



UK GREEN
BUILDING
COUNCIL



BREAKTHROUGH BIRMINGHAM

OUTPUTS FROM THE UK GREEN BUILDING COUNCIL
CITY SUMMIT 2016

IN ASSOCIATION WITH



SPONSORED BY



ROCKWOOL®

CONTENTS

	PAGE
INTRODUCTION	4-5
POLITICAL CONTEXT	6-7
CHALLENGE OF CITY BUILDING	8-9
BIRMINGHAM IN NUMBERS	10-11
SUSTAINABLE GROWTH	12-21
ENERGY EFFICIENCY AND LOW CARBON RETROFIT AT SCALE	22-29
GREEN INFRASTRUCTURE & NATURAL CAPITAL	30-35

FOREWORD



John Clancy

Leader, Birmingham City Council

Birmingham has ambitions to be a leading green city. This transcends many aspects of city living, from the built environment; the way we heat, cool and power our buildings; the way we plan our new developments to take account of natural capital and maximise green infrastructure; and the way we move around. The UK-GBC City Summit was a great opportunity to bring together professionals from across sectors to help us understand how we can maximise some of our opportunities, as well as tackle some of our more pressing challenges.

The context for Birmingham to respond to the challenge of becoming a low carbon city is in place, from the Birmingham Development Plan to the Green Commission's Carbon Roadmap. But moving from strategy to delivering aspirational change across a city the size of Birmingham will require partnership working and co-creation of new solutions and ways of working. This has started in some parts of the city, for example there is ambition for the Smithfield area of the city to become a 'zero emissions' development, providing living, working and leisure opportunities in an exemplar low carbon space.

“ ... MOVING FROM STRATEGY TO DELIVERING ASPIRATIONAL CHANGE ACROSS A CITY THE SIZE OF BIRMINGHAM WILL REQUIRE PARTNERSHIP WORKING AND CO-CREATION OF NEW SOLUTIONS AND WAYS OF WORKING.

There are also a number of challenges that we have as a city, and which moving to a more sustainable future will help us resolve. These include addressing fuel poverty, improving the quality of our housing stock; and providing

a healthy environment for our people to live and work in. We also need to ensure that as our city grows, in terms of people and housing, that new developments meet the needs of our citizens, are sustainable, low energy and that there are people with the right skills able to help us meet this challenge.

This City Summit report is a starting point for us to understand the art of the possible and we welcome the ideas that were generated over the two days of the event. What was especially pleasing was to see a number of people that were not already familiar with the city and were therefore able to look at our challenges and opportunities with a fresh pair of eyes. We concluded the Summit with an invitation to work with us going forwards, and to build on some of the more promising breakthrough ideas that were developed as part of the Summit discussions, as well as to develop new ones; we hope that you will want to join us on what promises to be an exciting, and more sustainable, future for Birmingham.

Bullring Shopping Centre, Birmingham

INTRODUCTION

WORKSHOP PROCESS

The Summit workshops followed a structured process, designed to achieve “breakthrough ideas”.

Themes:

- Sustainable design, construction & supply chain innovation (summarised in the report as “Delivering Sustainable Growth”)
- Energy efficiency and low carbon retrofit at scale
- Green infrastructure & natural capital

Process:



Birmingham New Street Station © Ross Jukes Photography, Network Rail media centre



John Alker

Campaign and Policy Director, UK-GBC

In keeping with the spirit and mission of UK-GBC, our 2016 City Summit was nothing if not ambitious.

Having conducted a similar exercise in Manchester the year before, we were able to build on that experience with Birmingham and – in the spirit of friendly civic rivalry – attempt to do even better!

As the Council Leader John Clancy has said, the Summit was designed primarily to help Birmingham tackle some of its most pressing built environment challenges. How do we deliver sustainable new development at the rate and scale required? How do we address the huge fuel poverty and retrofit problem? How do we integrate nature into the city?

To illustrate the challenges, delegates visited some diverse sites: Eastside and Curzon, the soon-to-be landing point for High Speed 2; Icknield Port Loop, a derelict industrial canalside site to be developed into a mixed-use family neighbourhood; and Druids Heath, a 1970s high rise housing estate in serious need of refurbishment.

“ **BIRMINGHAM IS NOT ALONE. WHILST ALL CITIES HAVE UNIQUE CHARACTERISTICS, THE CHALLENGES WE GRAPPLED WITH ARE – TO A GREATER OR LESSER EXTENT – ALSO FACED BY OTHER CITIES, AND BY AN INDUSTRY THAT SHOULD BE PART OF THE SOLUTION.** ”

Birmingham is not alone. Whilst all cities have unique characteristics, the challenges we grappled with are – to a greater or lesser extent – also faced by other cities, and by an industry that should be part of the solution. We therefore had at least one eye on generating insights with relevance far beyond the West Midlands and continuing to work with leading cities to develop them.

This report summarises the journey delegates went on and

gathers together the resulting ideas and proposals. It is not intended to be the last word, or to be the finished article. We, UK-GBC, are committed to taking forward to the next stage some of the ideas in the report, doing further detailed analysis in order to support Birmingham and other cities to tackle some of these challenges. If any of the ideas spark an interest, we invite you to collaborate with us.

One of the key questions for further discussion is how the issues raised here can be better incorporated into the ongoing negotiations around devolved powers to cities. How can “Devo-2” help drive sustainable development, and support some of the ideas proposed? Given the dire state of green policy nationally (post Zero Carbon, Green Deal etc) I found it very energising to consider the positive role that policy can play if it’s locally driven and co-created.

This report is intended as a call to action, for those who believe that cities – by which we mean all stakeholders, not just local government - can show the leadership so urgently required to deliver sustainability in the built environment. As was pointed out at the Summit, we should take heart that we can do this - Birmingham can do this!

For more information about UK-GBC’s work on cities, and for more content from the Summit, see ukgbc.org/cities.



Birmingham Town Hall © Tom Jeffs

CAN CITY LEADERS SUCCEED WHERE NATIONAL POLITICIANS FAIL?



Matthew Spencer

Director, Green Alliance

If you despair about the lack of sustainability leadership from Westminster, you may have higher hopes for what city leaders can achieve. London's mayoral candidates have competed to be greener than each other. We haven't seen this in national politics since 2010 when Cameron ran for election on an explicitly green ticket. But that's the rub. It proved only a short term boost to UK sustainability.

So, are green promises from city leaders likely to be any longer lived?

Sustainability is fundamentally about the quality of economic activity. You have to be comfortable trading maximum quantity for higher quality development, which is why the headwinds have grown for greener building and renewable energy, in response to the Treasury's 'pile 'em high, sell 'em cheap' solution to the economic downturn.

City leaders tend to be less ideological than ministers and are more able to see the difference between a tacky development and one that brings pride to an area, so they should be natural sustainability champions. They tend to get how sustainability can help to protect local identity and drive investment.

Unfortunately, this thinking wasn't very evident in the first round of city deals. Although some cities, like Birmingham, made an ambitious energy

retrofit scheme part of their pitch, on the whole the offers from core cities were fairly unimaginative and there was a sense that central government was setting the terms. To be true sustainability champions, cities will have to be much more assertive about quality in the current 'Devo-2' negotiations and rediscover some old municipal virtues: great spatial planning, a long term vision for infrastructure and a real attempt to allow their citizens to help shape priorities for development.

Cities are being wooed by ministers in search of new infrastructure schemes but, at the moment, they have very little capacity to generate exciting new projects. Despite all the talk of smart cities, old road schemes and high speed rail dominate because they are 'shovel ready' or have national backing.

And national backing is not always a recipe for success, since government policy is so volatile. Birmingham knows that better than most, given that its fantastic energy savers programme was agreed with government but then scuppered by the withdrawal of the Green Deal loans scheme. Old hands will say this is nothing new and that local government has always had a raw deal from Whitehall, but the signs are that sharp-elbowed mayors can change that.

The drivers of sustainability are inevitably stronger at a local level, because a city's natural environment and the quality

of its built environment are part of its identity. This, in turn, drives investment and a better quality of life for its citizens. It's why Nottingham and London have outstanding local transport, and Sheffield, Birmingham and Southampton have pioneering district heating systems.

“ THE DRIVERS OF SUSTAINABILITY ARE INEVITABLY STRONGER AT A LOCAL LEVEL, BECAUSE A CITY'S NATURAL ENVIRONMENT AND THE QUALITY OF ITS BUILT ENVIRONMENT ARE PART OF ITS IDENTITY. ”

If mayors and city regions can build on this heritage of municipal enterprise they can become the new sustainability leaders. And they can help us overcome the unsustainable, short term focus which has become the hallmark of national economic policy.

CHALLENGE OF CITY BUILDING

THE GRAND, DARING, MAYBE CRAZY PLAN TO CHANGE OUR CITIES



Adam Beck

Director of Innovation, EcoDistricts

City-building is challenging, often chaotic, but rewarding work. Managing the ever-shifting sands of planning, technology, financing, and risk management comes with the job. All the while seeking outcomes that are liveable, prosperous, healthy, resilient, low carbon, and ecological.

Sometimes standard operating procedures can be codified to help us navigate the predictable elements, but in most part, our expectations of how things might work are identifiable only in retrospect. And with the velocity at which change occurs today, this further places many city-building tasks into the realm of, at times, speculation.

Globally, we are in the biggest building boom of the past 100 years. As we enter this new phase of growth, we don't have a blank canvas. We have neutered nature and its productive capacity, and we have incubated a climate crisis. Our pursuit of economic growth has pushed out our most vulnerable citizens. We have built cities for cars, and not people. This is not just narrative, it's fact.

So how do we create the city-building 'super powers' we need to successfully approach this complex work which is becoming less technical, and more political, interventional, and unpredictable? Work that is more often about mindsets than financing, more about behaviours than technology?

“ WE ARE GOING TO NEED TO BUILD A SANDBOX, A SUPPORTING PLACE WE CAN ALL PLAY IN. IT NEEDS TO BECOME A SAFE PLACE FOR SHARING, THINKING AND TESTING. IT'S PART THINK TANK, PART LABORATORY, PART PEER LEARNING PROGRAM.

Building these super powers will require an injection of 'Collective Impact', whereby people come together, in a structured and collaborative way, to achieve large scale social change. It starts with a common agenda and shared vision,

establishes shared measurements, fosters mutually reinforcing activities, and has backbone organizational support that orchestrates our work as a united industry.

We will need to knit together the complex conversations about our past successes, and failures, that will drive us to do better in the future. We need to share. We need to work together, united by a common agenda and a resolve to create a joint approach to solving these complex problems. You see, implementation might be a win, but replication is success. And transparency is the core lubricant for this process.

We are going to need to build a sandbox, a supporting place we can all play in. It needs to become a safe place for sharing, thinking and testing. It's part think tank, part laboratory, part peer learning program. UK-GBC is one such place. We neither have the luxury of time nor capacity to resolve these issues on our own. It needs to be all in.

And we are in. For the past five years at [EcoDistricts](#) we've relentlessly pursued this idea, made it our day job to help create the opportunity for government, the private sector, and civic-based organizations to collaborate and create the necessary conditions for large scale and impactful change. To build more equitable, resilient and sustainable communities and cities for all. It only takes a spark to create a movement.

TOP TIPS FROM VANCOUVER



Andrea Reimer

Deputy Mayor of Vancouver

Andrea was elected to Vancouver City Council in 2008, and has been Deputy Mayor since 2014. She presented to the Summit [via video](#), giving her advice on how to become a leading sustainable city, based on her experience of Vancouver's award-winning "Greenest City Action Plan".

- Leadership.** "You need a leader who leads". The Mayor of Vancouver made it one of his four priorities, and stuck to that commitment. That was supported by, and supportive of, councillors leading on much smaller scale initiatives.
- Have a plan.** With measurable targets and set timelines for achieving them. "Some is not a number and soon is not a time".
- Action.** Before starting the formal planning process, the Vancouver green team produced a list of 'quick starts' that could be kicked off straight away. By the time the formal planning process began, 84 initiatives had already been completed.
- Public engagement.** The plan needs to be owned by the people who make up the city: residents, businesses, not for profits, labour unions, etc. The council team set targets, then some 650,000 people contributed to meeting them.

BIRMINGHAM IN NUMBERS



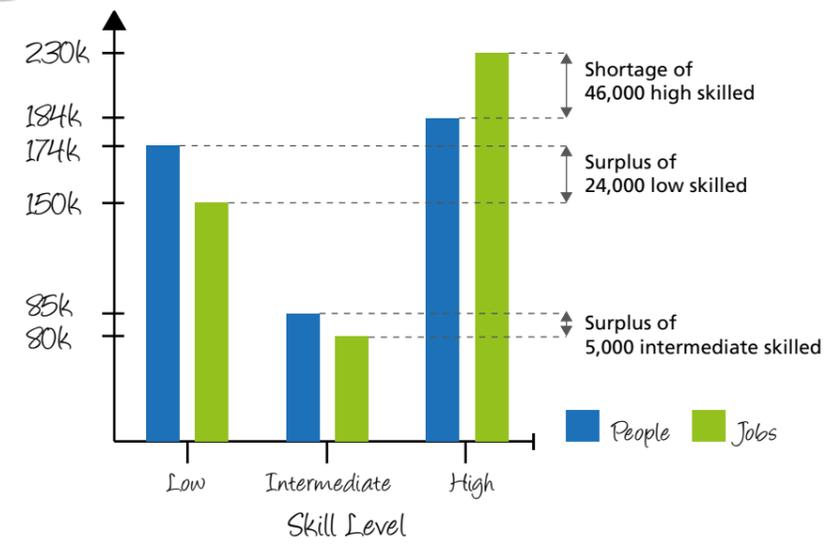
GROSS VALUE ADDED

£21,093 per head
(3rd lowest core city)

£46,471 per worker
(5th highest core city)



SKILLS GAP AND WORKLESSNESS



TREE COVER

- Birmingham 23%
- London 22%
- Edinburgh 17%
- Bristol 14%



POPULATION GROWTH

By 2031 Birmingham's population is projected to grow by 150,000



ECONOMIC GROWTH 2013/14

- £ £ £ Birmingham 16% (2nd weakest core city)
- £ £ £ £ £ £ £ £ £ £ National 46%



HOUSEHOLDS IN FUEL POVERTY

- 🌡️ Birmingham 18.9%
- 🌡️ Nationally 10.4%



DELIVERING SUSTAINABLE GROWTH

THE BRIEF

“BIRMINGHAM IS EXPECTING SIGNIFICANT POPULATION GROWTH OVER THE NEXT 10 YEARS. HOW DO WE ENSURE COMMERCIAL AND RESIDENTIAL DEVELOPMENT CONTRIBUTES TOWARDS SUSTAINABILITY GOALS, AND CREATES A THRIVING GREEN ECONOMY IN THE CITY? HOW DO WE DELIVER SUSTAINABLE GROWTH?”

Jackie Homan, Head of Sustainability, Birmingham City Council



View from The Cube, Birmingham

Through the **Birmingham Development Plan**, the Council would like new development to be built to the **highest sustainability standards**, to support a range of ambitious targets, including carbon reduction, climate resilience, air quality, biodiversity and green infrastructure.

Changes in national policy (e.g. the scrapping of the Code for Sustainable Homes), has set back momentum, although the **upcoming planning guidance on sustainability** to sit alongside the Birmingham Development Plan will address this. **Devolution also provides an opportunity** to carve out new powers although it is unclear what these might be or how the city will capitalise on them.

Innovative supply solutions are perceived to be too costly or risky and there is a lack of integration in the supply chain. There are some great companies in Birmingham and an opportunity to grow local businesses, but big procurement contracts are hard to navigate for SMEs.

The majority of property investment is short term in nature – **“impatient money” dominates**. Many in the industry, and policy-makers, are risk averse to new innovative finance models which could facilitate greater social equity and environmental benefit.

Like other cities, **Birmingham has some big socio-economic challenges**, including youth unemployment, skills and fuel poverty, which sustainable development would help to address. There is also backlog of demand for housing.

CONTEXT AND CHALLENGES

There are examples of good practice and innovation, and the Zero Emissions Smithfield development is promising, but these examples have been piecemeal to date and not yet delivered at scale. The Birmingham Business Charter for Social Responsibility offers potential but is under-utilised.

Part of the current problem, not unique to Birmingham, is that the **whole life value** of sustainability, including wider social value, is **not being recognised or captured in the development process**. This means land is not valued correctly, with no incentives for delivering more sustainable, value added development, and viability assessments are not fit for purpose.

There is a **lack of resources and capacity** within the Council compounded by siloed working; there is currently a **lack of joined up vision** or narrative on sustainable growth, and no shared sense of purpose underpinned by clear policies and governance structures.

Under ‘business as usual’ the city risks **new development being largely ‘bog standard’**, missing an opportunity to address key social, economic and environmental challenges and storing up problems for the future.

There is a **widely held perception that sustainability costs more** and that there is a tension between achieving scale (e.g. a certain number of new homes) and ensuring high levels of sustainability performance.

BREAK-THROUGH IDEAS

BIG CITY VISION

Birmingham needs a strong overarching vision and narrative that raises ambition, creates a buzz around investment and drives sustainable development.

- › Led by the Council but owned by citizens.
- › Clear, simple and long term.
- › Focused on quality of life values, not just environmental sustainability. E.g. “healthy, liveable, sustainable neighbourhoods”.
- › Celebrates the distinctiveness, charisma, heritage and pride of Birmingham.
- › Provides consistency and clarity of signal to investors and the supply chain.
- › Drives not just infrastructure and housing development but informs all the city does. It is “the way all things in are done in Birmingham”.



INSPIRED BY:

[#ONENYC](#) – New York’s vision for a “strong and just city”.



“In ten years, New York City will celebrate its 400th anniversary. #OneNYC envisions our city in its 5th century and sets goals to ensure that all New Yorkers can thrive in a city that is dynamic, liveable, and safe.” Mayor Bill de Blasio

“ AS A COMPANY WE ARE ALL ABOUT QUALITY, AND CITIES SHOULD BE NO DIFFERENT. BIRMINGHAM IS AN AMBITIOUS, VIBRANT, ENTREPRENEURIAL PLACE AND DESERVES HIGH QUALITY, SUSTAINABLE BUILDINGS AND INFRASTRUCTURE TO MATCH. I’M OPTIMISTIC ABOUT BIRMINGHAM’S FUTURE – IT IS A GREAT PLACE TO LIVE, WORK AND INVEST IN.”

Andy Street, MD John Lewis and Chair of Greater Birmingham and Solihull Local Enterprise Partnership (GBSLEP)



DELIVERING SUSTAINABLE CITIES

Birmingham is not alone – cities around the world are successfully delivering sustainable places in the context of limited resources, which should provide confidence that it can be done!

Great examples can be found in “[Powering Climate Action: Cities as Global Changemakers](#)” by C40/Arup and “[The Cities 100](#)” by C40/Sustainia.



INSPIRED BY:

The Lloyd EcoDistrict: A bold vision, with an equally bold plan



The [Lloyd EcoDistrict](#) in Portland USA, was formed in 2009, bringing together a diversity of stakeholders to formulate a vision - of becoming one of North America’s most sustainable living-and-working districts - and create a plan of action. Equally important was creating the necessary conditions for effective implementation – collaboration, governance, funding, and leadership.

Following the development of a jointly funded Investment Roadmap, the Lloyd District set out to catalyse projects that would underpin this vision. The recent development Hassalo on Eighth, is just one example.

Whether it is providing cycle infrastructure, or a living water treatment system, that bold vision has driven investment decisions in the neighbourhood.

BREAK-THROUGH IDEAS

DEAL MAKERS

With a strong city vision set out, Birmingham could set up a dedicated 'front-of-office' team of 'Deal Makers', designed to take the cost and hassle out of public-private investment partnering. The aim would be to broker long term relationships with investors and attract new finance to the city.

- › Encourages transparency of risks and costs on all sides, and shares risk and return.
- › Helps to overcome private sector difficulty in navigating relationships with cities – often being held back by procurement processes and the risk of entering into unfair practices.
- › Aligns business models of investors to aspirations of the city, providing long term business opportunity. The private sector will commit to Birmingham if it is clear the commitment is reciprocated and comes from the top.
- › Builds trust between public and private sectors and combines their skills and values, with all stakeholders empowered through a clear mandate.
- › Lowers cost of 'business development'.
- › Applies and consistently communicates the Big City Vision and the Birmingham Playbook (see page 18) – and carries it through to the wider region.



INSPIRED BY

Leeds SmartKlub

[Leeds SmartKlub](#) is a city sponsored private-public partnering team, which acts as a think tank of sorts, sharing best practice solutions between city and supply chain. It helps navigate procurement and finds the most efficient and lowest cost solutions, navigating city regulation for the supply chain and building trust. It can also help attract further investment.

Devon Growth Point

[Devon Growth Point](#) is an example of joined up planning and development for a low carbon region. It aspires to best practice in the use of procurement, and is set up to encourage private sector investment through developer partnering.

INTEGRATED DEVELOPMENT HUB

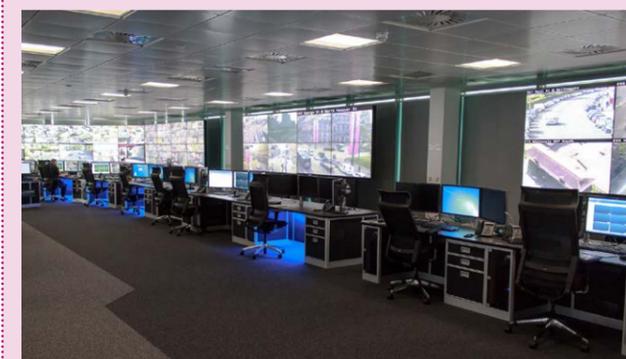
A 'back-of-office' hub that brings together public services, knowledge and data to enable efficiencies in delivery of development. This would be a new way of working designed to overcome fragmented decision-making. Different experts from Council departments are physically brought together to work in a more integrated way.

- › Better, longer term decisions are made about viability and whole life value of sustainability.
- › Increased speed and ease of doing business with less risk of development failure.
- › More cost effective and transparent planning process and reduced risk of planning appeals.
- › Optimised resources and co-location of development services.
- › Delivery based KPIs.
- › Collaboration platform utilising open data to empower community led regional low carbon development.



INSPIRED BY

Glasgow Operations Centre



Glasgow Operations Centre © Eyevis

[Glasgow Operations Centre](#) is a state-of-the-art integrated traffic and public safety management system. Although created with the aid of the Innovate UK funding, lessons can be learnt from the principle of bringing together information, smart data and people across silos.

BREAK-THROUGH IDEAS

THE BIRMINGHAM PLAYBOOK

A prospectus or tool for investors and developers that sets out the Big City Vision, and describes how to “do business” in Birmingham. It would give guidance on the city’s sustainable development objectives, delivery options and governance models for different types of development.

- › Supports the investment partnering Deal Makers.
- › Sets out how different developments should be led and roles for the Council, the community, agencies, developers and investors.
- › Describes the city’s approach to governance, which should be based on a collective approach that provides an agile framework for partnership working and co-creation.
- › This will enable neighbourhood-led actions that could be deployed on developments as diverse as Druids Heath, and city centre development such as Eastside and Curzon.
- › Helps Birmingham City Council (BCC) by empowering others to deliver.

“SUSTAINABILITY IS SOMETHING THAT WE FACTOR INTO ALL OF OUR INVESTMENT DECISIONS. WE ASK, IS THIS A PLACE THAT WILL ENDURE OVER THE LONG TERM? I BELIEVE THAT BIRMINGHAM HAS A GREAT OPPORTUNITY TO DIFFERENTIATE ITSELF FROM ITS COMPETITORS, BY PUTTING GREEN AT THE HEART OF ITS VISION.

Bill Hughes, Head of Real Assets, Legal & General Investment Management

Eastside and Curzon © Visit Birmingham



playbook (ˈpleɪ.bʊk)

► Definitions

noun

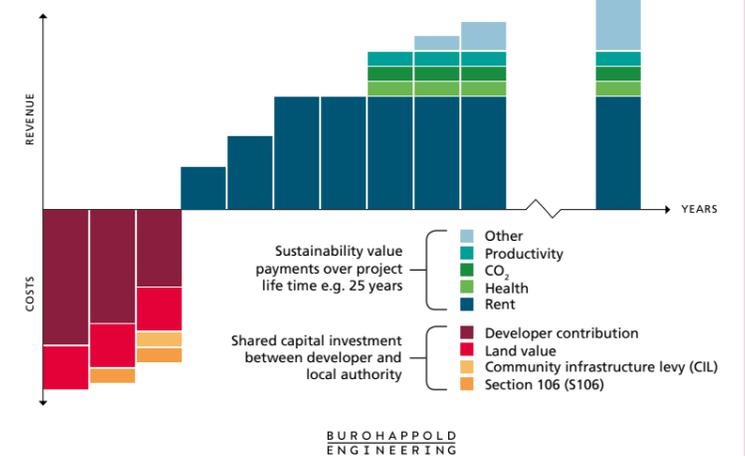
1. a book containing a range of possible set plays
2. a notional range of possible tactics in any sphere of activity

THE BIRMINGHAM TEST

A new Birmingham-specific finance/viability model that leverages sustainability to drive new and better flows of value. It monetises the wider value of sustainability and incentivises land owners and developers to bring forward sites in Birmingham which might not otherwise be viable.

- › Helps to create an evidence base for the cost and value of sustainable development, giving everyone (Council, developers, land owners) a better, more consistent understanding of value.
- › Rethinks the standard model of development with sustainability at the core, enabling more sites of viable, sustainable developments.
- › Provides a new way of capturing value in a more holistic way, providing development benefits at appraisal stage.
- › Established initially, by BCC though can be used by all.
- › Sustainable developments offer wider benefits to the public sector, for example through reduced health spending. If this reduced cost could be captured (based on robust data), it could be recycled to fund further initiatives or policies that encourage sustainability.
- › There are financial savings resulting directly from sustainable construction, such as reduced operating costs, which can be reinvested in development. This is more relevant for landlord-owned schemes.
- › The Birmingham Test could be a central tenet of the Birmingham Playbook.
- › Perhaps more controversially, BCC could entice developers to increase their sustainability ambition by offering up future pockets of land at preferential rates (once initial phases have been developed and sustainability ambition achieved).

‘BIRMINGHAM TEST’ DEVELOPMENT APPRAISAL



TO CONSIDER

How can we build on existing work, such as the [New Economy Manchester](#) cost-benefit analysis tool?

BREAK-THROUGH IDEAS

SUPPLY CHAIN CAMPAIGN AND PORTAL

Galvanise local supply chains with a high profile campaign, to persuade suppliers that the Council values and wants to utilise their innovation. Start with a major set-piece event to promote the idea and begin discussions. Could ultimately lead to a form of collaborative platform where supply chain members can discover and be matched to opportunities.

- › Promotes value in the supply chain and creates opportunities for innovation and demonstration.
- › Helps overcome the problem that good innovation in some of the remotest parts of the supply chain is too disconnected from the ultimate procurement briefing and scoping to be properly valued and exploited.
- › Portal ultimately managed by the industry and funded on a subscription basis, but some start-up funding would be required (could apply to EU).



APPLICATION ON SITE?

Planners on major development sites like Icknield Port Loop should share proposals as early as possible so that meantime use suppliers (e.g. of temporary football pitches or skate board parks) can use the land on a temporary basis. Or manufacturers of construction products could propose use of existing buildings for localised product manufacture or assembly on a temporary basis rather than them being demolished at the outset.



TO CONSIDER

Supply Chain Sustainability School: a free resource, supporting a common approach to developing sustainability competence in the supply chain. [Read more.](#)

CompeteFor: a free service that enables businesses to compete for contract opportunities linked to major public and private sector buying organisations. First used for the London Olympics. [Read more.](#)

BITE-SIZED BIRMINGHAM

New 'people-scale' urban villages providing a complementary alternative to the large infrastructure-led developments across the city. These sites are characterised by flexible, locally-led, collective governance models where the Council uses its powers (current and future) to encourage innovation in the supply chain, create opportunities for SMEs, and incentivise or reward sustainable outcomes.

- › Inspired by the West Midlands 'village heritage' and position as a centre for mixed commerce.
- › Villages may have delegated powers, shared financing models or risk share.
- › They will include a range of community, developer and statutory stakeholders configured appropriate for the site.
- › Villages drive their own priorities – could be walkability, sustainable food, or custom-build housing.
- › Prospective large employers could play an active role (reinventing Bourneville?).
- › Utilise custom build registration requirements to encourage BauGruppen (German example of resident build groups).
- › Another element of the Playbook.



FOR DEVO 2 NEGOTIATIONS?

- › Can Birmingham adapt powers it has over Enterprise Zones, to enable "Green enterprise zones?"
- › Could this require more use of compulsory purchase powers?



INSPIRED BY:

Charleston Up: Building new forms of Collective Governance

The [Charleston Upper Peninsula Initiative](#) in South Carolina, USA is an innovative, community planning and urban redevelopment effort, which encourages participation and commitments from residents, businesses, developers, non-profits and government who all work together to meet common goals. The group of diverse stakeholders is tasked with thoughtfully weaving together existing community assets with new creative ideas and innovative projects to build a strong sense of place and a vibrant, lasting community.

The initiative is managed through a joint public-private effort between the City of Charleston's Planning, Preservation and Sustainability Department and the Sustainability Institute, with the support of many other partners and volunteers. This governance model has been inspired by Collective Impact theory, whereby a backbone organization is established to help orchestrate the efforts of the group and ensure collaborative decision making is maintained.

ENERGY EFFICIENCY AND LOW CARBON RETROFIT AT SCALE

THE BRIEF

“AFTER THE SCALING BACK OF NATIONAL POLICY AND SUBSEQUENT DEMISE OF BIRMINGHAM ENERGY SAVERS, HOW DOES THE CITY RE-BOOT ITS ENERGY EFFICIENCY AND LOW CARBON RETROFIT STRATEGY – FOR BOTH HOMES AND COMMERCIAL BUILDINGS?”

Paul McGrath, Improvement Officer, Capital Green Investment Team, Birmingham City Council



Birmingham Skyline © Birmingham Conservation Trust

Fuel poverty is a significant challenge for Birmingham with 18.9% of households in the city classed as fuel poor (compared to a national average of 10.4%). Cold homes have negative impacts on residents' health as well as their finances, placing pressure on local health providers and preventing money from staying in the local community.

Many fuel poor households live in council housing estates in need of regeneration. In these areas unemployment is often high, leading to concentrations of crime and anti-social behaviour. Flawed estate planning and design can leave a legacy of neglected spaces, badly lit streets and residents feeling intimidated about leaving home after dark. The prospects for youngsters are poor, with local schools more likely to be underperforming and few opportunities for local employment.

Often the most significant barrier to a large scale regeneration project is finance. Local authorities are facing increasing strains on their investment budgets, making it difficult to fund improvements through council borrowing. Third party investors also do not trust energy efficiency projects to deliver expected outcomes and performance.

Public spending is focused more on managing cold homes than improving them. Maintenance contracts are in place for social residents but piecemeal repairs will do little to significantly improve properties. While local health providers have to treat the ongoing negative health impacts on residents.

Improving the energy efficiency of commercial buildings should be one of the most cost-effective ways to meet BCC's target of a 60% cut in carbon reductions by 2027, but there is a lack of strong drivers for local businesses to take action. The split incentives between landlords and tenants can discourage investment, with landlords seeing negligible value uplifts from making improvements.

Implementing improvements in commercial properties can often be complicated by restrictions in leases and concerns about opportunity costs. Managing the process can also be difficult where there are not clearly defined coordination and approval processes within organisations.

Measuring building performance is the first step towards reducing energy use in commercial buildings, but a lack of consistent metrics can provide a barrier to taking action. Without transparent and consistent data, building managers have less understanding about how a property is performing or how it could be improved.

The key challenges to consistent energy use metrics in commercial buildings are in setting the right boundaries of operational control and gaining access to data to measure whole building performance. Mandating operational ratings would be the most straightforward solution, but this is highly unlikely to come from central Government.

The construction industry currently has a shortage of knowledge and skills for installing energy efficiency measures and ensuring improvements are consistently of the highest quality. Fragmentation of the supply chain also means that coordination will often be poor between different specialist installers delivering multi-measure improvements, resulting in increased costs.

Demand for energy efficiency retrofit is very low among householders, making it difficult to set up area-based schemes. A lack of awareness and an absence of trusted information leaves residents confused about what can be done to improve their properties and cautious about claims of energy performance and bill savings. Householders are also discouraged by the disruption to their lives during whole house improvements and the additional complications of maintenance once the works have been completed.

CONTEXT AND CHALLENGES

BIRMINGHAM REGENERATION MODEL (BRM)

Whole house retrofit solutions can help to improve both homes and communities, so energy efficiency could be used as the catalyst to drive a major regeneration project for an estate. The Birmingham Regeneration Model (BRM) could improve whole estates through a coordinated approach of deep retrofit, selective demolition and infill new build homes.

- › Residents would be empowered to co-create a regeneration strategy which is fit for the local area through a **Community Interest Company** (see right), which would also help to deliver improvement and maintenance works.
- › Every home would have a compelling financial offer through a **Local Authority Revolving Fund** (see following page), which would allow them to invest in their homes and their community.
- › Deep retrofits should deliver net zero energy properties, with the savings guaranteed to ensure vulnerable residents aren't left with unaffordable bills. The improvements will also need to transform the appearance of run-down and neglected homes and neighbourhoods in order to make retrofit highly desirable for residents.
- › Many estates have large areas of underused land and homes that are prohibitively expensive to renovate which can be earmarked for demolition with the consent of residents. These infill sites can be used for new construction which will increase density, provide replacement homes for those displaced and bring value to the community. High quality design, net zero energy and demographically appropriate housing options will be crucial to getting buy-in from existing residents.
- › 'Plant the flag'. Early on in the development of the regeneration masterplan, exemplar projects on the estate will help residents to understand what is being planned and begin to create buy-in and a sense of ownership. The first step in the project should be exemplars of the mixed-use new builds and of net zero energy retrofits for a terrace and/or high-rise block.



LOCAL BUILDING WORKS

Employing local apprentices, the CIC would act as a sub-contractor during the renovation and construction project, and subsequently provide ongoing maintenance, repairs and possibly building performance monitoring to the local area. Developing local capacity is key to providing cost-effective follow-on measures and affordable regular maintenance. Training opportunities would also enhance the skills and employment opportunities of young people locally.

OFFSITE CENTRE OF EXCELLENCE

A Birmingham offsite Centre of Excellence could be established to create whole house retrofit solutions tailored to the local housing stock. New offsite manufacture homes could also be produced, contributing towards city-wide housebuilding targets as well as providing new infill properties for estate regeneration.

The Centre of Excellence would provide employment opportunities in manufacturing and could also help to upskill the local supply chain by working closely with SME contractors and partnering on apprenticeships with CICs. See page 20 for a complementary idea.

BRM: COMMUNITY INTEREST COMPANY

A Community Interest Company (CIC) could be established for the benefit of local residents which would deliver repairs, deep retrofit measures and create opportunities for local employment and training.

- › All residents need to be fully bought into any regeneration plans, understanding what the benefits will be for them and to their community. Creating jobs for local people is important for wealth creation and pride in the community.
- › In partnership with the Local Authority, the CIC would develop a regeneration plan in close consultation with residents, ensuring broad 'ownership' of the scheme.
- › The CIC would act as a bridge to the community as a trusted source of advice and the representative of residents' interests throughout the project.
- › By building an ongoing relationship, the CIC could help residents to better understand how to operate and manage their newly energy efficient homes. Behaviour change could also be driven by trained local volunteers offering energy advice to their fellow residents.



INSPIRED BY

The SOAR build

This **social enterprise** in Sheffield is a joint venture partnership between the public and private sector offering construction services and training opportunities to help deliver community regeneration. The project recognises that community regeneration is based on the aspirations and prospects of local residents as well as on building renovations, and creates a link between the two.

BRM: LOCAL AUTHORITY REVOLVING FUND

A local authority revolving fund could be used to finance large scale area-wide regeneration schemes, which would aggregate diverse funding sources and offer a range of payment options to householders in different tenures. Repayments made back into the fund would be recycled into further regeneration projects.

- › Local authority borrowing from the Public Works Loan Board or using green bonds would keep the cost of capital low and allow low interest rates to be applied to retrofit loans. Increased borrowing should be recognised as an investment which can be offset against the future benefits of reduced maintenance costs, reduced healthcare costs for local Clinical Commissioning Groups (CCGs), and increased skills and employment in the local area.
- › Borrowing should be supplemented by ring-fencing the value in the estate for the regeneration project e.g. rental incomes, sales of new build homes and equity release of local authority assets.
- › Direct subsidy can be brought into the fund through a range of public funding sources including the European Regional Development Fund, the LEP Low Carbon Plan, Horizon 2020 funding, the Feed in Tariff, the Renewable Heat Incentive, and the Energy Company Obligation.
- › Centralised funding of an area regeneration scheme would increase the scale of potential returns, making it a more attractive opportunity for institutional investors.
- › Offering a social bond to local residents would allow them to directly invest in the regeneration of the local area via the revolving fund. Investors would receive a competitive rate of return, particularly compared to the low interest rates currently available on savings accounts.
- › Management of energy efficiency measures should follow the new Investor Confidence Project Europe (ICP Europe) approach currently being developed. ICP Europe builds on the award winning US scheme that has stimulated increased investment levels and reduced interest rates.



OWNER OCCUPIERS - SOCIAL VALUE LOAN (SVL)

For private owner occupiers, the full costs of whole house improvements are funded through a low interest loan which is attached to the property. A charge is then placed on the property which allows the loan amount to be repaid when the property is sold, along with the interest accrued.

- › Low income residents would not be required to make ongoing loan repayments and would therefore realise the full benefit of lower monthly bills. But there is the option to make ongoing repayments on a pay-as-you-save basis if the resident chooses to.
- › The risk of default should be lowered by the loan being attached to the property. As a result the cost of capital and interest rate on the loan should be structurally lower.
- › When repayments are made, the funds are recycled through the revolving fund into retrofitting another property.
- › Low income owner occupiers with low levels of equity in their property may not be in a position to fully repay the loan and their improvements would need to be subsidised.
- › Private landlords would be able to access the SVL as a way of overcoming the split incentives of improving rented properties.



INSPIRED BY

Retrofit Loans

A number of local authorities across the UK have used retrofit loans which are repaid at the point of sale, particularly for low income and vulnerable owner occupiers. Birmingham has already joined with the Kick Start Partnership to offer loans of up to £10,000 which is repaid as a fixed percentage of the property value. While [Manchester Care and Repair](#) has introduced the [Home Energy Loan Plan](#) which offers interest free loans of up to £5,000.



SOCIAL HOUSING - ENERGY CHARGE

Local authority housing tenants would see their energy bills replaced with a pay-as-you-save Energy Charge. Bringing forward planned maintenance spend alongside the Energy Charge and funding from ECO, FIT and RHI should cover the full costs of improvements once a volume market is established.

- › Net zero energy retrofits would be guaranteed for 30 years by the contractor which will allow fixed, indexed repayments to be made over this period.
- › The Charge would be set at an affordable level for the resident, allowing them to benefit even if they had previously been under-heating their homes.
- › The Energy Charge would cover the expected 'normal' energy use for the retrofitted property, calculated according to the occupational needs of the resident. Should the householder choose particularly high internal temperatures or additional plug in electricity allowance this is allowed but would be chargeable.



INSPIRED BY

Energiesprong

[Energiesprong](#) translates as 'energy leap' and has delivered zero net energy retrofits to over 800 social rented properties in the Netherlands. It aims to create attractive neighbourhoods which generate as much energy as they use over the course of the year, with the improvements and energy savings guaranteed by the contractor for 30 years. To drive costs down, offsite manufacturing techniques are used with retrofits delivered in just a few days. Tenants contribute on a pay-as-you-save basis using an Energy Plan which replaces their energy bill.

BIRMINGHAM ENERGY CHALLENGE (NON-DOMESTIC BUILDINGS)

A consistent operational rating system for non-domestic buildings would allow comparisons between different buildings and provide a reputational driver for businesses to reduce their energy use. It would offer a common language for building occupiers and managers to communicate about energy and provide information which can be used to make ongoing improvements.

- › As a city region, Birmingham could promote a consistent methodology. The City Council would agree with local businesses and building owners on the most appropriate tools to use, and targets for energy use reductions could then be set in line with the city's carbon reduction targets.
- › Adoption of the agreed performance rating and energy reduction targets would be spearheaded by public sector bodies responsible for managing buildings. But the success of a common metric would still depend on its use extending into the private sector.



BIRMINGHAM BUSINESS CHARTER

[Birmingham Business Charter for Social Responsibility](#) already has 350 corporate signatories. The Charter sets some guiding principles for the City Council and also invites its contracted suppliers, the wider business community, other public sector bodies and third sector organisations to adopt it. It offers the City Council a potentially powerful tool to influence the actions of its suppliers, encouraging them to adopt socially and environmentally responsible practices.

ENERGY COMMITMENT

The City Council and its public sector partners could take a leadership role by expanding the Birmingham Business Charter to include a commitment for signatories to reduce their energy use. This commitment should be set in line with the City Council's own climate change targets, for example to reduce energy use by 60% by 2027. Crucially, the commitment would specify the city's agreed building performance rating as the metric for reporting these energy savings, thereby compelling all signatories to adopt a consistent methodological approach.

Public sector bodies would all be obliged to adopt the energy commitment and the operational energy rating to demonstrate their adherence to the Charter. This energy data would also be particularly useful for demonstrating progress towards the City's ambitious carbon reduction goals. But there is also significant potential to drive uptake of the performance rating in the private sector by including the Charter and the energy commitment in particular as explicit conditions of certain public sector service contracts. This would allow the Charter to be used as leverage to effectively mandate the adoption of the agreed rating system through public sector procurement.

Other local businesses should be encouraged to voluntarily sign up to the Charter through a communications campaign. But even if they do not sign up to the energy commitment, local businesses may have a compelling incentive to adopt the agreed performance metric anyway if they see the opportunities for future contracts with the public sector.



INSPIRED BY

NABERS

[The National Australian Built Environment Rating System \(NABERS\)](#) is an Australian government initiative to measure and compare the environmental performance of buildings. NABERS is a voluntary rating scheme, but the Australian government and a number of states and territories have set out NABERS targets in public procurement policies. Many states have specified that government tenants require a building to have a 4.5 star NABERS rating. Given the importance of public bodies as prospective tenants, these policies have had a galvanising effect on local property markets with developers widely adopting the NABERS rating system.



RE:FIT

[Re:Fit](#) is a procurement initiative developed by the GLA to help public bodies improve the energy performance of their buildings. Pre-certified service providers deliver improvements and guarantee the level of savings under a model set of terms and conditions. The scheme has been extended across England and Wales and could assist public bodies in Birmingham in achieving energy reduction targets.

GREEN INFRASTRUCTURE AND NATURAL CAPITAL

THE BRIEF



Eastside City Park © Big City Plan, Birmingham City Council

“BIRMINGHAM’S AMBITION IS TO BE ONE OF THE WORLD’S LEADING GREEN CITIES AND TO ENSURE THE EFFECTIVE LONG TERM MAINTENANCE OF THE CITY’S NATURAL GREEN AND WATER SPACES, WHICH IT SEES AS ESSENTIAL FOR AN ADAPTED AND HEALTHY CITY. IT IS ALSO ANTICIPATING HIGH LEVELS OF GROWTH AND NEW DEVELOPMENT OVER THE NEXT 30 YEARS. HOW CAN NATURE BE INTEGRATED INTO NEW AND EXISTING DEVELOPMENTS, CONTRIBUTING TOWARDS A GREEN, BIODIVERSE AND HEALTHY CITY? WHAT IS THE BUSINESS CASE AND IMPLEMENTATION PLAN?”

Nick Grayson, Climate Change and Sustainability Manager, Birmingham City Council



The **Birmingham Development Plan** includes a target for everyone in Birmingham to live less than 500m from high quality green space, and a **Supplementary Planning Document on biodiversity** is currently under development. Unlike some councils, BCC will adopt Sustainable Urban Drainage Systems. However, Birmingham is in an interim phase before the adoption of the BDP and the creation of the SPD, and **the current planning process is not driving significant action on the ground.**

The ‘vision’ of Green Infrastructure (GI) can be seen as elitist – only certain sections of society engage in meetings and put forward their opinion. Many people within the community **do not see the value of GI**, or at least, how that value might positively impact their lives.

The **investor and the beneficiary are often different.** In common with many sustainability challenges, those who pay for the implementation do not necessarily reap the financial and/or non-financial benefits. This is compounded by most investors/capital being short-term in outlook.

Birmingham’s Green Living Spaces Plan introduces to Birmingham the notion of Natural Capital - how dependent the city is on the services from nature. Birmingham is the **first city in the UK to map what nature can supply** and where the demands for those services are at their greatest against the multiple social, economic and environmental needs. However the **Natural Capital Planning Tool is not yet routinely applied** and outcomes are not being measured. There is a lack of resources in the Council, and a reduction in spending on formal parks and garden.

The Green Living Spaces Plan sets out seven core principles for maintaining, and making the best use of, Birmingham’s green spaces. However, **Green Infrastructure is still often viewed as ‘land take’** – i.e. using up valuable space rather than offering economic, social and environmental benefits.

Green Infrastructure implementation (where it exists) is not multi-functional, but **often seen as a luxury** - space for play and leisure, but nothing more.

The Birmingham and Black Country Nature Improvement Area is the only urban NIA in the country. However, **much of the green space in Birmingham exists in ‘pockets’** – it is disconnected within Birmingham and from the wider region – limiting its value to nature and its economic potential.

BREAK-THROUGH IDEAS

A COORDINATED GREEN INFRASTRUCTURE STRATEGY

Develop a multi/cross-agency strategy for Green Infrastructure delivery, involving all departments that have a role in public realm delivery and/or benefit from GI including health and highways. This should incorporate control of a coordinated budget based on beneficiary rather than land ownership. It should work with the private sector – particularly utility providers and transport infrastructure providers – to supplement funding for Green Infrastructure projects.

- › A more strategic approach is needed to bring GI planning into the early stages of projects, so that more partners are aware and engaged.
- › Mapping the benefits of GI to different stakeholders could lead to more opportunities for investment, for example private investment from utilities providers, highways and transport, etc., as they become confident in the outcomes of their investment.
- › Tackling the silo mentality in the Council, by using the Natural Capital Planning Tool for example, could be manifested physically with better connected green space in the city. There would be great value in having GI permeate throughout the city along streets and in incidental amenity space.
- › If green spaces have different/new function this might change the way in which community are able to use green space - for example, Business Improvement Districts may find new uses for space, and this would highlight opportunities for pooling funding from different sources.



Canon Hill Park © Sustainability West Midlands

A COST EFFECTIVENESS MAP FOR GREEN INFRASTRUCTURE

Produce a cost effectiveness map for GI, identifying quick wins, easy wins, and where existing GI needs to be connected into a grid. This map consists of two layers: a GI network map showing what could/should be done and how difficult interventions would be, and an additional layer indicating their likely cost.

- › People value parks, and so parks create value. However, we cannot just use purely 'spatial' planning - there is not space in today's cities for more 'flat' GI.
- › Networks are essential in GI effectiveness, and GI should follow flows of people, and therefore doesn't need to be a land take.
- › So, when building e.g. a road, do it with integrated SUDS. Change from land take to land value enhancement, by using the value of SUDS, biodiversity, health and wellbeing.
- › Expectation of what is to be built is set at point of purchase of land, and reflected in price of land. Then developers look at value at point of sale, not at lifetime value.
- › Use of the proposed map within BCC development zoning would help future landowners/developers understand the value of GI investment on their sites.
- › Making it clear where GI value lies, who needs to pay and who would benefit, would increase the chance of GI being integrated into development in an efficient way.



St Philips Cathedral, Colmore Row © Birmingham Toolkit

BREAK-THROUGH IDEAS

MANDATE GREEN INFRASTRUCTURE USING A NEW APPROACH TO PLANNING

Initiate an innovative approach to planning for sustainability that requires developers to meet high standards for green infrastructure. Identify clear actions and responsibilities within BCC, and build on and extend the Natural Capital Planning Tool Pilots.

- › There may be an opportunity to use '[Natural Capital Protocol Pilots](#)' which is a global standard of measuring natural capital developed by WBCSD. Perhaps using Birmingham Smithfield as an example?
- › Look to other councils' policies – e.g. GLA, and green roof policy in Westminster for inspiration on things that really work.
- › Work with developers on Natural Capital Planning Tool Pilots to ensure outcomes are implemented in projects, and learn from this experience to strengthen the planning process in relation to sustainability.
- › Utilise any additional powers BCC gains from 'Devo 2' to enforce sustainability in planning as strongly as possible.
- › Work with developers who 'get it' and have done good GI schemes already to demonstrate what can be done.
- › BCC planners are not strongly requiring GI – need a clear, challenging expectation of developers.
- › Council needs to capture capital value of GI and showcase successes.
- › Developers want consistency in planning requirements – a level playing field, but many are up for being challenged and pushed to deliver higher standards (as long as everyone has to do it).



INSPIRED BY

Greater London Authority

The [All London Green Grid \(ALGG\)](#): The ALGG Supplementary Planning Guidance is a policy framework to promote the design and delivery of GI across London and support the London Plan. Eleven Green Grid Areas (GGAs) have been established, and ALGG Area Frameworks have been produced for each to expand on the implementation points and strategic opportunities set out in the ALGG SPG. All Green Grid Area Frameworks London also has the ambition to become the first Urban National Park.

GREEN INFRASTRUCTURE TRAILBLAZERS

Identify forward-thinking clients (e.g utility company) who are already committed to GI to 'embed' requirements into plans.

- › The Council should seek to work with forward-thinking clients who have experience of delivering GI, to set up schemes where delivery of GI is fundamental to their success. Therefore other developers involved with the scheme will have no choice but to deliver.
- › The Council should promote Birmingham as being 'open for sustainable development' to attract forward thinking clients and developers.



FURTHER READING

For more information, case studies, and a '[how to' guide to Green Infrastructure](#), head to UK-GBC website resources section. This includes a report from the [UK-GBC Green Infrastructure Task Group](#).



Mell Square, Solihull © Birmingham Toolkit

“ As a City Council, one of our core values is to ‘put citizens first’, and we need to be challenged on the best ways to achieve this. The UK-GBC City Summit enabled us to really get to the heart of some of our most pressing challenges and explore sustainable solutions that will be good for people, the economy and the environment.

Mark Rogers, Chief Executive, Birmingham City Council

WORKSHOP PARTNERS

AECOM



CONTACT US

Website: www.ukgbc.org

Email: info@ukgbc.org

Twitter: @UKGBC

Phone: 020 7580 0623

UK Green Building Council
The Building Centre
26 Store Street
London
WC1E 7BT