and cross community participation are both positive and, as in many ways the Brexit vote showed, can be negative influences on our collective capacity to drive change and act for common good. That is why we draw on the change management method Theory U11 and understand that the change required lies within us and seeing things afresh as individuals as much as any engineered process of system change. Deliverable 'no regrets' real time, test and learn interventions are set out and a process by which the capacity and capabilities of all communities can be developed to meet the challenge and drive the change required forward.

Our Changing Context

Working out how to tackle climate change is this generation's greatest challenge – not least because we are the last generation who has the chance to make a difference and do something about the catastrophic impact of unchecked climate change and environmental degradation. The Intergovernmental Panel on Climate Change (IPCC) report calling for a 1.5 °C limit is unequivocal in stating that immediate and major transformation is required if warming is to be kept to that limit.

In setting out the challenge it accepts that the scale and speed of low carbon transition is unprecedented, with the sooner the change is made the lesser the risk being a significant factor. This urgency should guide the low emissions pathways to be chosen. Even if the right pathways are pursued now and global ambition is stepped up, there is a need to recognise that a climate crisis is upon us. The building in of resilience as well as adaptation to climate change is key. The reduction of carbon emissions is not sufficient, we also need carbon removal with changes required across energy, land, industrial and urban systems as well as geographies. Changes to diet, conservation of biodiversity and forestation need to provide global pathways alongside the more recognised technology and innovation processes.

The IPCC report, the global phenomena that is Greta Thunberg and the school strikers for climate as well as high-impact TV programmes such as Blue Planet¹² have highlighted the disastrous impact that we as humans have on the natural world and future generations' lives. Several sustained years of 'unseasonable' weather in the UK and natural catastrophe abroad has underlined to the public at large a pattern of accelerating change. Despite a few fringe doubts, in polling and reviews undertaken, the consensus is that change is happening, climate is a big problem and that we are to blame. Whilst there is less

consensus over when and what that change could be it is helpful to remind ourselves that whilst technology can help us along the way and has a key role to play, climate change is human driven and requires a response that is understandable by the public.

Against a backdrop of youth strikes, Extinction Rebellion activity and widespread calls for a declaration of a climate emergency by the Council and Combined Authority, Places in Common supported by Liam Byrne MP established a 'Community Assembly' that bought together leading politicians from Birmingham City Council, Birmingham Youth Strike for Climate, unions, public sector agencies and officers, and stakeholder groups

including business and the Higher Education Sector. The event sought to test whether there was a shared acceptance of the climate emergency and how a timely and just transition could be developed in the City. The aim was to create a space where the driving forces and interests of the different stakeholders could be reconciled and harnessed to secure a shared understanding on how to take forward action on climate change in the City and wider region.

The word cloud below represents the extent of common ground found amongst the participants of the assembly.



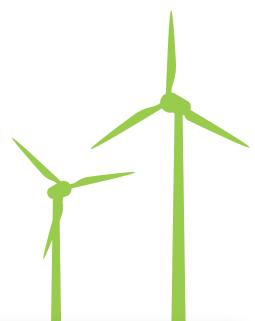
Figure 1: Word cloud from the Birmingham Community Climate Assembly 2019. Source: Birmingham City Council.

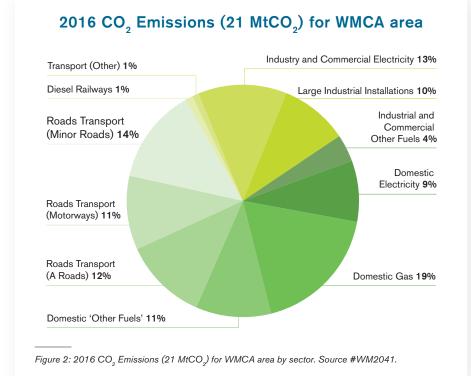
These thoughts were further encapsulated into 10 key principles, which were shared via social media. The cumulative results went on to inform the shape and framework of localised climate dialogues, which included utility workers and trade unions, small and micro businesses and a cross section of communities with a focus on the East Birmingham North Solihull Corridor. The key principles were:

- Emission reduction in line with the 1.5° goal – 'Don't follow the Growth Paradigm without thought'.
- **2.** Destroying the planet should not be incentivised.
- 3. Put combatting poverty at the heart 'Actions shouldn't penalise the poorest'.
- **4.** Create opportunity for workers 'Take workers with us'.
- **5.** Place the burden on the polluters 'Those that are less well-off are greener by default'.
- **6.** Do not leave anyone out 'A just transition should be for ALL'.
- 7. Be brave 'Don't leave the change ≠to chance'.
- 8. Build a movement 'We need a Brexit level of public engagement on climate and how life will be very different'.
- 9. Community ownership 'We need to build a shared vision for the future with an understanding that the transition is the opportunity for a better quality of life for all – not just a matter of giving things up'.
- **10.** Move beyond party politics 'We're on the same team'.

Having declared a Climate Emergency in summer 2019, the Combined Authority brought forward a discussion document #WM2041¹³ articulating the key actions required to deliver an inclusive, fair and prosperous response to the climate emergency. In its turn, Birmingham City Council established a Route to Zero (R20) Task Force to assist it to explore how it might best fulfil its ambition to be zero carbon by 2030. Both have drawn upon the Tyndall Centre for Climate Change's modelling of Carbon Budgets¹⁴ and looked to apply the local authority focussed SCATTER tool¹⁵ to help understand the challenges they face and where best to direct action.

Figure 2 below shows the breakdown of emissions by sector for the WMCA area and illustrates the importance of tackling energy consumption (electricity and gas) within both the domestic and industry/commercial sectors. Domestic energy consumption accounts for 28% of WMCA area emissions and industry and commercial sectors 23%.





Given that 85% of buildings will still be with us in 2050, this suggests an absolute need to bring forward retro fitting and adaptation programs in relation to heating for existing homes and businesses.

Whatever target they are working to, the leaders in the West Midlands accept that the next five years are critical. Despite this, there needs to be better understanding in terms of the development and procurement time lag.

How will decisions taken now impact upon the regions' wider ability to stay within defined limits in the future? Within the WMCA area if there is not significant change, the permitted carbon budget to stay within the IPCC 1.5°C will be reached within five years. Given the major impact of road transport on minor roads, bringing forward investment in modal shift with walking and cycling programmes offers the most immediate return for both community and climate.

The carbon budgets for each local authority area within the WMCA between 2020 and 2100 are set out in Figure 3 and translate into an incredibly steep CO₂ emissions pathway (Fig 4) for Birmingham if it is to stay within the parameters required to meet the 1.5°C.

However if we look at Figure 5 which sets out the emissions (in tonnes per capita) for the year 2016, for each local authority in the WMCA (3LEP) area then the importance of understanding the economic functionality of different places within the WMCA and the impact of issues such as travel to work patterns becomes clear. When the relative carbon usage per capita is seen against the relative deprivation set out in Figure 6 the view that the poorest communities are low carbon by default holds true.

It is therefore imperative that cross community cumulative impact on carbon emissions are understood across the various spatial scales and spheres of governance and that action undertaken is proportional and in line with respective impact of different communities on wellbeing and climate change. It is notable that for the Greater and Birmingham Solihull LEP, 1 in 4 of its areas fall into the 10% most deprived for the quality of the living environment, with 40% of Birmingham areas accounting for this. This suggests that its strategic locus within the region and UK brings with it a burden in terms of air quality, congestion and road safety although this does have to be tempered by the inclusion of poor internal living conditions within this analysis. In terms of the ability to address climate change in the region it is clear we need to understand the impact of these in more detail.

WMCA (3-LEP) 2020–2100 Carbon Budgets

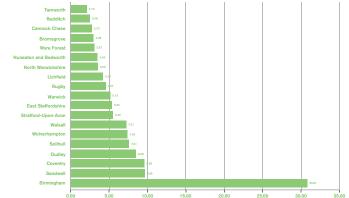


Figure 3: The 2020–2100 carbon budgets for each local authority in the WMCA 3-LEP area, expressed in MtCO_x. Source: #WM2041.

Pathway projections for Birmingham

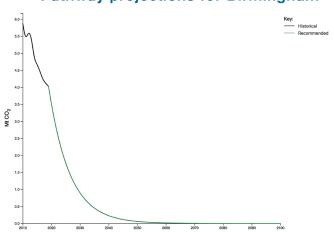
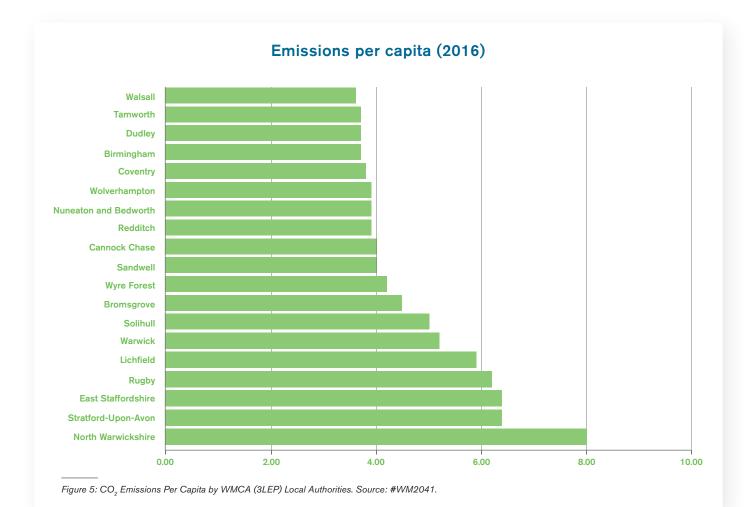


Figure 4: Energy related $\rm CO_2$ only emissions pathways (2010–2100) for Birmingham premised on the recommended carbon budget. Source: Tyndall Centre, Manchester.



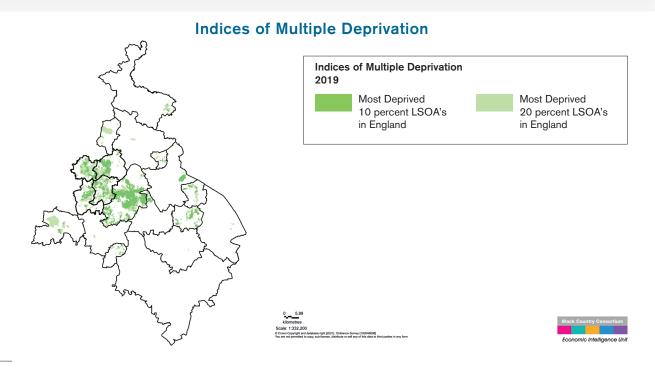


Figure 6: Areas in the West Midlands in the most deprived 20% of LSOAs in England; Source: Black Country Consortium Economic Intelligence Unit¹⁶

Whichever way we seek to cut it, the overall deprivation profile for the WMCA and the 3 LEP areas within its boundaries has worsened. This disproportionately high number of neighbourhoods experiencing elevated levels of deprivation and absolute need in Birmingham and the Black Country is reflected in New Policy Institute report on economic justice. It suggested that the underlying challenges and prevailing inequalities to be found in a high percentage of neighbourhoods spread across the local authority areas required urgent attention. A recent posting by the Open Data Institute Leeds shows all too well the intensity and depth of challenge confronting Birmingham.

Laudable as the WMCA's #2041 ambition 'to leave no one behind' is, the reality is that there is an acute need to address the needs of the 'already left behind' and 'just about managing'.

The WMR20 community dialogues PiC held as part of the work with UK100 for the Climate

KIC funded West Midlands Route to Zero (WMR20), showed us time and time again how, for many residents in the city, looking beyond survival is a challenge. Especially when 'heat or eat' is a consistent dilemma in daily lives or where talk of nearby greenspaces is largely irrelevant because litter and a poor local environment on your doorstep is all encompassing. The lack of control residents in the most deprived neighbourhoods have over their housing, employment or access to benefits inhibits the exercise of informed choice and ability to engage on an agenda like climate change - no matter whether they and their children are willing to accept it is a major problem.

Whilst the majority of families were willing to accept that climate was an issue, the everyday concerns of life, work and family in comparison to other troubles with which the nation was seen to be grappling (e.g. the health service, Brexit), meant climate felt like a very distance crisis. Incentives or promoted opportunities

to take up walking to school or get better at recycling were the most likely offered options for local action but still enjoyed limited take up. The Council's poor record on waste collection generally was seen to be a major disincentive to doing anything constructive around waste and when pushed on who should lead on climate issues, a response of 'not the Council – they can't even empty the bins' was a not uncommon refrain.

Amongst low and semi-skilled workers who did not see climate change as an immediate priority, there was a strong level of 'crisis-fatigue' and that the need to stop doing something or promoting fear was not helpful in engaging. This was true even of those working in carbon dependent jobs where a pathway down the carbon emission reduction curve potentially poses a very real threat. Overall, there was little comprehension of systemic issues and the potential consequences beyond 'those polar bears' of failing to act on climate change. In contrast, bar an inevitable core group of



dissenters, an understanding of the need to act on climate change is found amongst those with the greatest choice and control over how they go about their lives. The challenge for policy in this area is that, for too many in the region, there is little or no choice. In terms of business interests it is arguable that it is the corporate voices that are most often heard whilst it is the small businesses – the Turkish kebab shop owner, small parts manufacturer, car repair workshops, plumber etc., – who will go under if the transition is not responsive to their need and requirement.

There is a need to change 'the conversation' and connect it to the reality of people's lived experience – the term 'just transition' may signify something for the activist, it means little to the small business owner. Lessons need to be learned from global action on air quality where acting too late by nation states, including the UK, and the failure of the automotive sector

to own the need for change has meant that regulation and what is perceived to be punitive measures are put in place before any benefit from modal shift is clearly evidenced. Equally important are transitional schemes for those whose livelihoods are currently dependent upon diesel use such as the taxi driver or van driver where margins are very tight and (as was indicated to us in terms of a number of skip hire businesses) they will simply cease to trade or operate. Not confronting the reality of the economic challenge of transition for the sole trader or marginal business, gives traction to those who express scepticism. Even when all the evidence points to the massive impacts pollution has on mortality, where congestion means many short journeys are faster on foot, any attempt to restrict road space is met with the inevitable intonation 'we are a car city'.

For as long as climate action is a relatively closed conversation, lacking relevance to the

lived experience of marginalised communities and failing to connect to mainstream concerns in a community (food, adequate housing, litter, recycling, health, schooling, insecure employment and the lack of social care) we run the risk that the actions bought forward are shaped or challenged by those with most to gain from the status quo. Such people can be seen to be the educated, skilled and affluent who have the capacity and capability to make choices and exercise control. They are also the tier 1 major corporations with the necessary networks, skills and understanding to plan for a zero-carbon future by bringing forward investment proposals. Subsidy is seen to be going to the corporates, with incentives targeted at those with the most ability to make informed choices thus further cementing-in absolute disadvantage in the region.

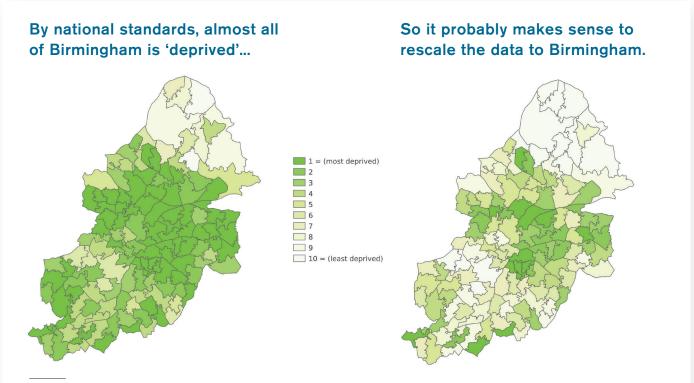


Figure 7: Deprivation levels within Birmingham by national standards and rescaled for Birmingham. Source: ODI Leeds¹⁷

A Just Transition

Our research and engagement with communities highlights the need to reach out to and look through the lens of 'frontline communities'. These are communities who are at risk of climate injustice and in addition who continue to be at risk from past and on-going transitions: de-industrialisation, globalisation, austerity, casualisation, Brexit, technological advancement, automation.

Therefore in taking forward a just transition there is a requirement to reconcile the injustices of past transitions and secure mutual readjustment to new requirements. It is not enough to talk about a just transition in terms of action on climate change because a one-dimensionally just transition will not feel just to marginalised communities. A just transition must be multi-dimensional. There is an absolute need to evidence benefit and intergenerational opportunity for the communities of today as well as respond to the needs and requirements of the future.

Leadership of the process cannot be nominal. Focusing at a local level where the failure of past transitions collides with the requirement to act now on climate change provides the opportunity to deliver deeds as well as words, to see afresh the limitations of current approaches to growth and socialise the shared opportunities to be gained from new approaches. Ceding power and collaborating with a range of communities of interest and practice as well as place may conflict and threaten the gatekeepers of the traditional commissioner-contractor split. What must be realised is that it is the maintenance of the status quo that is actually the greatest threat and the requirement to change will ultimately become non-negotiable.

A business model is required that is iterative in terms of investment and realignment of investment. Investor decision making frameworks need to better reflect uncertainty and therefore be flexible. There is a need to take risk assessment to a different level where the capacity to monitor and respond to the key levers and drivers of change provides as much confidence as the strength of the initial business case. The challenge now is that

we must overlay this understanding with the experience and impact of COVID on these communities and our city systems.

As the immediacy of managing the crisis recedes, priority is increasingly being given to what a post-COVID recovery requires. How do we restart an economy and find a new normal as we come out of lockdown to a socially distanced world?

Our starting point is to understand that whilst the impact is structural and global, the pandemic has also been a uniquely personal experience. We may be weathering the same storm; we are not in the same boat. The scars of COVID, physical, mental or emotional, will last a long time: the loved ones to whom we could not say goodbye, the missed celebration of life's milestones or the inability to give a simple hug of solace or affection to those we love, will never be forgotten.

Polling suggests that people feel that during the period of lockdown we have become more unequal but kinder. It is true that the upsurge in food relief networks and good neighbour schemes across the city points to a revived social solidarity but what this has really has laid bare to the many who have not had previous cause to truly see it is the loss of key community services and the very real impact of austerity on the social foundations of society. What we have learned or what has become more apparent during the COVID crisis includes:

 Our care for the vulnerable has survived for years on a shoestring and the risks in doing so have now been evidenced, not just in terms of deaths within care homes and the plight of low paid care workers but the sheer absence of help and support that many of us had assumed was still there but was found to not be available.

- The social security safety net has been found wanting. Universal Credit and benefit sanctions that leave the poorest in our communities excluded and demeaned but unseen have now risen to the fore, with the newly unemployed experiencing, for example, the hardship of 5–6 week delays in payment.
- The disproportionate number of deaths within BAME communities has raised questions in terms of the employment profile and cultural practice. Equally the correlation of such deaths with overcrowded or poorquality housing, underlying health needs associated with poor air quality and multiple deprivation needs serious investigation.

At the same time, we have all faced disruption to our working and family lives; we have all seen the effect of empty shelves in the supermarkets, we have understood the fragility of our food security. We have also seen how we can collectively come together and respond to immediate need as tonnes of food that would otherwise have been thrown away has been used to feed communities. With shops and fast food outlets shut our ability to over consume to the detriment of our planet has been restricted, the need to reduce - reuse - repurpose repair has become part of daily life. This has brought a somewhat better understanding of the benefits of moving away from our consume - discard culture. Whilst admonishments to not use public transport pose challenges to modal shift and behavioural change the uptake in walking and cycling in our parks and streets is visible for all to see. The crisis has

shown that the state has a key role to play in protecting our society. Equally it has shown that civic society has a vital role and can be flexible and outmanoeuvre many statutory agencies and major corporate players. The lockdown has been an immersive experience with social media listening and polling suggesting that the public will be looking for a vastly different new normal, and that revived social solidarity is something we collectively value.

Previous generations learned that none of us truly succeed when we leave others behind and that fact has been starkly shown during this crisis. As we emerge from the COVID crisis, just as when we have emerged from other periods of collective suffering, there is an opportunity to acknowledge that experience by drawing on the way we have come together to embed a new approach to community. If we accept that flattening the climate curve is a prerequisite to a resilient economy, this crisis has

also shown that there are absolute limits to the erosion of our social foundations.

Over a decade ago Marmot¹⁸ articulated the principle that where you live or where you are born should not impact upon how long you live or the quality of life you enjoy. Marmot's proportionate universalism and establishing of this simple principle along with the 1.5°C requirements are the absolute boundaries within which we should collectively determine the shape and nature of investment in a new economy. Brexit and political uncertainty nationally have already highlighted the need for the city and region to embrace devolution and take forward an agenda that plays to its distinctive strengths and the breadth and depth of opportunity (and challenges) within the region. The capacity to reconcile its legacy as the pioneer of the industrial revolution with the chance to be at the forefront of the green industrial revolution has become part

of the local narrative and is a frame which can resonate with politicians of all parties.

If, as is argued, transformation in time requires a consciously disruptive approach then the opportunity to harness the shocks and challenges to the system that COVID has provoked should be seized. With calls coming nationally and locally for recovery to take lessons from Roosevelt's New Deal and to 'build back better' a new deal for city and regions that delivers on climate and community should be pursued. The essence of the New Deal was not to accept things as they were but to assume that they could be different with transformative action. It did not simply seek to improve the opportunities of individuals and communities to compete better for limited resources it looked to generate greater resources to create a long term, sustainable, transition in society.

So, given the scale of complexity where do we start?

Over the last five years the West Midlands Combined Authority area has experienced a period of significant growth with a (pre COVID) GVA of 22.4%.19 Political leaders point to the cranes in the sky as evidence of the strength of the economy and the size of the region's not inconsiderable construction sector. The strength of the financial and professional services, identified as major assets and areas for growth and investment within the WMCA's Industrial Strategy, are offered as exemplars of how Birmingham has repositioned itself as a thriving centre for business with high exports, direct foreign investment and strong international links. The revived automotive sector and JLR's recent focus on responding to the challenge of a carbon-neutral future is celebrated as is the power of our knowledge economy given the strength of the higher education sector and the innovation they promote.

The risk the pandemic poses to such a revival are already seen with JLR entering talks with government over a potential £1bn loan and the closure of major high street stores. The loss of tourism in previously secure bases such as Warwickshire and the cultural jewels which are so dependent upon filling seats as well as the conference trade are likely to be impacted for some time. We can add to this the fact that the region is home to the UK's highest concentration of carbon intensive manufacturing and the continuing exposure of the automotive industry to the cumulative risks of Brexit, zero carbon, advanced technology and air quality. It is no wonder that those at the top are expressing concern and calling for assistance; the key question now to be put is - assistance with what?

Do we look through the lens of those at the top and, as they argue, protect our 'assets' by supporting major businesses and continuing with the competitive city? These are development-led approaches to growth that it is arguable follow the 'grow, produce, consume, discard' trajectory that has done so much damage to our climate. In so doing, they have displaced and distorted the established industrial base whilst failing to understand and capitalise upon the established assets within a given community. That, as has been evidenced, has done little to promote economic justice and community health and wellbeing.

Alternatively, do we test out a new direction that accepts clear social and environmental limits to the way we drive economic resilience and inclusive growth? Traditional approaches and thinking within the Mayor's Economic Impact Group highlights the importance of

supporting and protecting the existing assets' along with financial and professional services. We are thereby continuing with competitive city approaches to building economic recovery on the survival of these sectors and on an infrastructure which it is argued will encourage the diversification and development of local growth. In the words of one leader, 'we can do inclusive but let's get growth right first'. We should look for a more nuanced approach that facilitates growth but one that first looks to build and protect local assets and stay within the carbon and other boundaries we have set out above. It is our contention that there will be no economic resilience and inclusive growth if huge swathes of the region's geography are isolated and excluded from participating in that opportunity.

Experience has taught us that adjustments such as this cannot be tested at city or regional scale. Delivery and impact get lost in sheer complexity and protectionism and the reach is too far for communities to comprehend. Equally issues of insularity and lack of scalability arise if focus is at too small a scale. Within the region much collective memory has been lost and across all sectors the skills required for understanding economic development in a new context have also been lost, along with the underpinning institutional architecture that has previously supported points of transition. Work on leadership of place has also shown us that behaviour change at the top, aligning systems and collaboration to the new context will be key.



East Birmingham and North Solihull's high levels of poverty and deprivation are well documented. The issues in terms of employment and employment opportunity are characteristic of the wider disadvantage that is experienced health, housing and well-being. Over a long period, the changes in employment have impacted on people in this area. Service industries have been replacing manufacturing and long term, full time employment is being rapidly replaced by precarious employment in the gig economy. Against that backdrop of pre-existing conditions, the impact of the crisis related to COVID will affect the employment position of people in East Birmingham and North Solihull to an incredibly significant

degree. Any action or activity that captures the industrial legacy of the area and seeks to address climate change will need to operate within this context.

The East Birmingham North Solihull Corridor area covers a substantial part of two parliamentary constituencies, Birmingham Hodge Hill and Birmingham Yardley, with smaller parts of five other constituencies. Looking at the two main constituencies, economic and educational indicators provide a picture of significant deprivation in terms of education and training (see table 1). The constituencies are below regional or national benchmarks.



Table 1: Comparison of Hodge Hill and Yardley Constituencies with Regional and National Averages Source: House of Commons Library 20,21

	Median Wages	Unemployment Count %	House Prices	Attainment 8	Progress 8	A*-C GCSE %	AAB A Levels %
Hodge Hill	460	9.1	147,000	41.5	0.06	51	3
Yardley	490	9.3	167,500	43	-0.02	57	5
West Midlands	550	4.1	195,000	n/a	n/a	n/a	16
UK/England	580	3.2	235,000	46.9	0	65	14

The other areas of the East Birmingham North Solihull Corridor are generally characteristic of this profile even where they are drawn from more prosperous constituencies such as Meriden.

With higher unemployment and lower median wages, the working population is at a marked disadvantage. In terms of education, the significantly lower attainment will have long term impacts on the young people in this area but also the community more widely. Whilst there is some evidence in Hodge Hill that progress is being made in closing the gap, it is limited. The lower achievement at GCSE and A Level leaves the prospects for the young people of East Birmingham behind those of their peers elsewhere.

Following several months of lockdown related to COVID, the immediate future will be considerably more difficult and all the evidence suggests that this will continue to be the case for some time. Areas of the economy that have been hardest hit include retail and hospitality where there are a disproportionate number of jobs that would be drawn from these

communities. In relation to retail, EBNS has a 20% higher prevalence of employment in that sector compared to national figures.

Manufacturing is another significant area of employment within the EBNS area with high profile employers such as JLR forming part of the industrial legacy. With employment in those sectors already at risk of being impacted by a climate change driven transition there was already a need to build in appropriate strategies to guard against an unjust transition. Investment in retraining, the capture and redeployment of skills coupled with the generation of alternative, low carbon areas of economic activity were to be critical.

The low wage and low skills profile in the region also places many workers and businesses at risk of an unjust transition. The SME sector which includes amongst its cohort the 'just about managing' semi-skilled and self-employed 'man in the van' are at risk of not featuring in climate action plans. The skills required within the construction sector, a major source of employment for such groups, are going to be very different to those held now. Yet

currently, skills programmes are geared to preexisting requirements, turning out plumbers and builders who will not be equipped for our future, low carbon, economy.

The economic shock of COVID will be long term and the communities in EBNS are much less resilient to the impact of such a shock. Early studies by the Resolution Foundation suggest that low paid workers are three times as likely as the highest earners to have been furloughed or dismissed because of COVID. In addition, those who were already dependent on benefits will have faced far greater hardship with an inability to plan ahead (e.g. stockpile) for the coming lockdown and suddenly finding the limited support services available to them are being stretched to breaking point.

Food banks, which were never replete, are now having to address the needs of a much greater group: within the first two weeks of lockdown there were nearly one million new claims for universal credit. With payments being delayed by 5–6 weeks in normal circumstances large, numbers of people will have needed to turn to charitable support. Whilst there has been an

initial effort to meet the needs of people fallen into desperate circumstances, sustaining that support will not be easy. Local government and third sector reserves have been run down so that budgets are dangerously low and on-going support for a period of six months or more will be challenging, let alone measures to reverse the impact of COVID.

Whilst there will undoubtedly be investment in large-scale measures taken to stimulate recovery these will take time to have an effect. There is a real risk that the recession that will accompany COVID reactions and responses will significantly impact an entire generation in the way that has been seen historically during other deep contractions of the economy.

Forecasts of likely levels of unemployment are tentative for now but the Bank of England has suggested that it will double by Spring 2021 with other forecasts suggesting higher short-term levels. As of August 2019, there were 13,500 people in EBNS claiming some form of unemployment benefit on the basis that they were seeking full time work. Doubling this to 27,000 will obviously be a shock that communities will have rarely, if ever, experienced. Because of the greater vulnerability of EBNS any impact is likely to be amplified by comparison to the national picture and the increasing number of claimants shown in Figure 8 below exemplifies this.

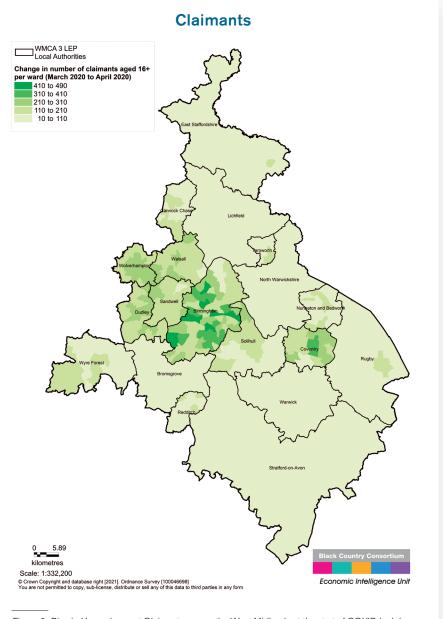


Figure 8: Rise in Unemployment Claimants across the West Midlands at the start of COVID lockdown. Source: Black Country Consortium Economic Intelligence Unit

Area regeneration schemes and economic interventions have been a feature of EBNS and similar areas. A study of the Single Regeneration Bid programme in the late 1990s and early 2000s found evidence that jobs were created as a result but that unemployment in the areas (for example in the Tyseley, Sparkhill and Springfield area) continued to be above national averages. The New Deal for Communities was a major initiative in neighbouring Aston where there were significant difficulties in working with the community. For example, it was noted midway through the programme that the community were 'led to believe that they were going to run and decide everything, it was after all 'community led'.

It is highly likely that there will be action to address the economic impact of COVID in the future. What is clear is that regeneration programmes have a variable lasting impact when whole system change is needed.

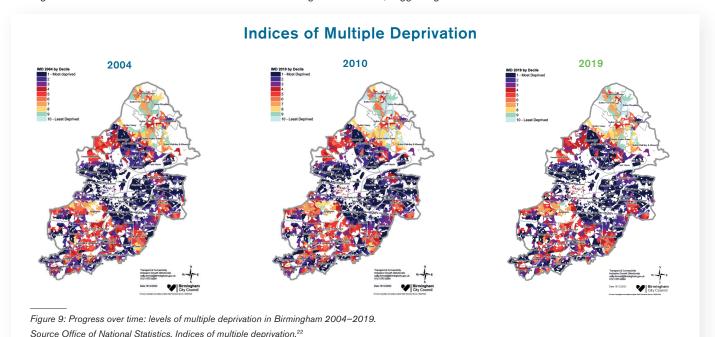
The limited reach and sustainability of such programmes and the impact of wider growth in the city economy are illustrated in Figure 9 below: a continuing process of exclusion and deprivation outlined in the Bishop Of Birmingham Social Inclusion Process.

The Centre for Local Economic Strategies assessed the economic trends that were like to shape the path to 2030 for employment in a 2014 study. It was noted that for those on lower incomes, inequality would continue to grow, just as in the five years leading up to the 2008 crash where lower incomes remained flat whilst the UK economy grew by 11%. Increasing digitisation of production, continued 'off-shoring', reducing public finances and a 'hollowing out' of middle income roles would, in the view of the CLES analysis, deepen such inequality over the following decade and a half. The growth of the 'gig' economy and a growing precariat is demonstrative of this trend. Growth areas such as retail distribution, the taxi industry and service sector are impacted by action on clean air, and the cumulative impact of regulation and charging regime on households dependent upon such jobs is yet to be fully understood.

Initial investigation by PiC of recent trends in the employment situation in EBNS prior to the impact of COVID suggested grounds for cautious optimism. New business registration in the Birmingham Hodge Hill constituency had trended markedly above the West Midlands and UK average for some time, suggesting a

growth of private sector enterprise. For larger companies based in the Tyseley B11 postcode area, where annual figures were reported, employment had increased by just under 1.5% year on year, based on the last filed company accounts. Not all of those jobs will necessarily have been local but it suggested movement in the right direction.

Whilst there is evidence, pre COVID, of improving economic health across Birmingham, there has been a greater rise in business failure than business inception in the latest reported figures that may affect the picture at a local level. As an example, engagement by PiC in 2019 with smaller businesses in the Tyseley area, looking particularly at the issue of a climate change transition, suggested there were a great many that were struggling and were often only continuing for want of an exit strategy. Ultimately such businesses were not equipped to survive a transition and would be less equipped to do so now. This suggests that those that come through the impact of COVID may simply be caught in the measures that will still need to be taken to address urgent requirements in terms of air quality or reductions in carbon emissions.



As has been noted elsewhere the East Birmingham North Solihull Corridor area is so large as to be suited only to large scale interventions at that scale. It is likely that such interventions will be needed in the response to the impact of COVID. At the same time, such large-scale interventions do not address individual pockets of deprivation well or enable system change to be embedded in a local area. There is a tendency for them to be single system and this loses the potential for securing efficiencies across interrelated areas such as transport, heat and electricity. It is also incapable of, for example, seeing the interface between connecting corridors and how investment in green infrastructure could be an immediate and effective way to drive modal shift. It is only through a discrete, place based approach that sense can be made of the respective streams of planned investment and projected requirement so that system change can be driven through a whole infrastructure approach.

There are diminishing opportunities for a traditional resource to be found that can transform an area. Oil is not likely to be struck in Small Heath (even assuming such a development would still be welcome) and a gold rush is unlikely to occur in Sheldon. All interventions to date have not managed to do more than improve situations to a degree and investigation of methods to create sustainable local economic resilience are vital if we are to minimise the impact of the economic downturn. What is clear is that past programmes have not readied EBNS to meet the shock of the current crisis and even if that is true of many communities the impact in EBNS is likely to be disproportionately significant.

The concept of the commons has the potential to play a role in an employment response to COVID. The evidence suggests that the trend towards shorter term employment careers and greater uncertainty will continue. Large organisations whether they are retail, manufacturing or service industries are increasing automation and reducing staff costs. Although large organisations, whether public or private, will continue to provide significant levels of employment opportunities, local communities will be less able to look to them to take up the spare 'labour' than they would be if automation, off-shoring and de-skilling of work continues as predicted in terms of future employment trends.

One of the benefits of the commons is that it is rooted in a community. While some aspects of the commons are universal even if of varying quality - the air we all breathe, the water we use - much of it is very local and can be particular to a given community. Typically, when a common resource has been found locally it can lift the prosperity of an area. An issue however remains that in lifting the prosperity of that area it may have required large organisations, often private ones, to move in and provide the investment to realise the potential. It may also have involved a displacement of residents as the area, or at least any opportunity associated with it, becomes more desirable.

Urban communities have what appears to be less opportunity to exploit the world around them for their common or individual benefit. There is still potential that can be unlocked and the key to doing so is to have a perception of value that allows communities to engage

with that which is about them in an innovative way. A typical view of the commons is of pasture. After all, that is where the word largely originates from: common land being used by a community for grazing. It is also much easier to conceptualise the commons in a rural setting where there is ostensibly free resource that can be shared and exploited. In an urban context the commons have also often featured the production of food – urban farms or small holdings. This follows the narrative of traditional commons but also reflects the fact that food is a fundamental component of our existence.

There are wider opportunities to embrace the commons in an urban environment and a wide range of elements of day to day urban life that can comprise the commons. As well as the air we breathe and the green and blue space around us there are different ways communities can share benefits of the world around them:

- The built environment there are ways in which property whether owned, leased or rented can be used for the benefit of the community. Energy generation from roof space is one way that communities can and do collaborate.
- Domestic and other waste can be used and repurposed. At present recycling and reuse is dependent on local government and tends only to be a service of waste removal.
- Location might not be seen as an 'asset', but it is undoubtedly the case that communities can benefit from it, for example, the Gloucester Gateway project exploiting the needs of travellers on the



nearby M5. Similarly, communities on the outskirts of urban areas or centres can collectively exploit their position.

Elements of the modern theory of the commons evolution was predicated on the basis that technology could not and would not, on its own, solve the issues facing today's society.23 The proposition that every challenge could be overcome by greater innovation or scientific advances was seen as the promise of a better tomorrow without addressing the needs of today. It pointed out that when the demand on

a common resource was far outstripped by its abundance then the impact of overuse did not arise. When there was enough land to graze 1,000 cattle whether 100 cattle or 101 cattle grazed the land made no difference. For almost all of human history the abundance of resources has meant that the impact of humanity has gone largely unnoticed. Climate change is a symptom of that abundance reaching its end point and, if anything, we have passed the tipping point of each additional demand upon the planet's resources making no difference.

It is undoubtedly the case that technological and scientific advances can have a benefit as the growth of low carbon transport technology shows. However, the overwhelming consensus is that technology will not achieve carbon reductions in time and that a significant shift in behaviour is imperative. The previous arguments around the commons - that technology on its own is not a saviour endures and the principles of the commons, how communities apply commonly owned assets to their common benefit without overuse have a renewed relevance.

What would a community that took a commons-based approach need to do?

One of the key steps is around organisation. The difference between ancient and modern commons is that historically the commons did not need to be brought into being: rivers, pastures, woodland were just there and whilst they might need a degree of husbandry they did not tend to need a great deal of work to bring them about. In a modern context our society is organised in such a way that local communities depend upon other organisations, public, voluntary or private, to meet their needs and where there is a common resource to manipulate it for the common good. This puts communities and the individuals that comprise it in the role of customer, client, or beneficiary.

service or benefit they will need to develop their capacity to act and to do so together. Organising theory is nothing new and nor when it is based around communities. Much of societal behaviour is based around concepts of conflict - that for me to succeed, I need you to falter. This is seen in the competition of the private sector but also in the way that the public and voluntary sector is often required to bid against others for grants or resources. Commons theory addresses the inevitable rationing of a limited resource but does so on the basis that everyone needs to benefit and thrive.

For a more equitable approach to sharing the

the members of the community need to have a greater involvement in the distribution. Benign redistribution has ostensibly been policy for a long time for local and national governments of every complexion, however, it has had limited impact. For there to be greater community involvement the community needs to be given the knowledge, tools and expertise to engage. A starting point is to organise the community in a way that fosters that approach. Too often community development places obligations on a small number of individuals who carry the load of responsibility for everyone and this can be where development falters.



What would an organised community look like?

Borrowing from theories rooted in trade union organising it might look like this:

- There is a high level of identification with the community and activity within that context.
- There are community representatives in all parts of the community that have the time and training to be effective.
- Community meetings are well attended.
- Community activities are a priority for members of the community and are activities in which they participate.
- Community organisations communicate regularly with members of the community in a variety of formats.

For many communities, including those in East Birmingham and North Solihull, this looks like an idealistic vision and in many respects is not one which is ground-breaking. In a world where technology can provide global connectivity, community organising on a street by street, household by household basis may seem out dated. It is still the case that community development and participation will fail because some or all of the above features are absent. What skilled organisers in the workplace and elsewhere understand is that organisational power comes from building a collective strength. Digital organising has an important part to play, particularly in communication, but does not supplant the impact of 'hands on' organising.

Creating an active and organised community is generally not easy but there are times when it can be spontaneous. Give a focal point for common endeavour and it can be the case that a community is suddenly activated often due to the decisions of public bodies. Proposals to build a road through the middle of a community, close a community resource or move a vital employer to a new location can energise activity because there is common interest and a shared goal. Absent that type of catalyst, the common interest and energy needs to be

created, developed and nurtured for an active community to thrive.

Union organising talks about the importance of building common endeavour one person at a time. It is necessary to make clear what the benefit of collective action is to each person, understand what the barriers are to individuals getting involved and to build participation by small steps and 'quick wins'. Similar steps work within a community, but often the long-term effort needed to create such a foundation is circumvented by infrastructure implanted to accelerate impact at the cost of sustainability.

Changing the nature of education within a community could overcome many of the barriers to a commons approach to resilient communities. For perhaps understandable reasons, most education is geared towards making students attractive to employers. Many of those in East Birmingham and North Solihull who find their academic achievement below the national average will be directed to vocational courses that are designed to meet the needs of existing employers.

Within existing educational curricula and established funding routes there is limited scope for developing the skills needed to work in a co-operative or commons-based economy. Within existing educational settings or separate from them there is a need to develop the skills of communities, particularly marginalised communities, if they are to be able to 'compete' with the pre-existing power structures that surround them. Equally research by PiC has identified a significant lack in vocational courses training young people for a post carbon society. Plumbing courses or automotive engineering are geared towards legacy technology more than post transition skills.

In developing the skills of communities there is also a need to support and develop the capacity and capabilities of those who control and shape the current system. Acting now on climate and economic injustice is asking them to question past practice, advice and recommendations – to challenge and change

a system in which they have vested much professional and political interest. It is accepted that this is not easy and as the experience with the R20 Taskforce has shown it is nigh on impossible within a local authority-controlled process. Approaches that rely solely on existing structures inevitably reflect the interests of those who currently hold power and whilst welcome attempts are made to make these approaches 'inclusive' if they are driven from the point of view of one community of interest, for example the big utilities or property developers, they are not going to reflect the complexity of requirement or the cross sectional range of interests that need to be understood and reconciled. A new context requires us all to rethink and relearn what we thought we knew and revisit the efficacy of the systems we have collectively nurtured.



Community Learning Platforms and the Test and Learn Areas

How we test and learn is as important to driving transformation as what we do. Experience from past regeneration and neighbourhood renewal programmes tell us it is much easier to:

- Talk about joining up or changing systems than doing it,
- For those at the top to talk of leadership of place and collaboration than to distribute power and change learned behaviours, and
- Be a community leader and use it as a platform for a specific (or self) interest than build collective agency and common purpose to drive transformational change.

The climate crisis and the lack of resilience to cumulative transitions and future shock given the levels of deprivation and inequality in the city, means there is simply not the scope to get it wrong this time around. Therefore it is envisaged that each test and learn area should be further developed through a 'community learning platform' that would act as an open and shared space for policy innovation and skills development.

CLPs will require active participation and engagement of politicians, commissioners, communities of place and interest to see the local context afresh, and to challenge their perceptions and realities through a shared lens held up by frontline communities.

The CLP process will give:

- Frontline communities and businesses whose voices are not currently heard and whose experience is not reflected in the policy dynamic a chance to tell their stories and participate as equals in the policy development and decision-making process.
- System leaders, innovators, academics and policymakers exposure to the realities and cumulative impact of the systems they have helped shaped and/or inherited.
- Participants a shared reality as the foundation to the development of common

cause and collective agency, with the use of community researchers to provide an oversight and rigour from a local perspective.

- Local political leaders the confidence to act now and take forward policy that challenges the status quo.
- National politicians' insight into contextually driven community based approaches that give the local point of view a voice at every sphere of governance and spatial scale.
- Space for informed and challenging conversations, facilitating and supporting people's best thinking which will be underpinned by Theory U stages as appropriate (open mind/open heart/open will) and thinking differently about what we know and what works.
- Act as a testbed and an opportunity for the commissioning of a wider skills and lifelong learning pathway – drawing upon new approaches and resources, the combined apprenticeship levy etc.
- Inform and drive implementation of improvements to core services a key requirement identified by EBIGS.

There is a risk within community development that programmes are established with preexisting outputs or measurements and these become determinative of the activity that takes place to the detriment of engaging the community. The further impact of that is that communities may not see the realisation of their aspirations or the addressing of their primary concerns and are not drawn into a commitment to participate. Local programmes can and often do offer to create a strong community input with local control but wider structural influences can still heavily outweigh the agency on the part of the local community. One intention behind community learning platforms is to address the imbalance of power relationships within such activity. It will allow those involved to share knowledge and to develop outputs and goals on a negotiated basis. CLPs will also

enable communities to increase their skills both through the participation in the process and also proactively.

It is as true today as it has been centuries before that knowledge is power. Even today with much more accessible sources of information available it is arguable that knowledge can still be held and withheld by those who hold power as a means of controlling community aspiration and action.

Traditional approaches to public policy and place based interventions have sought to bring into communities expertise and know-how to help shape a policy response that is subsequently shared with the locality – the community of place – restricting too often their input to one of consultation that merely affords them the opportunity of picking the least worse or best option. Whilst social media can be seen to be a moderator, recent experiences has shown how it can be used to promote misinformation and perceptions that are not aligned with securing shared values; the prerequisite of good place-based partnership working.

Our ambition is to unlock the latent assets in communities and harness these to address the requirement to act now on climate and, in return, grow communities for good. It is those who live, work and play in the community that best understand the underlying functionality of the place and have access through their close networks to the data, qualitative and quantitative, that is required to underpin the making and shaping of sustainable placed based policy and partnership. The visible and measurable delivery of socially just responses are integral to the securing of timely action on climate change. Action to address economic injustice goes beyond words, it requires shared belief. The community learning platforms offer an opportunity to build a movement for change where values can be shared and collectively shaped within a community and around issues critical to the locality. The embedded knowledge base can be shared with the communities of practice and interest to help build cross community, shared understanding,

'a truth in common', that will be required to develop the identification of timely and workable actions to drive climate change responses and build effective social foundations across a range of spatial scales and spheres of governance.

It is envisaged that the development of the community learning platforms will be a test and learn process and would be linked to the evolving governance arrangements within the East Birmingham Board and policy secretariat. Initial funding to test, trial and prototype the approach will be sought.

The next section looks at four key areas for the development and implementation of test and learn projects:

- Housing retrofit and regeneration
- A New Economy
- The greenway modal shift and the connection to opportunity
- Skills and employment

The initial focus will be on the communities of East Birmingham and the cluster that is Tyseley Energy Park, working through the connecting corridors to enable relevance, replicability and scalability across the communities that encompass Birmingham City Council and West Midlands Combined Authority spheres of influence.



Delivering for Climate and Community

Tyseley Energy Park (TEP) is a transitional energy cluster and collaborative partnership between business, academia, government and industry. It is developing innovative infrastructure and technological solutions to deliver renewable heat and power, energy storage solutions, clean transport fuels and advanced waste processing. Formed out of an initial partnership between Birmingham City Council, University of Birmingham and the Webster and Horsfall family business who own the site, TEP's mission is to transform energy generation and use in Birmingham and the region by stimulating innovation, demonstrating new technologies and turning them in to commercially viable energy system solutions.

Underlying that mission is the need to contribute to Birmingham's commitment to reduce CO₂ emissions by 2030. Approaches include:

- Developing solutions for power, heating, transport and waste processing that address key societal challenges as part of the transition to a zero-carbon energy future.
- Demonstrating how novel energy technologies and solutions can form innovative industrial ecologies and collaborations through clustering and colocating of assets and energy consumers.
- Creating a green business/technology hub to support SMEs to incubate, prove and deploy commercially viable technologies.
- Delivering innovation-led regional growth and new jobs and training in integrated waste, energy and transport sectors, new green manufacturing and engineering industry.
- Sharing learning and knowledge, plus proactively advocating change in the local community, city and region, as well as with cities across the UK.

The TEP Co-creation Group that has driven the process holds the ambition that these solutions will underpin the transition to a zero-carbon

future and tackling key societal challenges such as energy poverty, poor air quality, electricity grid constraints and unemployment. This reflects the ambitions of the founding partners:

- Webster and Horsfall, a 300-year-old manufacturing operation – one of the City of Birmingham's industrial pioneers,
- University of Birmingham, the UKs first civic university which is keen to evidence this continuing role though its work with TEP, and
- Birmingham City Council.

Despite this ambition, a series of community conversations undertaken as part of the WMR20 Project identified a lack of connection to, or ability to identify with, the ambitions of the partners to the TEP. Whilst the recent Power to the People Report²⁴ identified transformational opportunity to build an ecosystem that could drive both wellbeing and zero carbon, it identified a real risk of repeating past experience with major investments such as HS2, and/or Tyseley Energy Park (TEP) remaining disconnected from the daily lives of residents. There is symbolic and legacy capital around TEP with an embedded blue and green infrastructure, which if harnessed has the capacity to drive a sense of place and connect local communities. Not just to the low carbon future, opportunities around energy transition and modal shift but to large scale developments such as HS2 and Peddimore as well.

The #WM2041 requirement to reconcile the past and future in prioritising modal shift is visible at TEP and laid out in terms of its adjacency to the local Tyseley Station, which is just 14 minutes from Moor Street Station at the core of the HS2 Curzon Street interchange. TEP is also at the core of the City's canal network – a legacy of its industrial past. The canal network and cycle pathway connect the east of the city with a creative quarter including the Custard Factory and the Knowledge Quarter home to several higher and further education facilities including Aston, BCU and Birmingham Metropolitan College.

Whilst parts of the corridor are used to a degree, the canal towpath is noticeably underutilised, as are its greenways and potential walkways. There is a low incidence of use by all potential users including pedestrians, cyclists and boaters. The green corridor connects the communities of place within EBNS to current growth nodes and potential sites for local enterprise such as within the Ackers' site and surrounding parkland. There is an untapped heritage and destination potential that includes BSA and Vintage Trains, and a chance to understand how East Birmingham as a place became shaped by the UK's colonial legacy.

There is also opportunity to leverage the established assets, drawing upon the green and blue infrastructure to provide an immediate and visible return to the community. Drawing

on these assets could help secure the ambition to 'build back better' and establish a skills, learning and employment pathway that can take residents from their doorstep to learning opportunities in manageable steps.

There is a risk that meeting established need, including acute poverty, homelessness and overcrowding, will be seen to be in conflict with the need to respond to the climate emergency and the urgent requirement to instigate a programme of retro-fitting of the existing housing stock. Yet living in poor housing conditions across all tenures is seen to be a major determinant of health and life opportunity. Home is 'where the heart' is and where ambition can be 'gained or drained' through the sheer challenge of daily survival.

The East Birmingham North Solihull Corridor, when incorporating UK Central, is home to every era and type of housing stock and commercial use to be found across the UK.

There is an opportunity to break down barriers by addressing the dual demands of climate and community through retrofitting of heating solutions. Acceleration of supply initially through off site construction can be coupled with the participation of local SMEs and workforce (employed and not currently employed) to generate a localised supply chain and skills pathway.

Early outreach and engagement from the Birmingham Energy Innovation Centre (BEIC) can be secured if matched by successful projects in development to help in the creation of a clean growth value chain in the West Midlands through the establishment of West Midlands skills and training hub for domestic heat decarbonisation, and a Birmingham Energy Incubation Hub. These projects will bring together public and private sector 'end users', DNO's, utility companies, early stage technology firms, the region's universities, policy organisations and financiers to test and

develop innovative 'clean tech' solutions and support firms to rapidly scale developments, including decarbonising the West Midlands energy/transport system by 2030. The established Energy Research Accelerator (ERA) partnership of Midlands' universities, and bringing together programmes such as ATETA (an SME support programme for energy technology adoption) can further facilitate access to research and business opportunities. An open innovation platform in the West Midlands that utilises the climate change emergency as the imperative to influence large-scale energy infrastructure investment, and transition the manufacturing power of the region to deploy innovative solutions to address the productivity and skills gaps in the region is needed, to help align policy and investment plans for infrastructure replacement.

Housing retrofit and regeneration

The Committee on Climate Changes report UK Housing Fit for the Future 2019²⁵ was unequivocal in its view that the UK's legally binding targets on climate change will not be met without the near elimination of greenhouse gas emissions from UK buildings. Given 85% of UK building will still be with us by 2050 there are some 25 million homes that will need to be thermally insulated and fitted with alternative heating appliances in the UK. This is a level of intervention and transformation not seen since the Second World War.

The scale of investment required to deliver this programme nationally will be more than £500bn. It will require major civil engineering investment in the installation of new grid infrastructure to support the higher electrical power consumption of heat pumps, or new heat networks. It will cause major disruption to people's lives as homes are insulated and

new heating appliances installed for which there is currently little demand. Householders rarely put forward this type of requirement in a specification when seeking renovation and they are even less frequently included by builders trying to competitively bid for work. For individual households, the costs per house to achieve zero carbon is currently estimated to be £20,000–£30,000, way beyond what an average household can afford, let alone those living in multiply deprived areas such as East Birmingham.

There is a significant issue that as the likely mix of regulations and incentivised loan schemes are bought forward by Government, low income families and those already suffering from fuel poverty will be the least able to afford the transition and, therefore, will be left further behind. Meanwhile, those able to afford the expense of retrofitting will be able to take

advantage of the higher thermal efficiency of their homes to reduce their energy costs. If anything, those who have not been part of the transition could see increasing energy costs as their homes and heating systems age and become less efficient.

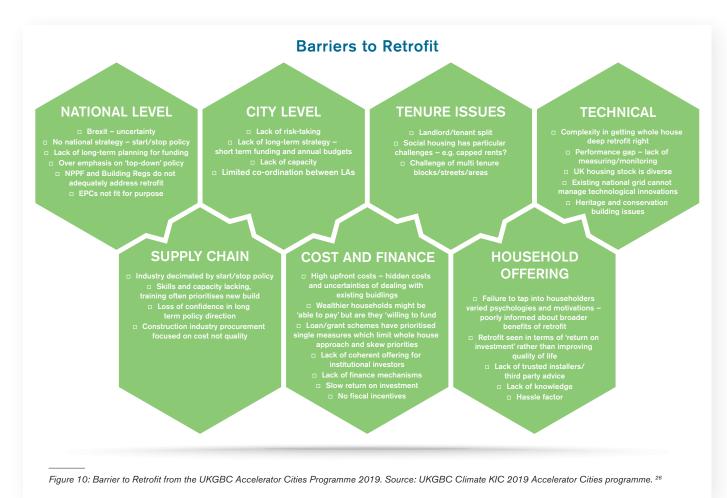
Upfront government funding or new forms of financing will be required to ensure that the transition is equitable and there is cross party agreement that this is the area where significant investment is needed. The experience of COVID has again shone a light on the impact of poor housing conditions and poverty on poor health, for example, respiratory conditions caused by cold, damp and poorly ventilated housing. There is a consensus that housing retrofit is an area that requires urgent investment and that it is also an area that could assist with kick-starting the economy by providing a reskilling opportunity and longer

term employment pipeline for those whose jobs will be lost within the crisis.

The speed, scale and pace of change required is unprecedented and given the current lack of consumer demand, supply chain or workforce, real time intelligence on what could trigger and drive the change needs to be gained. This needs to be done in parallel with developing programmes that could be bought forward at scale to drive supply chain and skills development. Action will need to be targeted towards both those who have the choice and control over their homes and, therefore, can make the decision to invest alongside programmes that are geared to different tenures and households who have lower levels of control and choice over their home.

UK Green Building Council UKGBC as part of the Climate KIC 2019 Accelerator Cities programme drew on cross sector experience and insight from the core cities of Birmingham, Manchester and Leeds, and the Greater London Authority to better understand the barriers to housing retrofitting (see Figure 10). Their work highlighted systematic failure in tackling the low carbon retrofitting of homes an issue compounded by years of piecemeal national policy. A key conclusion within their interim report was that if leadership on this agenda is left to national policy then the UK will not meet its climate obligations. Cities and regions need to bring forward localised schemes and domestic retrofitting programmes developing interventions on a test, learn, scale and replicate basis.

In an aligned programme PiC engagement with the home retrofit sector highlighted the sudden reductions to solar subsidies and cancellation of the Green Deal Home Improvement Fund as a major factor in terms of loss of confidence. The contradictions and inefficiencies of the current 'eco programme' are constantly referenced as a key factor in lack of progress in tackling domestic retrofitting. Council officers are concerned about contradictions in approaches with current warm homes programmes still geared to addressing fuel poverty through the installation of traditional boilers - giving a message to consumers that runs contrary to what is needed in terms of the climate change requirement. Loss of staff and strategic capability are frequently referenced in some towns and cities, including Birmingham, as the reason for limited strategic progress.



Few roles have been invested in or suitably equipped with the resources to understand how to meet the challenge ahead. There is an absence of detailed private sector stock condition surveys and energy consumption data at a household level. Taken together these are key impediments to progress.

Discussions with BEIS have highlighted the need for a blended approach; there is not the time or resources available to cherry pick the 'easy to do' actions as several past schemes have done. There is a need for a home retrofit programme that looks across tenures, with the potential to cross subsidise and build upon the wider infrastructure investment. One aspect of this will be the 'one dig option'. If you are digging trenches to lay a pipe for sewage then can the infrastructure for the district heat network or heat pumps go alongside? This is a level of granularity that it is impossible to plan at city scale let alone a national one.

The chance to draw together a range of investment into some form of 'total place' model needs to be further explored. Another important factor to build into engagement with residents and communities is talking about home rather than house retrofit, ensuring conversations are detached from the needs and emotional ties of the occupant, which can be a feature of house building programs. It may be that for an older person living in their own home, being able to stay there rather than being lonely and unsupported would be a reason to release equity in their home, if this could be done in a way that was fair and free from fear. There are examples of equity release loans and covenants piloted previously in the region that could offer an opportunity to address climate and wellbeing on a holistic basis as well as developing localised employment for community based agencies to provide the care and support.

There are numerous models that could work, the critical point is to test and work these through in real time, whilst also developing-out an overarching 'Home Retrofit Strategy' which can set out the key policy drivers, targets and performance data. Key messages from across

the sector would be not to over-work a strategy but rather to get on with it. There is enough known about what needs to be done and where it needs to be done to enable action to be taken now, otherwise the risk is that the scale and complexity of the challenge will overwhelm us. Birmingham City Council has made clear that it lacks the capacity and resources to drive forward this agenda and that this is an area where it is looking to facilitate and to support change whilst leaving others to deliver and drive key programmes.

Where to focus the test and learn?

Birmingham has a significant number of districts that have pre-1945 housing whose thermal insulation is of the lowest grade compared to more modern construction. The retrofit of these properties will need to be of high priority as this is where the greatest efficiency gains could be made. Figures 11 and 12 provide a profile of the city's housing stock by age and construction type respectively.

A recent study by Birmingham Energy Institute identified 'Priority Intervention Areas' – areas within East Birmingham most in need of retrofitting intervention but least able to afford the transition – using the following approach²⁷:

- Mapping data on actual energy consumption (gas and electricity) at the Lower Super Output Area (LSOA) (an ON; geospatial statistical unit for reporting small area statistics) level per capita,
- Modelling and mapping a theoretical energy demand for houses within each LSOA based on average energy building performance per capita by urban typology;.
- Developing an index of energy deprivation (IED) using the two energy data sets, where IED equals actual energy consumption divided by theoretical energy demand, to identify the most energy deprived LSOAs in Birmingham – where actual energy demand is lower than the predicted demand;

 Overlaying the IED against the ONS/ MHCLG Index of Multiple Deprivation to identify the LSOAs that are in the top 2 deciles of both indices and are therefore Priority Intervention Areas.

The Birmingham Energy Institute model can be extended to include other characteristics where data exists or can be obtained. It would be instructive to apply this approach to look at different tenure types across East Birmingham e.g. private rented, owner occupied, social/RSL and to develop the model to include quantitative data on the 'lived experience' of home occupiers. For example, the experiences and drivers for tenants and landlords in an area with a high number of student, private lets will be different to those of an investment landlord providing short term furnished lets in a city centre.

The different drivers for owners and their perception of the asset and its value is referenced above. There is merit in modelling the lived experience of home occupants, the functionality of the neighbourhood and the associated built environment alongside housing characteristics such as age and construction to develop a broader understanding of the different financial models and patterns of investment that might be available. Further work to include other environmental factors such as air pollution levels, humidity, wind exposure levels, urban heat islands etc. could also be of interest. Ultimately local energy system design would require modelling at a more granular level including gathering energy consumption data at the household level. PiC and University of Birmingham are part of an Energy Capital led IUK project that is looking at the data requirement for local energy system planning.

Figure 13 shows the results of the initial analysis and the property types and communities in Birmingham where there are high levels of economic hardship and the need for intervention is highest but the ability to bear the cost is lowest. Unsurprisingly there is a high concentration of these communities in the East Birmingham corridor, but this provides

both an opportunity and incentive to pilot the domestic heat decarbonisation transition in the EBNS corridor where there are a high number of homes in need of intervention, before rolling out to other parts of the city - and beyond to a national, city scale demonstrator. An EBNS pilot could take advantage of the energy infrastructure associated with Tyseley Energy Park, both for low cost heat, low cost electricity and potentially for hydrogen injection into the gas grid. In advance of a government Energy White Paper anticipated this year and a new Heat Strategy, BEIS are scoping-out the requirements for decarbonising five major cities and Birmingham is one these cities. BEIS, the WMCA and Birmingham will need to quickly develop a strategy for decarbonisation of domestic heating and the communities along the East Birmingham North Solihull corridor need to be prioritised in these plans.

Having reviewed the model and given that TAWS and the Hay Mills Trust have established community relationships in the area, including working with local schools, the evidence would suggest that George Road, Tyseley and the surrounding streets would be a good initial focus for developing the model through engagement on home occupiers lived experience. The area comprises a mixed tenure, multi-landlord, deprived housing area with a predominance of terraced housing stock. It has already been subject to a feasibility study by Severn Trent for measures to address flood risk and enhance biodiversity so is known to be of interest to a key utility. It has a proximity to TEP so has the advantage of potential ease of connection to renewable energy schemes located at the Park. It is the type

of neighbourhood and possesses the needs profile that past housing retrofit programmes have been least able to address, and will also be one where the market will be least equipped to bring forward a response. Engagement with residents in this neighbourhood has highlighted that a desired outcome for them would be to live in a secure, warm home, but equal emphasis is placed on the importance of living in a safe clean neighbourhood.

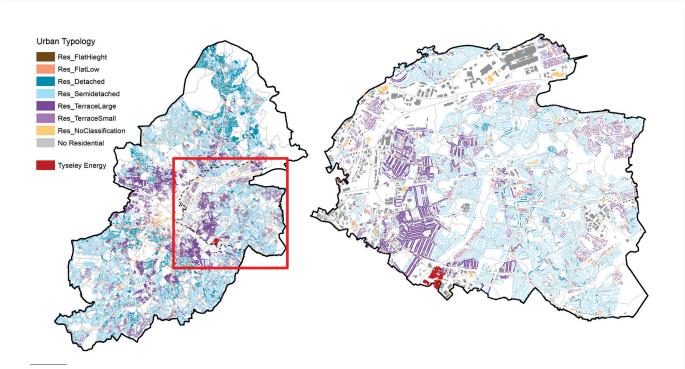


Figure 11: Profile of Birmingham and EBNS Housing Stock by Property Type. Source: London Assembly (1), London Datastore – Dwellings by Property Build Period and Type, LSOA and MSOA. 28

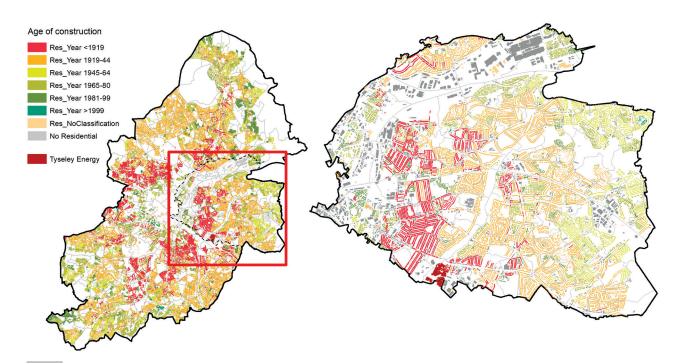


Figure 12: Profile of Birmingham and EBNS Housing Stock by Age of Construction. Source: London Assembly (2), London Datastore – Dwellings by Property Build Period and Type, LSOA and MSOA 29

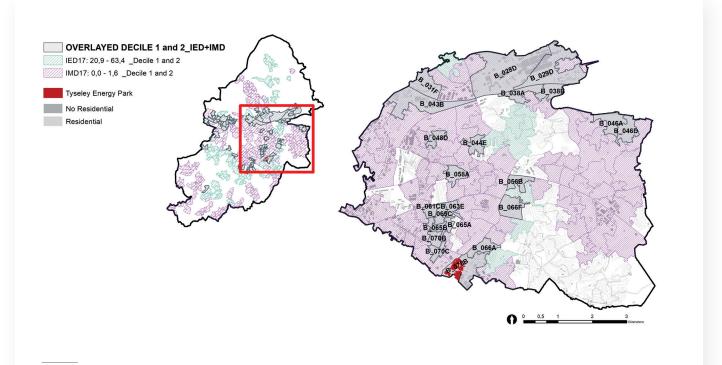


Figure 13: Priority Intervention Areas in Birmingham and East Birmingham. Source: Birmingham Energy Institute

Energy system mapping has highlighted the potential for some local off-take and this could potentially underpin a reformed affordable housing offer or form of cross-subsidy that could be secured through the potential mixed use of moribund industrial buildings, obsolete land in the area - also contributing to new housing supply and employment opportunity.

An SME seeking to diversify into modular housing construction is based in the area and models developed in Bristol and other European cities that enable a modular building to fit within the existing skin of an industrial building could be explored.

To minimise complexity, draw in capability and provide some certainty on the range of business models that could apply in the corridor there is a case for taking forward test and learn in two other areas. These would again be areas of high deprivation but representing a different housing era and type. Castle Vale and North Solihull would be areas of key interest given the local community housing models and the experience held on both in terms of housing regeneration, providing confidence to innovate faster and further. The modelling would be refined and developed as work in progress, looking to build in consumer/household insight,

the impact of the amount of choice and control a householder may have over their housing and way they live their lives in general. Initial seed corn funding is required to develop and refine the approach and bring together a community learning platform to bring the communities into a process on an equal and engaged footing. A comprehensive funding bid to government is required which will unlock funding for both the infrastructure and the retrofitting of low efficiency housing in areas of high economic deprivation.

New Economy

Canal regeneration

Birmingham is at the heart of the canal network in the UK, a network used as 'corridors' for travel, for leisure and residential living. The regeneration of the canals was at the forefront of Birmingham's urban renaissance, which focused on city centre regeneration to attract private investment and create jobs in the service sector. Increasingly, the canal network is identified as an opportunity to secure modal shift and connectivity, with the Birmingham Cycle Revolution bringing forward investment in over 50km of all-weather cycle routes and access points. There continues to be development-led canal side approaches that seek to exploit underutilised former industrial areas in London, Birmingham, Manchester and other core cities. However, such projects at inception continue to be designed to serve a target market; be it as investment rental property or a high value retained property asset for the owner. At best, such development can come across as ignorant of the needs of the adjoining local communities or at worse as seeking to maximise return on investment by expanding further and removing much needed social housing. A great deal of literature and political discourse is now given over to the risks of taking forward gentrification in the name of regeneration.

Whilst waterways have been positively exploited to benefit town and city centres there has been extremely limited leverage of the benefits that such community assets can bring to inner city (as opposed to city centre) and suburban locations. There are a few examples of niche projects where community wealth can be seen to be built but the insularity of the neighbourhood and community has meant there is not the potential to drive wider impact and build community wealth and connectivity to a wider area. Outside Birmingham's city centre there are large parts of the local and regional canal network that are little used, even as commuting corridors.

As it stands, the canal in the Hay Mills/
Tyseley area presents a lonely and somewhat intimidating space, and therefore it is underused by people who might otherwise do so as a transport route either on foot, cycle or on water. The canal in this area is not used by boaters for mooring, meaning visitors cruising on with little understanding of what lies behind the industrial façade and no welcoming presence that can attract others to use the towpaths. There is in fact quite limited opportunity for boaters to moor along this part of the Grand Union Canal in Birmingham, even should they want to. Residents point to poor lighting, the lack of frontage and perceptions

of anti-social behaviour as key reasons why they do not use the canals. Despite this, there is a strong sense that the canals should be an asset. Somewhere where residents can come together and escape from the surrounding congestion and pollution and to a place that is a shared benefit to all ages and cultures.

In major developments and in many regeneration programmes there is a time lag between the communities engaged having sight of an opportunity and its delivery. That does not need to be the case for the East Birmingham corridors because the embedded assets and the opportunity for a revitalised local economy already exist. A wealth of civic partners and communities have helped shape the proposals outlined, and the collective asset base and the existing investment in energy and climate innovation means that there is a real opportunity to develop out sustainable models for community wealth building.

The creation of a local narrowboat community is seen to offer an affordable and impactful early opportunity to bring this green/blue space into much greater public use. Creating some long-term moorings together with appropriate infrastructure and encouraging visiting boaters who are passing through to have a presence in the area (for example by offering 14 day visitor

moorings that contrast with 48 hour city centre moorings) will encourage other users creating a virtuous circle. There is a high demand for housing of any kind in Birmingham and local graduates are priced out of workspace units. The opportunity to combine the two in a low-cost work/stay unit provides a low-cost housing resource for local millennials or those who may be seeking to work and locate to the area.

Developing other opportunities for accommodation on the canal will increase the availability of flexible housing solutions with the potential to provide larger family dwellings in older industrial buildings – a possibility that would benefit from further exploration. As a mixed development proposition (but one that is driven by the principle of harnessing and locking in local assets for the benefit of the community) a range of funding mechanisms will need to be explored but with a decent canal boat valued at £30,000–£50,000 an initial localised canal boat offer could be funded as a 'pop up' or as a test and learn.

Making the canal a more clearly dedicated commuting route will encourage take up and allow easy access to Curzon Street and the development of the city around the new HS2 terminus, building upon established infrastructure. Birmingham City University, Birmingham Metropolitan College, Aston University and technical colleges are similarly connected to the Tyseley area providing an opportunity to develop the educational 'offer' out of the central core and connect it to the community where much of Birmingham's diverse youth population is located.

Seed corn investment in the current infrastructure in the canal side area plus

the potential for lighting, signage, access points and other measures to encourage use is required and should be picked up within any cycling and walking proposals for the waterway and greenway. A quick win is seen to be the signposting and facilitation of a walking route and access from Tyseley Station with footpath access created onto Tyseley Energy Park and the Birmingham Energy Innovation Centre (BEIC). A corresponding bridge across

the canal onto the Ackers site to provide connectivity and the sense of the innovation and energy offerings being co-located within a 'civic campus' would also be impactful. Funding is currently being explored for this.

The ATETA project and PiC engagement has identified business interest in locating to a revived canal area, with the focus on low carbon technology and the potential of hydrogen refuelling providing for several marketable propositions for canal boat retro fitting, maintenance and renovation. There is significant opportunity to drop modular units into underutilised light industrial and council property bordering the canal which could provide incubation space for businesses keen to be associated with a low carbon future.

There is also a significant opportunity for the energy innovation present on TEP to drive the development of new businesses focused on environmental technologies including smart/intelligent system technologies. Examples of this would include APIs, sensor networks, SUDS, sustainable construction techniques, ecosystem services, waste management practices and technologies as well as urban farming.

SMEs

PiC research in 2019 in relation to the Tyseley Environment Enterprise District TEED has shown that beyond TEP, for which it was mission critical, SMEs in the TEED have either failed to capture the opportunities that were envisaged around environmental enterprise nor sought to relocate to this area. The Cogen Hay Hall Road multi-million-pound energy from waste plant is one recent example of a TEP based firm expanding out into the TEED but does not represent a wider transition. The understanding of the impact of climate action and a zero-carbon transition has been explored with SMEs in the area and it was found that many are precarious and unprepared for future climate change abatement policy changes. Small businesses, the backbone of the Birmingham and UK economy, are at risk of becoming the overlooked sector

despite the massive impact action to tackle climate change could have on them. A concern that engagement by Nick Robins et al from the Grantham Institute through their body of work exploring investing in a just transition underlined.³⁰ Small and medium size enterprises (SMEs) comprise the overwhelming part of the UK business sector:

- There are 5.7 million SMEs in the UK with less than 250 employees and only 8,000 companies with over 250 employees.
- 5.4 million of those SMEs have fewer than 10 employees.
- Large businesses account for just 0.1% of companies, 40% of employment and 48% of the total turnover.

Small businesses therefore matter when it comes to dealing with climate change. Yet 90% of UK businesses have no strategy for reducing their carbon emissions. In Birmingham, the SME sector accounts for 57% of output and family businesses are a core feature of the SME sector within some communities.

Work by the Ashden Foundation31 and the economic impact assessment carried out for the Birmingham Clean Air Zone³² has highlighted how the accelerated delivery of a controlled regulatory approach through the CAZ will be a shock to many businesses. In terms of marginal businesses, it could well be the final determining factor for them ceasing to trade. For many small businesses such an event will result in a failure of the business without any realisation of accumulated capital or value as they have no practical exit strategy. The precariousness of the situation is even more apparent now that SMEs are also having to cope with the shock of COVID and seek a recovery during a period that is likely to be hugely challenging.

Some SMEs may feel that the climate transition and moves to address clean air should be held back. In economic terms that only builds up further, more intense, shocks with late in the day regulatory responses hitting those who

are least equipped to respond now and who will be no better equipped in the future. As the OECD outlined in its climate action submission in 201933, a shock to the system from action on climate change for those in work is not evenly impacted. The risks are greatest amongst the low waged, the older age brackets (54 plus) and those social groups who lack the adaptability and necessary skill set to gain from any promised growth via the green economy. This is a profile that fits many of those engaged in manufacturing or light industry in the Eastern Corridor. Stakeholders in the region suggest that the absence of critical institutional architecture that was around to support business through past transitions is an issue. Mechanisms are required to bridge this gap in the short term and understand the types of investment and support that are required.

Rather than see employment lost and businesses going to the wall there is the potential to put in place succession and workforce planning now. Ultimately bridging and investment may be required but this needs to be informed by a finer grain understanding of the motivations and intent of SMEs in the TEED area and of the skills development and employee redeployment opportunity.

The Birmingham Energy Innovation Centre (BEIC) provides a facility to bring together energy research groups in Birmingham covering waste processing, fuel cells and low and zero carbon fuels, energy storage and hydrogen vehicles. BEIC can provide initial focus for policy and skills development but this will need to be supplemented by the required succession and workforce transition planning. Funding is required for further engagement with businesses in the locality to enable them to shape the offer and inform the requirement.

The workers and innovators united will not be defeated!

PiC engagement with trade unions and utilities workers has demonstrated a significant gap between energy and utility workers and the business/academic community on understanding what a climate transition will entail. For example, heating engineers and apprentices had little appreciation of the changes that will take place soon in relation to heating of premises. Apprenticeship programmes at further education level were not geared towards the needs of climate change solutions and in-house programmes were geared very closely towards the specific needs of an employer with limited transferable skills. Experienced workers were concerned at their lack of participation in the viability testing of innovations or any evaluation of how their skills and experience could be harnessed.

Energy and utility workers have experienced significant job losses and fragmentation through past attempts at industrial transition, privatisation and efficiency drives. They are understandably wary of further change whether as part of a just or unjust transition. Unions were formed to protect and improve pay and conditions as far as possible for their membership and this is understandably reflected in their negotiating positions. In the face of the significant impact of measures to address climate change in certain carbon heavy sectors, unions have sought to assert the interests of their members in the absence of any certainty about their position in a new economy. If not effectively addressed industrial unrest and action be seen as a legitimate brake upon taking forward climate action in these areas.

It is suggested that as part of the BEIC development, there is an early opportunity to test how these conflicting priorities can be reconciled now to accelerate delivery and transition to new environmental processes

down the innovation pipeline. A 'space' could be created as part of a 'test and learn' project to bring together experienced workers, their unions and businesses with specialists developing and implementing new technologies. The space could be used to explore the options for bridging the gap in terms of a viable offer and reassurance to enable workers to be part of driving change. It would also offer a reality and relevance test for innovators whose technologies need to be delivered on the ground by gathering feedback from those with practical experience. An assessment of skills would inform transferability to low carbon technologies and climate interventions, whilst the development of a co-created learning pathway for the securing of mutual consent and participation in climate transition would be a key foundational step. This an area in which the key unions have expressed a willingness to participate as has the membership skills body for the utility sector.



Reconciliation of the past, present and future

The untapped heritage 'offer' that is embedded within the Tyseley/Hay Mills area and the acres of 'stranded' green space is strongly promoted by the Hay Mills Trust and the communities who are engaged and live within the locality. Local children who participated in community open days could identify with its industrial heritage, connecting their lives now with historical innovators and the experiences of their ancestors. Alongside established assets such as Tyseley Locomotive Works and Vintage Trains, there is seen to be the potential to draw on the area's rich history and legacy sites such as the BSA Armoury Road site and the Webster and Horsfall Factory along with the canal network and the River Cole valley to create a destination of major significance. The rich industrial heritage of Birmingham's past combined with its current role as a city that is incubating the birth of the Green Revolution create a compelling narrative and identity for Tyseley and Hay Mills. The fact that these sites sit within the area of Small Heath and Bordesley, which are now the subject of urban folklore courtesy of the Peaky Blinders programme only serves to highlight the importance of capturing the moment.

There is an argument that for any successful regeneration you need to know where you have come from to know where you are going to. The heritage assets and connecting green space offers an immersive opportunity for the local community to find this and to animate their shared histories, co-creating and developing out an investable marketable

community proposition for the promotion of the combined sites. In the run up to the Commonwealth Games 2022, bringing forward local residents' voices young and old to be heard in the exploration of what made us who we are and what we are today, and recognising that what we have in common is at the core of Birmingham's future, would be a valued legacy arising from this event.

It is, therefore, suggested that Tyseley-Hay Mills should not just be an immersive experience for the exploration and reconciliation of past and future but one where communities can be drawn into an exploration of the past and present day. The global and local impact of our industrial and colonial past being brought together in a place where communities can celebrate diversity and learn to embrace difference. Working together through the system change requirement to evidence through our actions that 'Black Lives Matter'.

Community enterprise

The Grand Union Canal, at the point where it crosses the River Cole, sits within over 72 acres of underutilised, poorly tended council owned green park and woodland. The urban streams are clogged by litter which further inhibits use of the green space which is disconnected from evolving assets such as TEP and the local community for whose wellbeing it has so much potential to serve. Forty acres of the site is leased to Ackers, an outdoor adventure centre that includes a 100m ski and tobogganing slope, zip wire and climbing wall. A fully equipped self-catering residential centre is set in a canal basin where canoeing and

kayaking can be undertaken on an arm off the Grand Union Canal. Whilst originally conceived as a facility to support young people in the area, the disconnection of the site and the perceived lack of relevance, as well as issues of affordability for the local community and schools who previously accessed the site has proven a significant challenge for the Ackers Trust and in turn the local community.

The potential to market Acker's offering and face outwards to the local community has been further undermined by disused council owned playing fields and an empty pavilion fronting the site. Both the Trust and residents suggest that it leaves this part of the parkland area open to vandalism and adds to a perception of an accumulation of assets held back from the community. Social distancing measures and the risk assessments that will be required for the foreseeable future are a potential challenge to its ongoing viability. The Ackers Trust is keen to diversify its offer and be accessible and responsive to the needs and requirements of the local community.

The potential to anchor and support what should be an amazing life changing resource for the local community within a new economy and a civic campus is realisable. The land, situated alongside Webster and Horsfall holdings, is owned by a range of civic interests. There is the potential to leverage what is currently perceived to be a liability and realise the value of the existing assets and green space, collectively repurposing this into a community enterprise that provides for a range of accessible opportunities for education, health and wellbeing in an outdoor setting.



This is something much needed in an age of social distancing and one that is in line with engagement in programme such as the Sport England Active Communities. Space. Resources for facilitation and support to broker a realisable proposition between the stakeholders and community are required.

The hospitality sector has been hit hard by COVID and this is a key sector both in terms of locally run family businesses and employment. Within the local community there is the capacity and enterprise that brings together communal events such as iftars, successful Eid Melas and a retail and cultural offer that services celebrations across the Midlands. The way in which the different social networks and faith groups have organised and provided food relief and support throughout COVID has evidenced skills and an ability to shape an empathetic community offer not currently recognised in standard skills programmes or commissioning routes. The underutilised green spaces and local assets offer potential for new employment within a repurposed, socially distanced, community-based retail and leisure offer, which can serve as a destination in its own right but can also easily be connected on foot to the range of different cultural and creative assets at the Custard Factory and in the Bordesley area. Early dialogue is required with local entrepreneurs and local members of the creative sector to test out and validate this concept but, to date, this is seen to be a significant quick win for a community blighted by the experience of COVID.

Transformative nature based learning is

College in Devon and the Centre for Alternative Technology in Wales. Whilst both are valued resources nationally they are very much geared towards those who have choice and control, and in terms of climate it is very much teaching the already converted. There is an opportunity to learn from this experience and develop an immersive residential offer that provides both CPD opportunity and 'respite' learning opportunity for communities of place and practice from across the UK who are seeking to address the twin challenge of climate and social justice. This opportunity could bring in new perspectives and a revenue stream to the communities engaged in the area.

To secure climate action in time, a process needs to be developed that enables those with least choice and control (and thus the least opportunity to mitigate or adapt) to have the opportunity to shape the agenda and co-own the problem and benefit from the solution. Addressing air quality and issues related to traffic congestion can be the basis of positive connectors for some communities. However, for communities in East Birmingham that have a high concentration of taxi drivers, workers engaged in retail distribution and JLR workers already aware of the impact that the recent 'dieselgate' has had on car manufacturing it is harder to 'sell' the benefits of climate action. This is true even when the action required will address massive concerns around health and wellbeing, as the first place it will hit those concerned is in their pocket.

Pre lockdown, PiC engagement highlighted how the climate action options within

communities that have choice and control over what they eat, how they heat their homes and how they conduct their daily lives is very different to the 'heat or eat' dilemma for the 'just about getting by' working poor or the very poorest households who have little choice and no control. At the present time, the basic needs and, arguably, the right to food and warmth is not practically reflected in the more privileged and professional lens of the communities of practice within climate activism. Domestic food consumption and waste is currently an underdeveloped area in terms of climate action and is an area in which the potential impact of inaction or action will be much more understandable given the experience of shortage, rationing, cooking and collective action during the period of COVID lockdown. Food is now seen to be more of an issue in common that could drive community led climate action around food consumption.

There is an opportunity to build out from the #BrumTogether network that drew heavily on projects such as the Junk Food Project, to continue with the reuse of food that would otherwise go to waste. There could, for example, be a series of 'dining clubs' and pop up food kitchens on a pay what you can afford basis within both the stranded assets and communities in East Birmingham. This could enable the shared experience of communal dining to be the foundation for the co-creation of community-based projects on climate action and the first step in potentially taking up training or learning of opportunities within the new economy.



The Green Way

Urban planning and development led approaches to regeneration draw heavily upon transport routes as connecting corridors. The Peter Brett study for EBIGS provides a valuable baseline and sets out the major impact of investment in HS2 and the proposed metro extension out to East Birmingham, which is at risk with WMCA resources unable to match commitments made within established investment plans. Whilst not wishing to ignore the importance of long term investment planning, the challenge is that completion of such major infrastructure projects are decades in the making.

In the interim a generation or more continues to live in an area with low car ownership but short journey patterns, poor public transport, high congestion and all the associated health problems. The delivery on Sprint, a low carbon priority, limited stop, premier bus service on the A45, planned to come online ahead of CWG 2022, is seen by practitioners to be positive but from the perspective of the local community and businesses it effectively bypasses an area where connectivity is perceived to be poor and most in need of investment.

Exploration of the more discrete corridors and blue and green infrastructure has identified the opportunity to provide connecting routes if investment in cycling and walking was to be prioritized along a series of greenways and waterways within East Birmingham. Modal shift or the effect of urban heat islands is a difficult conversation to have in any community. However, if you can relate it to children's asthma and the respiratory difficulties that many others in this community experienced during the pandemic, the conversation has relevance and could be linked to social prescribing initiatives that are being rolled out in the area. Work being undertaken by a landscape architecture practice has highlighted a fine

grain pedestrian network adjoining the green corridor, running alongside the River Cole and incorporating Kingfisher Way and the canal network. This network has the potential to connect communities to major employers such as Heartlands Hospital, HS2 Curzon and the Washwood Heath Depot and, in the Northern Industrial Corridor, with the Peddimore site. With residents concerned about the impact of the CAZ on their business and their ability to move around the city, linking now to a rising employment opportunity, rather than in ten years' time, will ease the delivery of a just transition.

Engagement with BCC officers, the
Environment Agency and communities along
the corridor has identified a number of green
and blue infrastructure projects that would
improve the local environment, increase local
natural capital and create greater connectivity
along the River Cole in the East Birmingham
Corridor. Habitat improvements and biodiversity
gains through promoting indigenous flora and
fauna will be required as will models that enable
the maintenance and continued investment in
the green space.

Birmingham City Council officers suggest that major efficiencies could be gained from more effective and holistic management of the green space. Over the coming years the resilience of the city will be partly dependent upon ecosystem services that can adapt to and regulate climate change impacts. Those skills as with other major areas such as waste prevention and reuse simply do not exist. The opportunity for the region to take the lead and develop a climate ready green training scheme is an opportunity that should not be missed and the combined apprenticeship levy resources could be targeted to a test and learn approach as part of this.

There are opportunities for urban farming and revenue streams from community enterprise. Salad City, a social enterprise that brings together health system and horticultural expertise, is seeking to develop such a model. The Urban Farming Collective that has arisen from engagement within the city around food relief has grassroots expertise and experience to support the development of this area and a new economy. Birmingham is also part of the Future Parks Accelerator that looks beyond the formalised green space that has become designated as parks in urban areas to explore how green space can be maximized for community health and wellbeing. In reclaiming vast hectares of green space, there is the opportunity to drive economic resilience within the context of the need to act now on climate and address the persisting health inequalities that blight the lives of too many residents in the city and region.

As part of a green recovery a series of scalable and replicable test and learn projects should be bought forward, that harness the greenways as part of process of modal shift and building economic resilience.

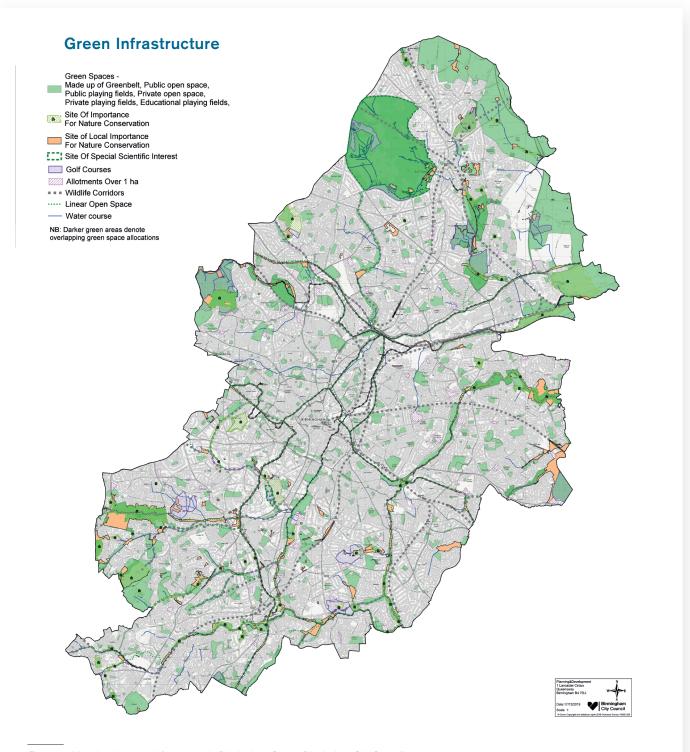


Figure 14: Map showing green infrastructure in Birmingham. Source Birmingham City Council.

Green Mobility Hub

Whilst climate change commitments and air quality requirements will continue to drive modal shift, with a 60% reduction in car use being envisaged, there is a recognition that cars will continue to play a role albeit a more limited one in the City. Given the continued contribution of the automotive sector to the regional economy this is an important area.

Electric cars and autonomous vehicle are seen to be a key part of a blended sustainable transport solution. The size of the market and the demand now evidenced in Birmingham is considerable. In the first nine months of 2019, compared with the same period in 2018, Birmingham saw the largest growth in electric car ownership of any town or city in the country. Some 2,192 new electric cars were registered by September 2019 compared with only 340 in the same period in the previous 12 months. This amounts to an increase of 527%. Growth in the city was five times the nationwide average yet charging infrastructure has not kept pace with this growth and Birmingham is

yet to see the flexible infrastructure offers that can be found in other cities. A proposal for the development of a Green Mobility Hub has been bought together by a collaboration including TEP, University of Birmingham and businesses who have driven such approaches in other European cities. It is envisaged that the hub will provide several services, included but not limited to:

- EV Charging
- Co Working Office Space
- First and Last Mile Delivery (E Cargo)
- Bike Share, Car Club and other mobility services

The electricity will come from a secure supply of green energy produced on site. The link to the Birmingham Energy Innovation Centre (BEIC) would enable the Hub to be a test bed for mobility innovation and demand responsive transport, as well as new fuels and energy systems to reduce carbon emissions

that promote a new way for our cities, towns or regions to operate. Given the vision for Peddimore as a logistics hub, the potential to compliment this and bring forward enterprises that look at first and last mile delivery is considerable. The cycle pathways and canal network in East Birmingham provide a ready-made test and learn platform to bring forward new enterprises around E Cargo bikes with associated employment and training opportunities.

Figure 15 shows the location and an artist's image of the Hub within the road network and surrounding green ways. Tyseley Energy Park is already home to an EV business with five fast chargers and a fleet of 30 electric taxis. The further development of this concept of a green mobility hub that facilitates the movement of people and products, given the impact of the CAZ, would be a key part of transition and recovery.



Skills, Employment and Learning Pathways

East Birmingham underperforms at every point of the learning and skills pathway relative to the UK and the Birmingham average. Few OFSTED ratings are good or outstanding, and there is a core group of schools where significant challenges have led to a Secretary of State order requiring academisation. There are also not enough secondary places and children are therefore having to travel out of the area where car ownership is low and public transport is known to be inadequate. In an icebreaker session with young people in the area, when asked to give their name and something notable about their school, one young person gave their name and then stated they came from the worst school in the UK. Another gave their name and then referenced the Trojan Horse affair.

Systemic failure has not just impacted this generation of school children, adults across all communities in East Birmingham have fewer qualifications than the Birmingham average. Poor language and literacy skills within the community play out across the generations. The complexity of the educational challenge is well documented and as far back as the late 1960s, when schools in this area were designated as part of an Education Priority Area, a range of interventions have occurred. This culminated in the establishment and then, through austerity, the subsequent loss of Sure Start and Children's Centres, a policy approach that understood that children and families need support and that poverty is a key driver of poor educational performance and social exclusion.

Whatever view is taken on academisation the evidence points to the fact that no matter how much intervention in schools is undertaken they will not work without support and investment in the families and communities within which they are located. Similarly, innovation and investment in zero carbon futures and major developments can happen at pace, but if these do not relate to the current situation for the community, the benefit for the local community is likely to be minimal. Field work undertaken in East Birmingham by Professor James Arthur from the University of Birmingham highlighted the missing links: the lack of self-confidence,

self-esteem and crucially the lack of any sense of the ladders to move up and on in life:



The overwhelming majority of young people surveyed in this research recognised the formative role of their families, school communities, teachers and the wider community in fostering positive values.

Students in poor neighbourhoods generally lacked the experience of professional role models in their lives and had no sense of a mental map with which to assist them realising ambitions in life.



A decade on when PiC sought to engage with families and young people in communities adjacent to the TEP to see how they felt about the future and what possibilities it might hold, there was little comprehension of how climate action and the hopes for innovation and jobs from a green future could make a difference in their locality. There was a clear articulation of the poor quality of the environment, litter and fly tipping and hunger that has been experienced as a result of job loss and benefit sanctions. Putting in place the 'ladders' and 'scaffolding' around such communities will be a prerequisite to any justice being secured in climate transition. Therefore investment and innovation in providing the social foundations has to be on a par in terms of status and priority as the investment in what is seen to be cutting edge technology. The proposals set out in this report offer a way that these can be bought forward at speed and contribute to the impact of world class research and innovation.

Given the scale and complexity of need and the requirement to intervene at every level at this moment in time there is no discernible pathway that a child, family, resident or whole community can use to assess the point at which they are

at and look to develop a learning experience for their personal and collective development. Those we seek to engage will often not easily be drawn to traditional 'classroom' learning and a less direct approach can have a significant impact on engagement and changes in behaviour. The value in doing so has been erecognised by The Active Well Being Society (TAWS), seen within its engagement as part of the Sport England Active Communities Programme. Whilst ultimately the aim is to secure increases in physical activity, an intervention can start with cake, coffee and crochet at the café in the park before moving residents on to the point that a 5K run becomes a 'walk in the park'. A couch (or cradle) to qualification process exists that can deliver a form of 'Sure Start plus' process that helps children become school ready and equips parents with the skills to be parents and to pursue their own development.

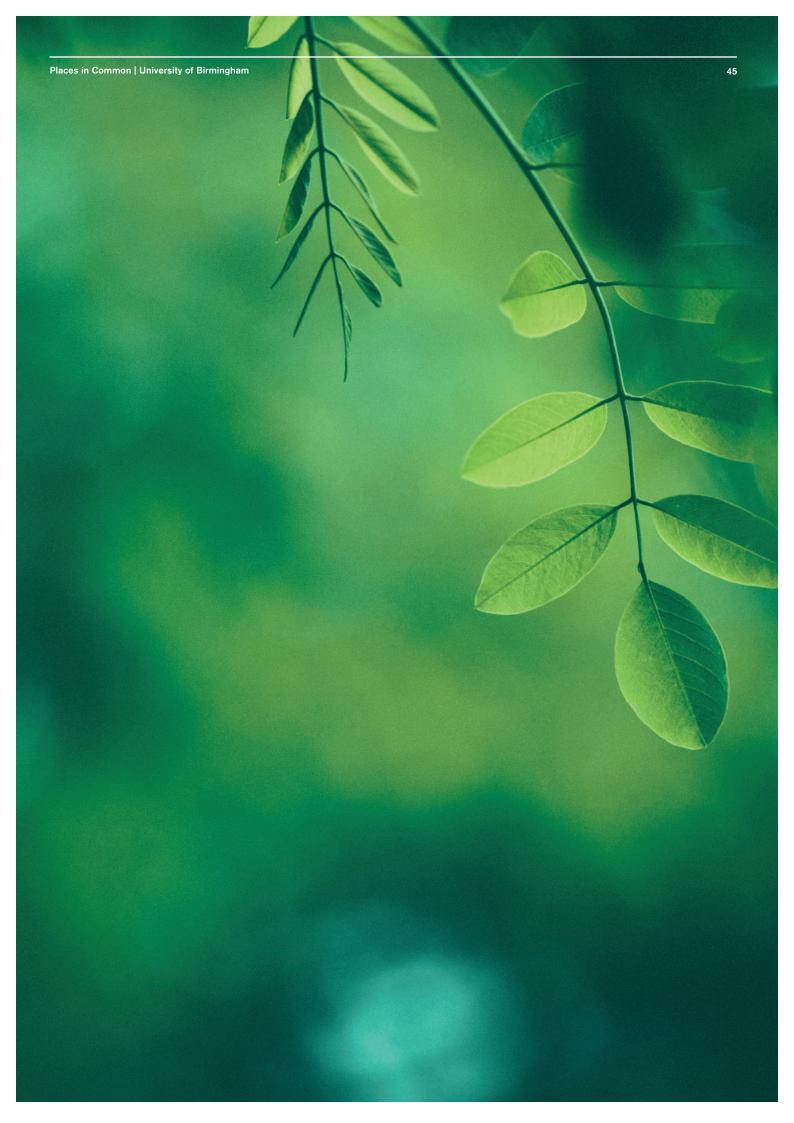


The emphasis has to be on lifelong learning. Much can be learnt from what has gone on before in the Scandinavian, but especially Finnish, education systems to see how children and families can be better readied for the challenges ahead and those in work or with low skills can be re-skilled for a better future. There is a need to accept that the classroom is potentially not the right setting given the perception and the stigma some young people have experienced and as teachers report much foundational learning has been lost as the curriculum has become increasingly crowded. The World Economic Forum has stated that 65% of children entering school today will be occupied in jobs that do not currently exist.34 Automation and further technological advancement - The Third and Fourth Revolutions - promise to destabilise the labour markets and will require us to look at jobs and just transition in a totally different way. Therefore, it is envisaged that community learning platforms will provide a learning framework that enables policy makers and participants to look at the key social and environment challenges in a holistic way a pathway that takes us to zero carbon but one that goes hand in hand with jobs and social justice.

Engagement with FE providers, employers and commissioners highlights a system that remains overly cumbersome, complex and resistant to facilitating the kind of skills required for a new economy and zero carbon future. The newly devolved adult education budgets to WMCA means that there is a renewed opportunity for pragmatic partnerships and development of learning and skills pathways that are not cemented in traditional, current systems. Local FE leaders in East Birmingham are keen to explore new models, including for the South and City College Birmingham's Bordesley Green Campus. Given it is embedded within the communities where the challenges are greatest but well within reach of what is envisaged could become a civic campus at Tyseley Energy Park that draws upon and feeds into the innovation that will drive the new economy.

There is the potential to develop an East Birmingham employment and skills test and learn platform where the WMCA, BCC and larger employers could look to aggregate resources and requirements and develop a pool of talent to serve a series of pathfinder projects. These projects could be integrated into and be spun out of opportunities arising from TEP and the new economic opportunities arising from harnessing of the existing asset base.





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