

<b>Report/Briefing to</b>	<b>Economy, Skills and Sustainability Overview and Scrutiny Committee</b>
<b>From</b>	<b>Cabinet Member for Sustainability, Councillor Lisa Trickett</b>
<b>Date</b>	<b>Friday 11<sup>th</sup> December 2015</b>
<b>Subject</b>	<b>Sustainability Portfolio</b>
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### 1. Purpose of briefing

The briefing provides an update to the Economy, Skills and Sustainability Overview and Scrutiny Committee on the progress of work within the Sustainability portfolio.

### 2. Scope of the report

The report focuses on areas of the Sustainability portfolio that are not currently being tracked by the Scrutiny Committee, including:

- Green Living Spaces
- Birmingham Cycle Revolution
- Making Birmingham Greener
- Digital

As there are separate report being taken on the matters of waste and recycling, these areas have not been included within this report.

### 3. Green Living Spaces

#### **3.1 Natural Capital Planning Tool (NCPT)**

- 3.1.1 Through a steering group of partners sponsored by the Royal Institute of Chartered Surveyors Research Trust- the Tool has been advanced and further tested. What this Tool seeks to achieve is a much better balance between new development and the allocation of future open space. The Tool starts from an ecosystem services point of view and has established a method of how to assess which of 10 ecosystem services, like flood relief, or recreation access, are addressed by any scheme's master plan.
- 3.1.2 The Royal Institute of Chartered Surveyors Research Trust has converted the 2014/2015, extended trial of the NCPT- into an impressive report- soon to appear on their website.
- 3.1.3 The Natural Environment Research Council Green Infrastructure Innovation funding call has recently closed- the NCPT was one of the applications being considered.

3.1.4 The NERC application is to test the NCPT on a range of national sites under different habitat conditions and at different scales, to assess the true merit of this tool- becoming a national standard. The City and Solihull will further test this tool, on their schemes.

### **3.2 Natural Capital Balance Sheet**

3.2.1 In summary the city's green environment costs £24M to maintain each year, but pays back £36M; so an annual positive balance of £12M;

3.2.2 Over a 25 year term, the city pays back £382M, over and above its maintenance costs.

3.2.3 This provides a critical new perspective against which to re-evaluate the role of parks and open spaces- particularly in urban areas.

3.2.4 It is proposed to now take this completed balance sheet through the City's accounts process and to achieve the adoption of an annual natural capital balance sheet to sit alongside the standard set of accounts.

### **3.3 Natural Capital 25 Year Plan**

3.3.1 The City participated in a 2 day workshop with the Minister at Defra in November- drafting the terms and conditions of a new national 25 year Natural Capital Plan.

3.3.2 Birmingham remains the only city committed to paralleling this process at the city scale- where it would sit alongside the growth agenda.

3.3.3 The balance sheet methodology would be used as a mechanism to measure the impact and effectiveness of the 25 year plan- at 5 year milestones.

### **3.4 Natural Capital Investment Models**

3.4.1 The Bank of England and the Insurance Market have declared Climate Change to be their number one risk.

3.4.2 Their report on the matter has been sent to Defra, who are also drafting the 25 year natural capital plan.

3.4.3 Working with partners, WBCSD, CISL, and others, Birmingham will push to bring these two agendas together.

3.4.5 In the Smithfield development through the Zero Emission Cities model, there is the genuine opportunity to explore innovative natural capital based investment models. This could have profound implications for future green development.

### **3.5 Erdington Urban Health and Well Being Park**

3.5.1 The communities groups in Erdington, spearheaded by the Witton Lodge Community Association, have succeeded with a Home Office Our Place grant. Their premise is very simple but very ambitious. To link seven sites that follow the brook courses, into one park that celebrates and provides health and well-being to its local residents. This aims to link across council services, third sector and voluntary services, to put people first and seek to generate real engagement with the local environment. This connects in with Youth employment initiatives and Community Pay Back schemes. Other funding is being sought to support this initiative.

### **3.6 Urban Buzz**

3.6.1 The wildlife and insect charity Buglife, have secured a national grant from Biffa, to support eight cities over the next three years in introducing or improving spaces for pollinators. Birmingham was the launch venue and the scheme focuses on two corridors, with the aim of learning lessons that can then be passed onto other cities- or other areas of Birmingham. The A38 Highway will be one focus, looking at how wildflower rich grass verges can be achieved within existing budgets, with support from Amey. The Health and Well Being Park corridor will be the other, where extensive trials of seed mixes and maintenance regime changes have already been undertaken. A Project Officer will be employed by Buglife to support this work.

## **4. Birmingham Cycle Revolution (BCR)**

### **4.1 BCR programme update**

4.1.1 Significant elements of the BCR1 programme have been completed, in line with the original DfT deadline for expenditure of Cycle City Ambition Grant Phase 1 funding by the end of September 2015.

4.1.2 All Green Routes included within the original BCR1 programme have now been substantially completed, comprising improvements and extensions to the existing network of off-road cycle routes through parks and public open space areas. A total of 11 Green Route projects were completed as part of BCR1, including the Cole Valley (South) and the Hamstead Park route in Perry Barr. Further Green Routes, which have been advanced from BCR 2, to maintain continuity in the delivery programme, have also been completed. These include Alexander Stadium, Silvercroft Avenue and Harborne Walkwy. In all, a total of 8km of new routes have been constructed whilst upgrades including new surfacing and improved signage have been carried out to a further 22km of Green Routes.

- 4.1.3 Feasibility studies for the BCR3 Green Route schemes have all been completed with detailed design and consultation now commenced. These include the following corridors: Yardley Cemetery, Castle Bromwich Hall and Gardens, Sheldon Country Park, Rea Valley Route, Woodgate Valley Country Park and Highbury Park. Once FBC approvals to the proposals and expenditure have been obtained, it is anticipated the next phase of Green Route works can commence on site in Spring 2016.
- 4.1.4 The Canal Routes package included within the original Phase 1 programme is now substantially complete, with final sweeping works nearing completion. A total of 36km of canal towpath has been re-furbished as part of this programme, comprising new all-weather cycling surfaces, together with associated access improvements, lighting upgrades, signing and way-finding. Two canal schemes from the BCR2 programme, on the Grand Union Canal and Tame Valley Canal, have been advanced into BCR1, and these are now being delivered on site with completion anticipated by early 2016. A programme of further canal works is now being developed and consulted on, as part of BCR Phases 2 and 3. A Full Business Case for this package was approved by Cabinet at its meeting on 17th November 2015, with commencement on site anticipated in early 2016.
- 4.1.5 The Big Birmingham Bikes (BBB) initiative continues to be rolled out. As of early December, a total of 1700 free bikes had been issued to successful ballot applicants.
- 4.1.6 Other Supporting Measures: Top Cycle Location grants had been successfully issued to nearly 50 businesses and schools by the end of September as part of the Phase 1 programme. A second phase of the project is due to be launched in Spring 2016 covering the wider City Council area. Brompton Docks have now been installed at Moor Street, New Street and Snow Hill stations and orders for further installations at Aston University and Brindley Place have now been placed with installation planned by the end of the year.
- 4.1.7 Work is progressing on the delivery of the BCR1 Highway Works package in accordance with the revised timescales agreed earlier this year with DfT. Contractors have now been appointed to take forward design and delivery of the Phase 1 programme, which will be completed in two stages, Phase 1a having commenced on site in mid-October 2015 and due for completion in March 2016, and Phase 1b which is due to commence in Spring 2016 with completion anticipated by September 2016.
- 4.1.8 Development of the Phase 2 & 3 Highway Schemes package is also gathering apace. Consultation meetings including proposed route-walks are now being arranged with Cabinet Members, District Chairs and Ward Councillors. It is intended that these will be completed by the end of the calendar year,

following which design consultants will be appointed to further develop the proposals for submission to the BCR Member Board for approval and subsequent wider (public) consultation in early 2016. Implementation of the Phase 2 & 3 Highway Schemes is due to take place from September 2016 onwards, following completion of the Phase 1 works.

4.1.9 Overall, the BCR1 programme remains on target to achieve full expenditure of the Cycle City Ambition Tranche 1 grant (CCAG1) by the revised completion date of the end of March 2016, as agreed with DfT. Expenditure on BCR1 as of the end of October was some £11.1m against the DfT (CCAG1) funding allocation of £17.0m. Of the outstanding £5.9m budget, approximately £3.8m of expenditure relates to the elements of the Canal Routes, Green Routes and Supporting Measures (Top Cycle Locations, Big Birmingham Bikes, Brompton Docks) programmes which are either awaiting payment or in the process of being delivered on the ground. The remaining £2.1m of required expenditure comprises the Phase 1a Highway Works package, the implementation of which has recently commenced on site.

## 4.2 Future BCR Programme Phases

4.2.1 Birmingham Cycle Revolution Programme Phase 2 (BCR2) – The Full Business Case in support of the application for a further £8m of funding from the government’s Local Growth Fund (inclusive of a £2m local contribution) was approved by the Greater Birmingham and Solihull Local Enterprise Partnership (GBSLEP) Growth Team on 2nd September 2015. A Service Level Agreement between the City Council and GBSLEP has now been concluded, which has enabled the release of implementation funding.

4.2.2 Birmingham Cycle Revolution Phase 3 (BCR3): Following the successful bid for a further £22m of Cycle City Ambition Grant funding in March 2015, work has been progressing on the development of the various programme elements, as identified previously in this report

## 5. Making Birmingham Greener

### 5.1 The city’s CO<sub>2</sub> emissions

5.1.1 Birmingham’s carbon target is a 60% reduction in total emissions by 2027 (against a 1990 baseline), which aligns with the national carbon budget periods. The Commission is also mindful of the longer-term UK target of an 80% reduction by 2050 and the commitment some cities are making to be zero carbon by this year. The most recent carbon emissions data show that in 2013, Birmingham’s CO<sub>2</sub> emissions had decreased by 24.4%, against a 1990 baseline. Birmingham’s emissions continue to be dominated by industry and

commercial (40.3%) and domestic CO<sub>2</sub> emissions (37.8%). Transport emissions now account for 21.9%.

## 5.2 Focus & Priorities

5.2.1 Birmingham's emissions reductions are heavily reliant on national decarbonisation and the recent scaling back of support through subsidies for renewable technologies and efficiency programmes, may affect our ability to reach these targets. The carbon emissions reductions that we can control, and therefore the focus for actions, are based around:

- **Energy infrastructure** - creating local, decentralised, low carbon or renewable energy generation and linking that in with the academic expertise in the city around energy storage and bioenergy;
- **Transport and Mobility** - how people travel across the city but also how we change the infrastructure to low or zero carbon refuelling or recharging;
- **Buildings** - How we make our buildings more energy efficient.

5.2.2 As we take action to reduce carbon emissions across these areas, the Commission is looking at opportunities to develop jobs, skills and new economic markets relating, and also how the city can use its natural assets, such as green spaces and water corridors, for the benefit of the city, its businesses, people and wildlife.

## 5.3 The Commission's Roundtables

5.3.1 In addition to the Commission's Board, there are five Roundtables, Chaired by Commission members from all different sectors, that act as project development groups to help achieve the city's targets and ambitions. This paper (briefly) reviews the progress and some of the projects of each.

## 5.4 Green Growth & Behaviour

5.4.1 The green growth agenda is applicable to all sectors of the economy. For Greater Birmingham, the Low Carbon Goods and Services sector covers 1580 companies, sales of over £3.89bn a year and employs 29,000 people; the GBS LEP is leading in positive trends for this sector.

5.4.2 WBCSD Zero Emissions Cities Programme – Birmingham is named as the first of three cities in global programme. We are working with business to understand how we might make the Smithfield redevelopment site in the city centre 'zero emission'..

5.4.3 We will be working through the Green Commission to host a Your Green Futures event in 2016 to show students the sort of jobs that are available through the Low Carbon Goods and Services sector.

5.4.4 The Green Growth group is exploring the potential for resource efficiency through the implementation of the business model piloted nationally by MIROG (Minerals Resources Opportunities Group) which builds upon the NISP programme and creates partnerships between the public and private sector to enable the reuse of valuable materials to be planned and costed into new developments thus representing both a resource and financial benefit.

## **5.5 Energy & Resources**

5.5.1 Birmingham's homes and businesses currently buy approximately £1.3bn worth of gas and electricity from sources outside of the city. This is a major leakage from the city's disposable income and has a direct influence on fuel poverty and health outcomes; as well as affecting city investors and business competitiveness. In order to address this, and improve the city's energy security, we have a large number of projects.

5.5.2 There has been almost £14m investment in Birmingham District Energy Scheme – the city centre award winning heat network that has proven to be a national leader in the deployment of district heating and we are just finalising a city centre extension to connect two different schemes together, via an interconnection at the refurbished New Street Station the city centre heat network

5.5.3 We are working directly with DECC to develop new heat network opportunities across Birmingham but also for the GBS LEP. We have already identified up to £72m of potential new networks in Birmingham alone.

5.5.4 Midlands Universities, including Birmingham and Aston, are part of the £60m Energy Research Accelerator – that could enable new energy technologies to be demonstrated, and then deployed at scale in Birmingham.

5.5.5 The national Energy Systems Catapult will be based in Birmingham. The Catapult Centres are a product of Innovate UK and are working to deliver solutions at scale, to support spin outs from universities, as well as to grow innovative businesses. The ESC will employ 150 experts to address future energy challenges for the UK.

5.5.6 CEPPI (Coordinated energy-related PPIs actions for cities) is a Horizon 2020 project that the Sustainability Team is leading to enable us to procure innovative energy solutions, working with four other European cities. The project will enable us to build on our low carbon energy offering in Birmingham.

- 5.5.7 A £49m wood biomass gasification plant is due to open in the Tyseley Environmental Enterprise District in January 2016 – this will provide renewable electricity for the equivalent of 17,000 homes
- 5.5.8 We're currently reviewing our waste management contract for the city and ensuring it links with our wider energy and transport plans; we are leading on a best practice/ foresighting study to support this.

## **5.6 Transport & Mobility**

- 5.6.1 We want to create a transport system which puts the user first and delivers the connectivity that people and businesses require. High quality transport can improve people's daily lives by making travel more accessible, more reliable, safer, greener and healthier. It also has a major impact on air quality.
- 5.6.2 Birmingham Blueprint for low and zero carbon refuelling provides a clear direction and investment opportunity for vehicle infrastructure around hydrogen fuel cell vehicles, electric, CNG/LNG and LPG. The Council has already implemented a network of 36 electric vehicle charging points and is in discussion with infrastructure providers, utility firms and transport operators on how to develop these networks. Once this infrastructure is in place it will support as a priority public and private sector fleets of buses, taxis, HGVs, LGVs, coaches, mini buses, bin wagons and heavy trucks, as well as support wider uptake of personal low/zero carbon vehicles
- 5.6.3 A CNG station feasibility study over an initial 4 regional sites network is being finalised.
- 5.6.4 Horizon 2020 funded engineering studies for infrastructure development to support the introduction of hydrogen fuel cell buses within Birmingham have been completed.
- 5.6.5 A 'Clean Vehicle Technology Fund' programme has recently achieved success in Euro VI approvals for the LPG retrofit of the iconic Birmingham Hackney Carriage taxis. NOX, NO<sub>2</sub> and PM emissions from these vehicles will be cut by at least 90%.

## **5.7 Buildings & Efficiency**

- 5.7.1 Fuel poverty remains a significant problem for Birmingham's residents, with just over 19% of the population currently in the bracket of fuel poverty. As fossil fuel prices continue to rise, more people will find fuel bills dominating their spending. In 2013 Birmingham's residents consume an average 3,870kWh of electricity and 14,040kWh of gas. Business consumer an average 75MWh of electricity and 649MWh of gas.



5.7.2 WE are working to understand how we roll out scalable retrofit following the cessation of the Birmingham Energy Savers Programme. This will be a key theme of the UK Green Buildings Council City Summit in 2016 (hosted by Birmingham), which will enable us to work with over 100 experts to address the key challenges from the built environment.

## 6. Digital

### 6.1 **Progress Update**

6.1.1 Already over 3500 businesses have been helped by investing over £4million in improving their digital connectivity enabling them to increase productivity and develop new products and services. The Digital Academy has been created, the first ever LEP wide digital skills programme that provide new digital capabilities to over 400 SMEs, improving their market growth potential, opening up new markets and providing them with skills in order to grow their business in a more resilient and sustainable way.

6.1.2 The largest free wifi network across the City Centre has been established, enabling citizens to access information and services. In addition there is free wifi at over 200 public buildings across the city, to ensure people are not digitally and socially excluded.

6.1.3 For our most vulnerable, we are developing plans to establish alternative ways to provide broadband connectivity to our social housing tenants in multi-storey occupancy blocks

6.1.4 We have attracted major organisations to establish a presence in Birmingham, such as the Google Garage and we continue to work with O2 Gurus and Barclay Digital to ensure that we are one of the most digitally enabled regions in the UK.

6.1.5 The Council is reducing its carbon footprint with the tools it needs to monitor and control its energy usage (gas, water and electricity) through the ground-breaking SmartSpaces project.

6.1.6 New digital applications and products such as the Digital logbook to radically transform the customer journey for social housing tenants in accessing their universal credit.

6.1.7 Our leadership of the open data agenda has enabled us to attract funding from the Release of Data fund, establish new analytical tools for data mapping, establish community based data surgeries to enable citizens and communities to better understand and manage their locality. The Birmingham 'data factory' has been established; a rich source of data for all our

communities to use so that they can access, and create new applications for services.

## 6.2 **New Development and Proposals**

- 6.2.1 Having recognised the importance and the challenges faced by our citizens and communities in East Birmingham and are working with them and the Future Cities Catapult to establish a Smart City Roadmap and portfolio of citizen led projects that makes the most of our natural assets using a methodology that will enable these to be replicated in a low cost and low risk way.
- 6.2.2 There is work with Birmingham City University to establish a urban spatial planning tools using data and analytics in a new and innovative way to promote and enable a more sustainable and resilient approach to urban development.
- 6.2.3 A Digital Prospectus for HS2 is in development that will enable us to ensure that we maximise the use of digital technologies so that our communities, businesses, commuters and visitors can enjoy a world class experience.
- 6.2.4 In the East Birmingham corridor a digital platform is being developed that will enable businesses and citizens to access data, create new models for service delivery and create new and innovate applications and services for citizens
- 6.2.5 Already we have started to work with older and vulnerable people through our City4Age project which will support those to mild cognitive impairment to better manage their health and well-being.

## 7. Conclusion

- 7.1 Birmingham recently came 18th in the world in the Arcadis Sustainable Cities Index; the city is becoming increasingly recognised as a city which is serious about addressing climate change We are already planning for and transitioning to a city where a local, integrated and low carbon energy system is supplying efficient and comfortable buildings, and where people are able to move around more efficiently and effectively between places. We are developing plans and tools which put natural capital at the heart of decision making for the future built environment, whilst looking at how we strengthen the existing green and blue spaces and corridors. At the heart of this are key opportunities to support improvements in living standards and create new jobs.