The transition to a green economy:

The vital role of the ensuring council

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An APSE report prepared by Infrangilis

April 2012

The Association for Public Service Excellence (APSE) is a non-for-profit local government body working with over 300 councils throughout the UK promoting excellence in public services. APSE is the foremost specialist in local authority frontline service providers in areas such as waste and refuse collection, parks and environmental services, leisure, school meals, cleaning, housing and building maintenance.

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Infrangilis is part think-tank and part consultancy. A values-driven enterprise based in the UK, Infrangilis works with multi-lateral agencies, the public sector, businesses, NGOs and academia to instigate or accelerate innovative solutions on the interface between the green economy and sustainable urban development.

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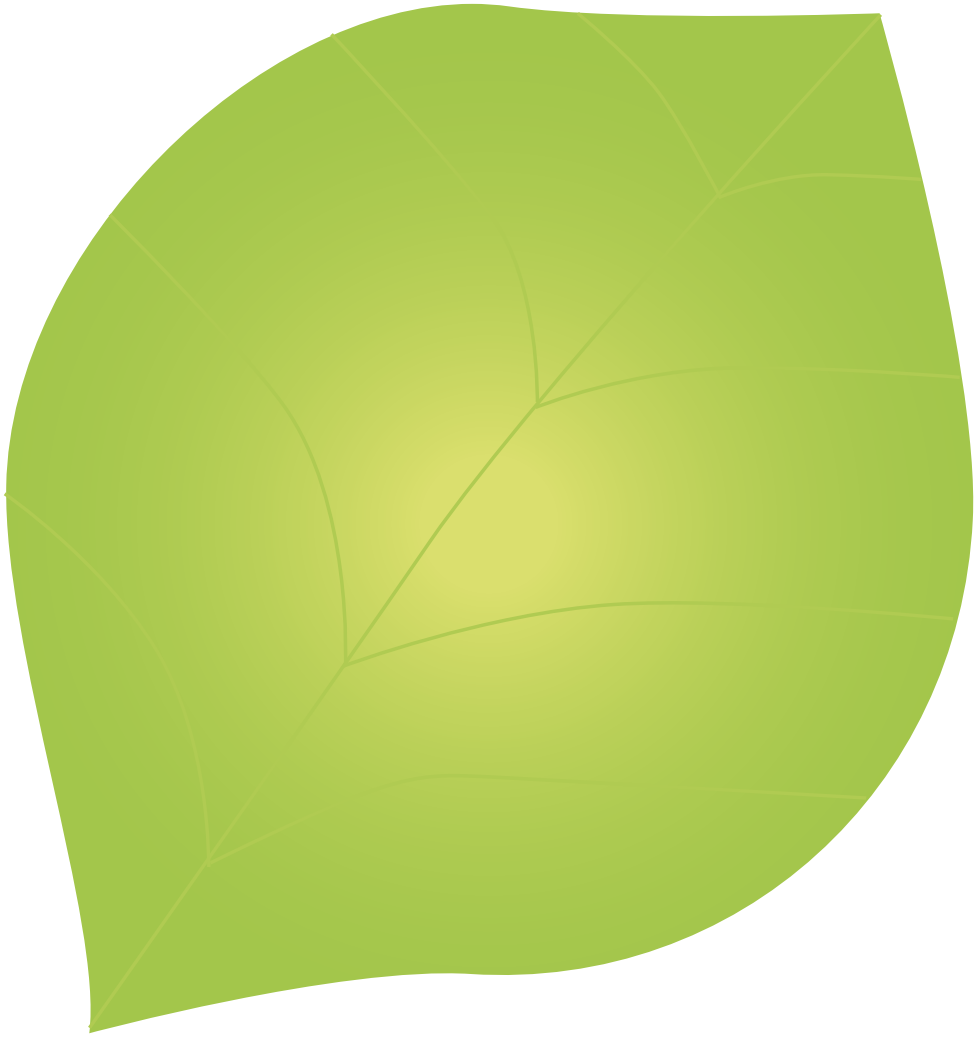


Foreword

This publication marks a valuable addition to APSE's substantial body of research drawing together the burning issues of environmental sustainability and economic resilience.

The need to reduce carbon emissions in order to combat climate change is well recognised. The transition to a green economy will enable the UK to compete in the £4 trillion global low-carbon market. The need for a green economy in order to reduce energy expenditure and improve security of supply, tackle fuel poverty and create jobs is also clear.

These are all pressing priorities and local government needs to take its rightful place at the heart of the transition to a green economy. APSE is proud that councils are already achieving impressive results from embracing this agenda; through use of their property, community leadership, regeneration and planning, procurement, transport and education, not to mention in managing services on the front-line. This publication contains numerous examples of exciting local government initiatives from across the UK.

This report shows how the 'ensuring council' model developed by APSE is highly pertinent in ensuring our transition to a green economy. The ensuring council retains a strong core capacity to deliver efficient services and aligns this with strategic vision, policy co-ordination, leadership, entrepreneurship and accountability. All of which is key to achieving the changes required.

Given the vital local government role in the transition, this report raises the question of why it is not being properly recognised by national government. It is disappointing that the Government's green economy roadmap *Enabling the transition to a green economy* does not discuss local government's contribution.

APSE is calling on national government to recognise the pivotal role of local government in the transition to a green economy. This report sets out specific steps central government should take. Such measures range from helping to unlock £143bn pension fund investment in low carbon regeneration projects, through to requiring the electricity industry to work on district energy planning and making Feed in Tariffs viable for large-scale social housing schemes.

This publication provides evidence of what local government can achieve. We call on central government to help councils fulfil their massive potential to achieve even more.

Cllr Jim Docherty, South Lanarkshire Council

National chair of APSE

Executive summary

There is a compelling argument for decarbonising the UK economy. It allows the UK to compete in the £4 trillion low-carbon technologies global market (the UK share of this market was £116 billion in 2010). It will enhance energy security by reducing the nation's dependency on imported fossil fuels (by 2020 the UK could be importing more than 70% of its gas). It will also help avoid the huge cost of failing to deal with climate change (by 2050 the global cost of extreme weather could amount to 20% of GDP per annum if preventative action is delayed, compared with only 1% if there is an effective response). Taken together, this means the primary motivation to act is to boost national resilience.

APSE believes that local authorities are pivotal to the delivery of national resilience as every aspect of åtheir role shapes how people live their lives – from democratic elections and education, through to spatial planning and waste collection. The same is true for the transition to a green economy.

This report provides critical insight into why local authorities in the UK and the rest of the world are already doing tremendous work to aid the transition to a green economy. The table below details a route map of the 46 case studies and reference points contained within this document which highlight how each and every function within a local authority can make a powerful contribution.

From this research it is evident that APSE members across England, Northern Ireland, Scotland and Wales are committed to innovation when to partnering with business to green their local economies. This ranges from the UK's first Green Skills Training Centre in Blaenau Gwent through to creating the UK's largest smart electricity grid in Liverpool. Taken together across the UK, this kind of leadership is protecting or creating hundreds of thousands of jobs, providing new career opportunities for young people and helping to alleviate poverty.

Despite these achievements the Government's new policy roadmap on the green economy does not make any reference to the role of local government in this big transition. Whilst APSE welcomes the Government clarifying its position on the green economy, this omission is bad news for everyone. Such a fragmented approach undermines collaborative efforts and is damaging to the public purse during an age of austerity.

Consequently APSE is calling on Government to recognise the pivotal role of local government in its national strategising on the green economy. The Government can help local authorities to achieve even more - ranging from helping to unlock pension fund investment in low carbon regeneration projects, through to requiring the electricity industry to work with local authorities on district energy planning. By doing so, everyone wins - it allows the public sector to do more with less, for the UK to bounce back from an economic downturn and for the nation to boost its resilience to future shocks and surprises.

This document is intended to build on APSE's body of work to deliver a set of techniques for UK local authorities to proactively assist strategy and practice on greening local economies. This research underpins a major focus of APSE's wider work– developing a long-term strategy for the future of local government and the services it provides in a difficult financial climate. APSE is advancing this through the development of a new model of the 'ensuring council'. This is a local authority of the future that is leaner but not hollowed out; one that retains a strong core of services and capacity to co-ordinate policy; that has the ability to intervene on behalf of local communities and secure broader strategic goals; that ensures local economies are resilient; and that is innovative and maintains a spirit of municipal entrepreneurship.

1. What is the Green Economy and why is it so important?

Greening the economy

According to the USA's Pew Environment Group, 2010 was a landmark year as it was the first time that investment in renewable energy overtook nuclear power.[1] Soon after, China's new five-year plan (2011-2015) signalled a switch in its economic blueprint, with energy efficiency and environmental services declared as 'priority industries' for the first time through a £370 billion investment.[2] Crucially, the 'race' for new investment and jobs in the so-called 'green economy' had come of age.

But what is the green economy? Is it all about attracting new investment in green jobs, or is it something more than this?

There have been varying approaches to deriving a common understanding for the term green economy. The United Nations Environment Programme (UNEP)[3] defines it as 'One that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities'. Whereby the concept of green economy is not intended to simply substitute 'sustainable development', but rather, suggest UNEP, that there is a now a growing recognition that achieving actually sustainability rests heavily on getting the economy 'right' in the first place.

Put simply, this means that on the one hand the rapidly expanding low-carbon technologies market offers an attractive route to bounce back from a lingering global recession in a resource efficient way, resource productivity improvements that could meet 30% of resource demands by 2030 - worth savings of £1.9 trillion[4]. On the other hand, generations of wealth creation and over consumption through the traditional economic model have played an unhelpful role in exposing the world to the peril of depleted natural resources, for example 25% of fish stocks are over exploited and a further 50% are fully exploited[5]. The dangers of extreme weather conditions, for instance flooding, cost the world £245 billion in 2011, with only one third of this covered by adequate insurance[6].

Boosting UK resilience

In recognition of these drivers, the 2011 HM Government set out its business case for greening the UK economy in August 2011 called *Enabling the Transition to a Green Economy: Government and Business Working Together*. It stated this as desirable is in terms of[7]:

- competing in the huge £4 trillion low-carbon technologies global market (the UK share of this market was £116 billion in 2010)
- enhancing energy security by reducing the nation's dependency on imported fossil fuels (by 2020 the UK could be importing more than 70% of its gas, at a time when global demand is expected to rise in a rapidly populating world, leading to supply constraints and price spikes)
- avoiding the huge cost of failing to deal with climate change (The Stern Review estimated that by 2050 that the global cost of climate change could amount to 20% of GDP per annum if preventative action is delayed, compared with only around 1% if an effective international response is adopted).

In short, the primary motivation for the Government to act is to boost national resilience.

APSE believes that local authorities are pivotal to the delivery of national resilience as every aspect of their role shapes how people live their lives – from democratic elections and education through to spatial planning and waste collection. The same is true for the transition to a green economy.

1 Harvey, F. (2011) 'UK left behind in race to invest in green economy, says report', *The Guardian* (29 March 2011: 5).

2 Wang, S. (2011) 'What does China's new five-year plan address?', BBC, http://www.bbc.co.uk (website accessed January 2012).

3 UNEP (2011) *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication – A Synthesis for Policy Makers* (Paris: UNEP).

4 McKinsey & Company (2011) *Resource Revolution: Meeting the World's Energy, Materials, Food, and Water Needs* (Seoul: McKinsey).

5 Food and Agricultural Organization (2010) *The State of Food Insecurity in the World: Addressing Food Insecurity in Protracted Crises* (Rome: FAO).

6 China Dialogue (2012) Natural Disasters Cost $380 billion Last Year, http://www.chinadialogue.net (website accessed January 2012).

7 HM Government (2011) *Enabling the Transition to a Green Economy: Government and Business Working Together* (London: HM Government).

2. The aim of this document and the vital role of the ensuring council in the transition to a Green Economy

APSE and the green economy

The aim of this document is to build on APSE's body of work – both current and previously - to deliver a set of techniques for UK local authorities to proactively assist strategy and practice on greening local economies.

- APSE's ongoing portfolio of research on this important topic includes:
- producing a sustainable procurement policy toolkit, as a resource for members when determining how to factor low-carbon considerations into their purchasing process[8]
- publishing a guide on how to create a revolving fund for local authority solar energy, through smart use of the Government's Feed in Tariff (FIT) [9]
- proposing a solution on how to remove barriers to the uptake of sustainable and energy projects, such as changes to the national skills development programme[10], in partnership with the UK public sector trade union UNISON
- undertaking an assessment of how sustainable energy projects contribute to local economic development, such as through the provision of new employment and services[11].

This research underpins a major focus of APSE's wider work over the past year - developing a long-term strategy for the future of local government and the services it provides in a difficult financial climate. APSE is currently developing its own model of the 'ensuring council' (with De Montfort University and other partners). The ensuring council is a local authority of the future with the vision, political leadership and strength to deliver on behalf of the local area, without having to rely on insufficient levers of influence and negotiation to achieve this.[12] This means a local authority that is leaner but not hollowed out; one that retains a strong core of services and capacity to co-ordinate policy; that has the ability to intervene on behalf of local communities and secure broader strategic goals; that ensures local economies are resilient; and that is innovative and maintains a spirit of municipal entrepreneurship.

Mind the gap

Given the major economic footprint of local authorities, they have a huge role in ensuring a smooth transition to a greener UK economy. This is both in terms of financial assets and constitutional powers at their disposal. Each year £42 billion is spent by local government on external contracts alone (e.g. £13 billion is spent on constructing and maintaining buildings and roads and £3 billion is spent on waste services).[13] The value of local government pension funds last year was £143 billion, and it is estimated that local authorities have £250 billion worth of property. Also, to varying degrees across the UK, local authorities have the power to control or stimulate investment in low carbon business through their regeneration and spatial planning strategies. Councils also have significant scope to influence residents' behaviour through the education system through for example green skills training and neighbourhood management schemes which could include financial rewards or penalties.

Yet, surprisingly, HM Government's new policy roadmap on the green economy does not make *any* reference to the role of local government in this big transition. Instead, it solely focuses on what

8 APSE (2011) *Towards Sustainable Procurement for Local Authorities* (Manchester: APSE).

9 APSE (2011) *The Virtuous Green Circle: Creating a Revolving Fund for Local Authority* Solar Energy (Manchester: APSE).

10 Unison and APSE (2011) *Sustainable Energy Stymied* (12 October 2011: Press Release).

11 APSE and CLES (2012) *Powerful Impacts: Exploring the Economic and Social Benefits of Renewable Energy Schemes* (Manchester: APSE).

12 APSE (2011) *APSE Annual Report 2011* (Manchester: APSE).

13 Regional Centres of Excellence (2007) Delivering Efficiency Now...Laying the Foundations for the Future, http://www.rcoe.gov.uk/rce/core/page.do?pageId=22790 (website accessed January 2012).

central government will commit to and what business could do in return, as detailed in Table 1.[14] Whilst APSE welcomes the government clarifying its position on the green economy, this omission means that the nationally important and entrepreneurial work by local authorities – for example to attract new investment into renewable technology installations, to meet financial liabilities under the Carbon Reduction Commitment, or to fulfil duties under the Flood and Water Management Bill - are at best undervalued or, at worst, ignored. This is bad news for everyone and such a fragmented approach is especially damaging to the public purse during an age of austerity. Furthermore, it undermines collaborative efforts between central government, industry and local authorities for the UK to be resilient by competing in the global low carbon technologies market, to become more energy independent, and to adapt to weather extremes.

Table 1: Government commitments to support a green economy

Government will develop a green policy framework which:	**Business should work with Government to:**
• is effective, clear, stable and as streamlined and minimally burdensome as possible	• explore voluntary approaches to greening products and services
• encourages investment	• identify areas of green policy and regulation which can be streamlined whilst remaining effective
• protects existing investments, where possible, through use of 'grandfathering' (protecting pre-existing rights)	• invest in greener products, services and production processes
• promotes the UK as a global leader in green exports and encourage green inward investment	• help Government publicise the skills and expertise of UK-based business
• provides accessible advice and support to enable business to increase their resource efficiency, resource security and resilience to climate change	• become increasingly resource efficient and build risks of energy/resource security and climate change into future business planning
• ensures that Government 'green' policies take into account the competitiveness of UK-based companies, including Energy Intense Industries and develop measures to support businesses most hit by transitional costs	• continue to explore production processes and business models which reduce use of resources and carbon emissions
• ensures the skills system responds to the demand for skills created by a shift to green economy	• help articulate skills demand through involvement in LEPs, and Sector Skills Councils
• supports the development of greener products, services, and technologies, through continued support for R&D and innovation	• Design, develop and promote greener products and services, including enabling technologies
• encourages investment in infrastructure supports the green economy, including through the Green Investment Bank	• invest in infrastructure that will support the green economy
• enables UK-based businesses to compete in green, low carbon supply chains where the UK has expertise	• work together, where possible, to help build UK-based supply chains
• produces products that meet cost-effective sustainability standards	• adopt sustainability standards for their procurement
• helps businesses understand the value of and their impact on the natural environment	• consider the value of the natural environment to their business

To bridge this gap and to assist with knowledge transfer between APSE members and Government this report brings together the latest thinking and practice on how local authorities across the UK are already helping to ensure the transition to a green economy. The research also proposes a number of ways in which national government can support local authorities to do even more during a time of austerity.

In doing so, APSE appreciates that the system in which local authorities operate is complex, which will vary according to each ones' particular context. So for instance, whilst the policy agenda set by the

14 Source: Page 11, HM Government (2011) *Enabling the Transition to a Green Economy: Government and Business Working Together* (London: HM Government).

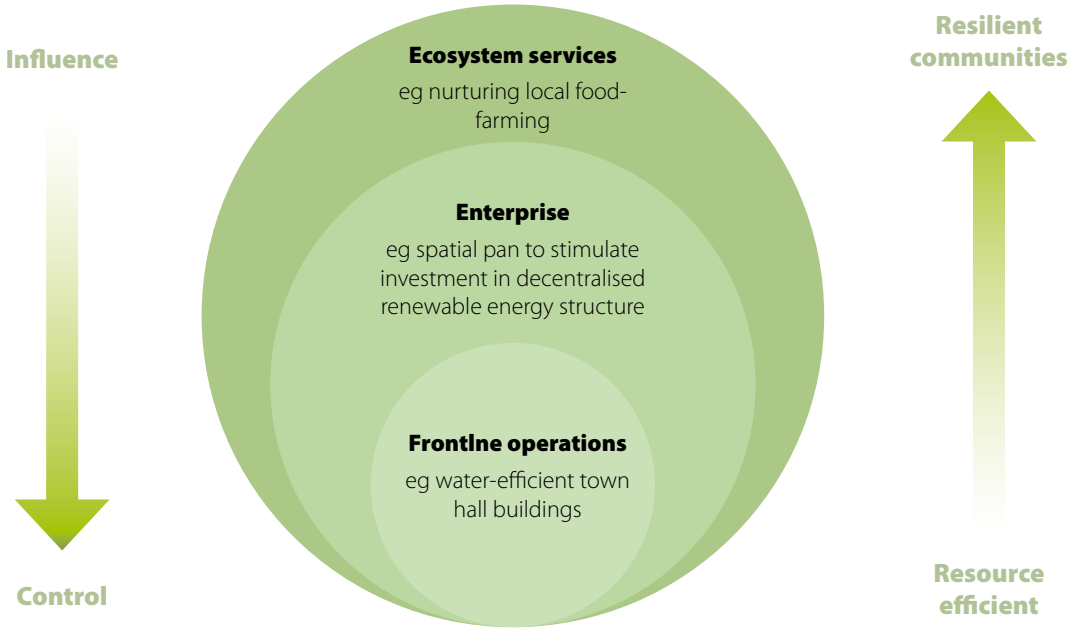
Coalition Government impacts significantly on both the resources and responsibilities of all UK local authorities, devolution means that councils in Scotland, Wales and Northern Ireland may be on quite a different journey when it comes to the green economy. Belfast City Council, for instance, does not have responsibility for urban regeneration. Even within these countries, some may have extra powers – for example, members of England's 'core cities' group (like Nottingham) have a consolidated capital budget to spend 'as they see fit' and are allowed to take out bank loans on future developments.

Consequently, what is needed is the adoption of a suitable approach to deal with these complexities. This systems-thinking' means that a small shift in one thing can produce big changes in everything else. [15] These so called 'leverage points' allow us to identify the best places to intervene in a system and include: resource constraints, buffers and other stabilising stocks, information flows, rules of the system and power distribution.[16] In respect of the relationship between councils and the green economy (as depicted in Figure 1), local governance of these various resources - natural, physical, financial or human - can be bundled together into three broad categories, namely:

- **frontline operations**: the day-to-day council activities such as running buildings such as town halls, leisure centres or waste depots;
- **enterprise**: the development of local industry through new investment and jobs); and
- **ecosystem services**: the process by which the environment produces resources used by humans such as soil, water, air and minerals for food.

Depending on a local authority's particular context, their ability to control or influence each of these directly, indirectly or if at all, will vary. So it is a matter of each local authority doing the best it can, given the circumstances. Whether it be a rural town surrounded by farmland with low industrial presence, or whether responsible for a large city that is home to several major industries, two points are universally important. Firstly, that it is fundamentally important for a local authority to clarify its role and responsibilities in respect of each national government, business, residents or other key partners. What a local authority influences may be of less importance than what the local authority controls. Secondly, it is vital for local authorities to understand what possible key interventions can be made by each service or functional lead – from asset management and transport infrastructure planning; through to education and neighbourhood liaison. For, whilst resource efficiency is obviously desirable, the end goal should also always be creating more resilient communities and to achieve this means being able to deal with the whole system.

Figure 1: A complex system – local governance of resources



15 Middleton, P., Seddon, J. (2010) *Delivering Public Services That Work* (Devon: Triarchy Press).

16 Meadows, D. (1997) *Leverage Points: Places to Intervene in a System* (Hartland, VT: Sustainability Institute).

How to use this resource

Written with a public sector audience in mind, this resource can be used as follows:

Chapter 3 sets out the policy context on the green economy in which UK local authorities operate, ranging from international accords and national strategy through to local agreements.

Chapter 4 details how UK local authorities are already helping to green the economy. This includes case study interviews and other informative examples from peers in Belfast, Birmingham, Bromsgrove and Redditch, Hackney, Lambeth, Liverpool, Glasgow, Newport, Pendle, Plymouth, St. Helens, Stirling and Wrexham, amongst others. For ease of use, guidance is tailored towards specific functions, such as leadership, regeneration and spatial planning, transport and logistics, asset management and procurement, environmental services, neighbourhood management, and schools and education.

Chapter 5 suggests ways that national government can help local government to do even more when it comes to the green economy. This also includes putting forward possible statements of commitment by local authorities in terms of their role vis-à-vis that of central government and business.

Chapter 6 clarifies APSE's policy position on the green economy, given the dynamic nature of the topic.

Chapter 7 sets out an overarching framework for the ensuring council to manage transition to the green economy. This includes a checklist of potential interventions based on key leverage points in frontline operations, enterprise and the wider ecosystem.

So, whilst a primary object of the publication is to transfer knowledge between APSE members and Government on good practice when it comes to the interface between the green economy and local government (chapters 3, 4 and 7), a secondary objective is to encourage national government to acknowledge this pivotal role and thus help UK local authorities to do even more (chapter 5).

3. The Green Economy policy context

International accords and agreements

There are several internationally negotiated agreements that by extension shape both UK and local policy on greening the economy. Most notably, the Kyoto Protocol is an international agreement developed by the UN to reduce greenhouse gas emissions such as carbon dioxide. It came into force in 2005 and is legally binding to countries that ratified it - the UK's current target is to reduce emissions by 12.5% below 1990 levels between 2008 and 2012, which according to the Government we are on track to do. Following the COP17 international climate change meeting in Durban at the end of 2011, further international agreements were reached. These included[17]:

- recognition of the global goal of limiting average temperature increases to below 2 degrees above pre-industrial levels;
- adopting a second commitment period of the Kyoto Protocol; and
- establishing a Green Climate Fund to help the poorest countries in tackling climate change.

With regard to the EU, the adoption of the *Roadmap to a Resource Efficient Europe* last year will be followed in 2012 by a more detailed sustainable production and consumption action plan. The plan will have longer-term consequences for local authorities – as well as businesses within their areas – as it becomes embedded in national policies[18], DEFRA highlights that low-cost resource efficiency 'quick wins' could potentially save UK businesses £23 billion[19]. The UK's current EU-derived targets which should be met by 2020 include: sourcing 20% of national energy from renewable sources, recycling 50% of household waste and at least 70% of construction and demolition waste as against 1995 levels, reducing the amount of biodegradable municipal waste going to landfill by 65% as against 1995 levels, and to half the loss of natural habitats and biodiversity.

Looking ahead, in June 2012 *Rio+20 - The UN Conference on Sustainable Development in Brazil* will celebrate the 20th anniversary of the Earth Summit and Local Agenda 21. The primary focuses of the gathering will be the green economy, in terms of how it can alleviate poverty, and agreeing a new international framework for sustainable development to help create a more resilient planet. One likely area of discussion is a renewed call for the decoupling of human well-being from resource consumption by linking local or national development strategies to resource flow strategies, which is contentious as it goes beyond traditional calls for resource efficiency. Calls for this decoupling are informed by analysis by the UN's International Resource Panel[20] (IRP) which shows that by 2050 the level of resources used by each person each year will need to fall dramatically - to between five and six tonnes - in order for us to live within our environmental limits. Consumption levels vary wildly, with some developing countries still below this level, such as India at 4 tonnes per capita, whilst some developed economies, namely Canada, are as high as 25 tonnes per capita.

Box 1: Exporting the problem?

According to the IRP report, even in countries that are making explicit efforts at decoupling human well-being from resource consumption, such as Germany's National Strategy for Sustainable Development, and Japan's. Sustainable Society Policy, where it would appear domestic resource consumption shows stabilisation or even a slight decline, further analysis shows that many goods contain parts that have been produced abroad using major amounts of energy, water and minerals.

That is, that some countries (like the UK) are managing the problem of high resource intensity by exporting the problem elsewhere. Additional studies have also found that emissions from imported goods exceeded by five times the emission savings made by industrial nations between 1990 and 2008[21]. This means that these countries' national carbon reduction targets are increasing less and less credible if they fail to include emissions arising from overseas sourced goods.

21 The Environmentalist, (2011) 'Taking responsibility', ***The Environmentalist*** (May 2011: 3).

17 DECC (2011) Secretary of State Oral Statement on the Outcomes of the Durban COP17 Climate Change Conference, http://www.decc.gov.uk/ (website accessed January 2012).

18 The Environmentalist (2012) 'The Year Ahead', *The Environmentalist* (January 2012: 17).

19 ENDS (2011) 'Doing more with less: the real green economy', *ENDS Report* (September 2011: 440: 40).

20 International Resource Panel (2011) ***Decoupling: Natural Resource Use and Environmental Impacts from Economic Growth*** (Paris: UNEP).

Getting to grips with this challenge, as Box 1 shows, also means including resources used from goods sourced overseas when dealing the problem of reducing emissions.

UK policy

As noted earlier in Chapter 2, in August of last year the HM Government set out its policy in *Enabling the Transition to a Green Economy: Government and Business Working Together* for enabling the transition to a green economy. The vision is that a green economy of the future will[22]:

- grow sustainably and for the long term;
- use natural resources efficiently;
- be more resilient;
- exploit comparative advantage.

This includes driving change through:

- overhauling planning policy to consolidate existing disparate planning policy into a single concise National Planning Policy Framework
- reforming the electricity market to bring forward the £110 billion needed in energy generation infrastructure
- facilitating the manufacture of ultra low emissions vehicles and electric vehicle charging infrastructure
- launching the £200m Green Deal which will create the financing mechanism to support £14 billion investment in homes and businesses
- setting up a £3 billion Green Investment Bank to accelerate private sector investment in projects that support economic and environmental objectives.[23]

Whilst *Enabling the Transition to a Green Economy: Government and Business Working Together* does not make specific reference to local government, earlier national plans, put in place by this and previous administrations do.

The Climate Change Act, 2008

The Climate Change Act 2008 created a framework for building the UK's ability to adapt to climate change, which included:

- a UK wide climate change risk assessment that must take place every five years
- a mandate giving the Government the power to require 'bodies with functions of a public nature' and 'statutory undertakers' to report on what they are doing to address the risks posed by climate change to their work
- a national adaptation programme which must be in place and reviewed every five years to address the most pressing climate change risks to England.

The UK Government's first Adaptation Programme is expected in 2012. The Act sets legally binding carbon budgets with the long term goal to reduce carbon dioxide emissions by a very challenging 80% by 2050. As part of the Act, the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) established a new mandatory carbon reduction scheme designed to encourage public and private organisations improve energy efficiency and reduce the amount of carbon dioxide emitted in the UK. The CRC covers all organisations whose electricity consumption was equivalent to an annual electricity bill of £0.5m in the qualification year of 2008 and, thus, many UK local authorities are required to comply with the scheme. Carbon allowances must be purchased for each tonne of carbon dioxide emitted from energy use in buildings (currently £12 per tonne).

The Carbon Plan, 2011

The Government's Carbon Plan, released in early 2011, gives greater detail about how the Government intends to meet the challenging targets set out in the Climate Change Act. Through the Energy Act 2008, the Government has introduced an incentive for small scale renewable power in the form of the Feed in Tariff (FIT), a guaranteed amount of income per kw/h produced by the owner. (An incentive for large

22 HM Government (2011) *Enabling the Transition to a Green Economy: Government and Business Working Together* (London: HM Government).

23 On 8 March 2012 the Business Secretary announced the Green Investment Bank will be run from offices in Edinburgh and London.

scale renewable electricity came into effect in 2002 in the form of Renewable Obligation Certificates (ROCs) which place an obligation on UK electricity suppliers to source an increasing proportion of electricity they supply to customers from renewable sources). In addition, it also provided incentives for large scale renewable heating in the form of the Renewable Heat Incentive (RHI), providing premium payments for the purchase of green heating systems and many local authorities, including Wrexham Borough Council, have already registered with the scheme. [24]

The Flood and Water Management Act, 2010

The Flood and Water Management Act 2010 (applicable to England and Wales) means that many councils are now the lead statutory authorities with responsibilities for managing flood risk. This includes a requirement to use sustainable urban drainage systems (SUDS) in certain developments.

Devolved nations

As previously highlighted devolved powers mean that some nations are taking different journeys to the green economy. This has led to leaders in Scotland and Wales arguing they are more progressive than Westminster when it comes to greening their national economies compared to England.

At 42%, Scotland's climate change target for 2020 is significantly higher than the UK Government's (34%), and more than double that of the EU's(20%) [25]. These disparities recognise the Scottish Government's determination to be at the forefront of the green energy revolution, and to develop wind, hydro, tidal and wave energy technologies.

Wales already has established a strong focus of sustainability at the heart of Government strategy with *One Wales, One Planet* and the *Green Jobs Strategy for Wales* both released in 2008. However, in late 2011, the Welsh Government committed to introduce a new Sustainable Development Bill during its legislative programme, in order strengthen this approach and make the commitment a legal duty for all activities and decisions of the Welsh Government and devolved public bodies in Wales. It also sets out the creation of an independent sustainable development body for Wales.[26]

Local policy

Local authority responses to relevant policy are constantly reshaped as particular needs and circumstances change over time. In many ways, as we approach the 20th anniversary of the Earth Summit and Local Agenda 21 later this year, we have come full circle, with a re-emphasis on localism – but with a twist. The UK is in the grips a prolonged global recession which means there is a great emphasis on local employment, cost avoidance, self-sufficiency and community resilience.

Local Agenda 21

A key outcome of the first Earth Summit in 1992 was the emergence of Local Agenda 21, which highlighted the need for every area to have its own unique, bespoke sustainable development plan. Following this it became usual for UK local authorities to establish a cross-departmental steering group or specialist division to help develop and implement local policy on sustainable development, with the focus on community wellbeing, quality green spaces and domestic waste recycling, amongst other related issues.

Carbon management

A decade on from this, and the rise in importance of climate change meant that carbon expertise had become a requirement for local authorities and so they responded again. Interventions ranged from signing up to the Nottingham Declaration, devising carbon management programmes for town hall building, through to sustainability design obligations on developers in the Local Development Framework (LDF).

More recently, for some local authorities, policy responses have evolved again to also address how they realise new regeneration opportunities through greening local economies. The Local Carbon

24 However, in late 2011 the government announced that it was making provision for a reduced tariff rate (from 1 April 2012 onwards) for new solar PV installations.

25 BBC (2011), 'Scotland's Climate Change Target Could Cost '£11bn', BBC, http://www.bbc.co.uk/ (website accessed January 2012).

26 DEFRA (2012), 'Welsh Government Sets Out Vision for Sustainable Development Bill', *SD Scene* (9 January 2012: Issue 1, 2012).

Framework (LCF) by Plymouth City Council is one such case.[27] The LCF includes examining the size and value of the green economy in Plymouth and providing a forecast of its future growth and an analysis of both current and future skills needs - such as in relation to its contribution toward a new marine energy park in the South West of England[28]. The outcomes of this work are being reported to the recently created Local Enterprise Partnership (LEP) with the aim of incorporating the intelligence into regional growth plans.

This evolution of the 'greening of places', seen through Local Agenda 21, to now encompassing the 'greening of the economy' is critical. It means it has become an outright top priority amongst elected leaders, on par with other populist issues like safe streets or clean parks. The reasons for this is primarily that it relates to 'close-to-home' and highly desirable issues such as money, employment and shared prosperity.[29] This has developed into a new business case for taking action and is especially important during a time of austerity, when local government faces a 'perfect storm' of dealing with spending cuts (of up 28% between 2010-13) at the same time that demand for public services is increasing as residents struggle with loss of employment or income. Thus, local authorities have to make tough choices in order to do more with less.

For some this is a matter of hoping for the best and trying to ride out the storm that is the economic downturn. For others, there is actually an upside to the down, as it is offers a moment to seize a new opportunity to do things differently.

Building on this theme, the next chapter sets out in more detail the latest examples of how service leads in local authorities across the UK are ensuring their areas are best placed to benefit from the big transition to the green economy.

27 CAG Consultants (2011) *Evaluation of the Local Carbon Framework Pilots* (London: CAG Consultants).

28 DECC (2012) *South West Makes Splash as First Marine Energy Park* (23 January 2012: Press Release).

29 Monaghan, P. (2010) *Sustainability in Austerity: How Local Government Can Deliver Sustainability During a Time of Crisis* (Sheffield: Greenleaf).

4. How are councils instigating and accelerating the Green Economy transition?

4.1 Leadership

High-quality local leadership takes many forms.[30] It can be top down, be led by grassroots actions or be a combination of the two. For example, it can take the shape of a bold council vision for the area which helps secure a new comparative advantage, or it may involve people willing to take a political risk and collaborate creatively with unlikely partners in order to solve some of life's big problems. It may be communicated through charismatic people in the community with high social status, who step forward to help others and inspire neighbours to follow suit. Indeed, it could be some combination of these top-down and grassroots interventions.

Such inspirational and high-quality leadership will be key for the big transition to a green economy. Drawing upon the examples from Hackney and Liverpool amongst others, it is clear that many UK local authorities have are already stepped up to the challenge.

London Borough of Hackney

When Hackney's Deputy Mayor Cllr Sophie Linden welcomed participants to the conference *Practical Solutions: Financing Sustainability in London* in December 2011 this was a demonstration of how the local authority is reaching out to lead the move to a greener economy.

The event was unique in that it was convened in partnership with an unlikely collaborator - the environmental pressure group Friends of the Earth (whose *Get Serious* campaign aims to cut emissions in all areas of the country by at least 40% by 2020) with the premise being knowledge transfer between members and finance officers. The purpose of which was to ensure that local authorities were best placed to deal with the current challenges around financing sustainability in an economic downturn. Participating councils included Barking & Dagenham, Greenwich, Hammersmith & Fulham, Haringey, Hillingdon, Kensington & Chelsea, Kingston, Islington, Lewisham, Redbridge and Sutton, amongst others.

> Ian Lewis, Assist Chief Executive (Policy & Partnerships) at the London Borough of Hackney who chaired the conference, says this is typical of local authority's type of leadership:[31] *"Ten years ago we were considered to be the worst run council in the country, and now we are one of the best. This type of event is our style. It is not about us shouting about the good things we have done but our keenness to learn from others. It is about securing the future by getting our approach right."*

Hackney's current green economy programme includes:

- constructing of a Combined Heat and Power (CHP) Network, set to go live in September 2012 and exploring the expansion of the network across neighbouring boroughs to make best use of the heat and power and to further reduce carbon dioxide across the wider city
- visiting 1,300 homes in the Leabridge ward to offer energy efficiency advice, small interventions and referrals to schemes for larger interventions (43% of the borough's emissions are produced by homes which is more than business, industry and transport)
- collaborating with British Waterways on the Lower Lea Valley waterbus taxi service for visitors to the London Olympics (to encourage low carbon travel); and
- extending the existing green corridors to better connect areas of higher population density to green space nearby and to use high quality urban design so that people have pleasant and safe routes to walk and cycle between main town centres, local amenities and neighbouring areas, such as Stratford City.[32]

30 Local Government Association (2008) *Local Government Leadership – Creating Political Value* (London: LGA).

31 Case interview with Ian Lewis, London Borough of Hackney (10 January 2012).

32 London Borough of Hackney (2008) *Hackney's Sustainable Community Strategy 2008*-2018 (London: London Borough of Hackney).

"Our approach is about building on what is unique about Hackney. Greening the borough is one important part of our aim to be a cultural hub on the edge of the city of London. We do not have huge employers, but these green credentials enable us attract small businesses in the creative industries. But as part of this 'offer', we also want to ensure we are able to close the gap between the affluent and the poor and so expect these employers to pay a living wage as opposed to a minimum wage. This position on being green and also fair is hardwired into our Sustainable Communities Strategy. We are mainstreaming it within the council by ensuring that this is a 'golden thread' is reflected in key decision-making, such as through our Core Strategy, procurement policy, and reporting to Cabinet." concludes Lewis.

What is clear from the lesson in leadership from Hackney, as well as other local authorities, is that the drivers to move to a green economy go *beyond* complying with central government policy. Strong business cases have been forged in local authorities by building more resilient societies through job creation, inward investment, eradicating fuel poverty, adapting to extreme weather, boosting resident's capacity for self-help and financial savings.

This action by local authorities on the green economy can often mean these areas are hotspots of innovation, created through excellence in leadership that are way ahead of central government thinking. Take for instance the Kirklees Warm Zone which is considered the most successful and comprehensive home insulation programme in the UK (Kirklees is the only council that offers all of its residents free home insulation). Or the UK's first Green Skills Training Centre in Blaenau Gwent, a partnership between British Gas and the county council which aims to create a new generation of green apprentices. And the Southampton District Energy Scheme, which is the largest commercially developed district energy scheme in the UK and a pioneer of geothermal energy.[33]

There are similar examples of innovation in this field by local authorities from overseas too. As part of its climate change adaptation plans, Chicago has more than 2 million square feet of roof top gardens, which is more than all other cities in the USA combined.[34] Another example was when the Japanese government failed to take sufficient legislative action on climate change, Tokyo Metropolitan authority 'stepped up' and passed legislation that now requires all major companies in the city to formulate emission reduction plans.[35]

Returning once again to UK-based innovation – Liverpool is a significant example of how a city and key stakeholders can join together to show outstanding leadership on this agenda. Working in partnership with energy regulator Ofgem, energy company Scottish Power and the housing association Plus Dane, Liverpool City Council supported the development of the UK's largest smart electricity grid in 2010 (whereby 1,200 households in Toxteth were fitted with solar panels, electric car charging points and smart meters).[36] But this is just one part of the local authority's broader ambition for Liverpool to become a leader in 'smart city' solutions.

Liverpool City Council

"Liverpool has always had a close connection with green issues: There is our proximity to the River Mersey; we were the first home of the Groundwork [federation of trusts] movement; and we were one of the first local authorities to analyse its ecological footprint, then produce a sustainable development plan. Becoming the European City of Culture [in 2008] and hosting the Year of the Environment [in 2009] resulted in us incorporating our Climate Change Strategy into the city's Local Development Framework." says Jan Rowley, Director, Community Services at Liverpool City Council[37]

Over the past couple of years the city has refined its leadership role, with a particular focus on private sector partnerships regarding energy and resiliency. This is influenced by: i) the ecological opportunities made available by Liverpool's coastal location and land availability (notably as a base shipping port, supporting and servicing offshore wind farms in the Irish Sea which is estimated to be worth £15 billion by 2020); ii) enterprise offered by industry (e.g. Jaguar Land Rover, Peel, and Stobarts

33 Friends of the Earth (2009) Cutting Carbon Locally – And How to Pay For It (London: Friends of the Earth).

34 Monaghan, P. (2010) *Sustainability in Austerity: How Local Government Can Deliver Sustainability During a Time of Crisis* (Sheffield: Greenleaf).

35 Local Government Association (2009). *The Climate Challenge: Local Solutions Through Global Learning* (London: LGA).

36 CLASP (2010) *Developing Strong Links Between the Local Carbon Economy and Economic Development in Local Authorities* (Wigan: CLASP).

37 Case interview with Jan Rowley, Liverpool City Council (25 January 2012).

Group); and iii) thought creation through its universities and colleges.

To drive this forward existing delivery infrastructure is being consolidated – through all local authorities in the city region, the LEP, The Mersey Partnership, Merseyside Waste Development Authority and others to establish a new 'Smarty City' board. It will focus on ensuring the city's residents and businesses are resilient and well equipped to adapt to changing weather. Examples include, the promotion of district energy infrastructure, and housing retrofits which are estimated to be worth up to £5 billion to Liverpool's economy.[38] The board will be led by Liverpool Vision, the city's economic development company.

> Rowley continues *"Our Low Carbon Economy Action Plan shows that we can create 12,000 jobs in the wind, transport, housing and retrofit sectors over the next half decade (the city region already employs approximately 9,000 people in this sector). As a city with significant areas of deprivation and a declining population, this provides both an opportunity increase local prosperity, as well as the vision to attract new people to Liverpool. Supported by government, the new green skills hub operated by Liverpool Community College will help ensure we are well placed to meet these training and employment challenges".*
>
> *"It's another indicator of the mainstreaming of this agenda in the city's leadership. Liverpool City Council no longer tolerates any silo working when it comes to the green economy. We have a Cabinet Member for Environment and Climate Change who works closely with the Member for Regeneration as well as the member for Skills too. At the officer level, this agenda is being incorporated into the day to day activities of our Resilience and Emergency Planning function. This is because the business case to act is being made in language that resonates with our leadership."* adds Rowley.

Liverpool City Council's reference to the importance of both leadership and mainstreaming is well made and repeatedly cited as a key factor of success is the topic becoming a non-partisan issue amongst politicians. Further evidence of the importance of this was seen in Brighton & Hove, when in 2008 the authority launched a campaign to become internationally recognised by UNESCO as a 'biosphere reserve'. The area concerned included coastal ecosystems within the South Downs National Park and was driven by the goals of promoting responsible tourism and enhancing water security). By 2011 all main political parties had included a commitment to the proposal in their local election manifestos. Similarly, in Canada, the forward thinking council of Vancouver has reached cross-party support for a 100-year plan for sustainability. This unusually long-term plan included an early action for 90% of the city's power to come from a hydroelectric source.[39]

4.2 Regeneration and spatial planning

Local authorities up and down the UK from Newport to Peterborough are remodelling traditional approaches to economic development so their areas are able to compete in the £4 trillion global market for low carbon goods and services. Doing this can sometimes require rebranding an area as a destination where major employers with green credentials would want to be located, and where their workforce would want to live and play.

Interventions to achieve this range from special economic trade zones and business incubation, through to new developer controls and smarter use of existing physical and natural infrastructure. In particular, the past three years has seen a remarkable rise in interest amongst local authorities in the UK (as well as across the world) in the concept and practice of so-called 'low carbon enterprise zones (LCEZs) – as detailed in Box 2. Notably it is worth remembering that these 'zones' may be referred to by different terminology, although may exist and characteristically be the same or similar[40], the reason for this is that as the green economy concept is still relatively new – agreed terms are yet to emerge.

38 Arup (2011) *Mechanisms of Energy Infrastructure Delivery for the Liverpool City Region* (Liverpool: Arup).

39 Monaghan, P. (2012) *How Local Resilience Creates Sustainable Societies: Hard to Make, Hard to Break* (London: Earthscan).

40 Adapted from: ICLEI (forthcoming 2012) *The Economy of Green Cities – World Compendium on the Green Urban Economy* (Freiburg: Springer).

Box 2: Cloning of Zoning or Different Approaches?

LCEZs are special economic trade areas in cities and towns within which designated clusters of low carbon industries are nurtured. In doing so, local authorities are building the brand of their districts by providing a clear market signal that they are 'open for business' in the clean technology industry; whilst simultaneously implementing controls that reduce the incidence of fossil fuel dependent activities. Motivations go beyond traditional notions of greening local government to the core activities, namely building local capabilities to attract new inward investment, regenerating areas by creating jobs and re-skilling the local workforce, and enhancing local resiliency by providing greater energy or water security.

Particularly noteworthy schemes include solar energy in Baoding (China), hydrogen transport in Newport (UK), energy efficient LED lighting in Toronto (Canada) and water efficiency in Zaragoza (Spain). Taking the four examples listed, one can identify a number of common and unique characteristics in these LCEZs. The most notable common feature is that they are seeking to gain competitive advantage in low carbon markets through clustering business capabilities and academic research.

However, it is interesting to note that in some countries such as the UK, the process of designating LCEZs was originally instigated by central government and required local government to apply for ministerial designation (whereby a city or region submits a competitive bid to national government to be designated a LCEZ), as was the case with Newport. The practice has since evolved whereby municipalities are notable to self-designate as LCEZs through their own local planning frameworks (as is the example of Liverpool).

Whilst some LCEZs date back up to10 years (Baoding), others such as in Newport have developed more recently and so comparative performance data varies. Despite this, it is clear by all accounts that Baoding has been a strong success, whereby (as part of a national to move away from heavy manufacturing to new hi-tech markets), the municipality introduced an industrial energy saving policy and regulations for businesses that was further complimented by financial incentives support for solar panel production. Baoding now has 20,000 people working in the clean energy industry which generates £4.5 billion per annum, and is expected to grow 30% each year through to 2016.

It is also interesting to appreciate that seizing an economic opportunity may not have originally been their primary driver. So for instance, Zaragoza's initial drivers were dealing with the environmental dilemma of water shortages. The economic opportunity to trade in the £247 billion water market was only discovered subsequently during the course of resolving the water shortages.

Another place which is successfully exploiting the concept of the LCEZ is Peterborough, which boasts the largest cluster of companies in the environmental goods and services sector in the UK.

Peterborough City Council

The 'Green Quarter' in Peterborough is a state-of-the-art six storey building that hosts over 380 environmental businesses. The reaches of these businesses spans across the globe and is across multiple cutting edge technologies, including wave energy turbines to eliciting bio-fuels from micro-algae. Interestingly, the Green Quarter also includes a flagship sustainable Tesco store where heat generated by the supermarket's huge refrigeration and cooling systems is harnessed to service the offices.

> *"Peterborough is bucking the national trend. Unemployment is down and below the national average. This is especially the case amongst businesses in the environmental cluster, which is intended to create 2,500 jobs for the city. Companies are benefiting from the ability to get work from each and the volume of this is on the rise."* says Paul Phillipson, Executive Director (Operations), Peterborough City Council. [41]

The Green Quarter is one strand of the city's wider 'Home of Environmental Capital' strategy to develop the city sustainably. This is a high level vision endorsed by their Local Strategic Partnership (LSP); other initiatives in this strategy include:

- the council's unique Peterborough Model, which demonstrates environmental performance at a city level, such as SAP ratings of buildings, which has attracted interest from New York, Cape Cod, Bordeaux and Vienna as well as HM Treasury
- establishing the UK's largest zero-carbon homes development on Peterborough's South Bank comprising 295 Code 6 homes and investing in seven new schools to the highest possible green building standards

41 Case interview with Paul Phillipson, Peterborough City Council (03 January 2012).

- creating *Blue Sky Peterborough* - an Energy Services Company (ESCo) to administer green housing retrofits that take advantage of the Green Deal and FIT includingg 25,000 new homes are to be built by 2026 and the aim to make these 87% more energy efficient;
- establishing a sustainable skills centre in partnership with Cranfield University;
- being home to the UK Centre for Economic & Environmental Development (UK CEED), a charity that promotes the economic benefits of sound environmental practice and has been recognised across Europe for its innovation network (EcoCluP)
- installing 75 electric car charging points as part of the Plugged in Places programme that will deliver 30-40% emission reductions during the lifetime of the vehicles;
- collaborating with Anglian Water on sustainable waste water management – this is important as Peterborough is vulnerable to flooding given its proximity to The Fens and at the same time is also one of the driest places in the country;
- boosting quality of life in Peterborough by proving the highest green space per capita ratio in the UK;
- introducing a supplementary planning document on sustainable design and construction to the Local Development Framework (LDF).

Given these credentials, Peterborough with the support of its LEP was one of several cities bidding to host the Government's new £3 billion Green Investment Bank. *"Peterborough is traditionally associated with blue collar jobs. So a big attraction for the council with the transition to a green economy is the creation of white collar jobs, which can raise GDP and standards of living in the city."* continues Phillipson.

An ambitious goal of the Environmental Capital strategy is to decouple growth from fossil fuel use, thus reducing carbon dioxide emissions per capita to 6.7 tonnes by 2014. With the current UK average at 10 tonnes per capita, this will need to drop to 2 tonnes per capita over the next four decades to meet the Government's target of an 80% reduction in emissions by 2050.

In addition to clustering, business support is another way that local authorities are regenerating their areas, whether by helping existing companies grow or aiding new ones to be setup. This well established intervention, usually in collaboration with the local chamber of commerce, is now being extended to the green economy. This ranges from a free 'low carbon business network' such as that established by Stockport Metropolitan Borough Council[42] – which requires little if any extra resources, through to a for-fee serviced 'green business incubator', such as the one soon to be launched by South Tyneside Council[43] which will pay for itself.

Development controls are another major resource for local planners and low carbon design and construction requirements have been a feature of Local Development Frameworks for many years now. Local authorities such as Cambridge City Council[44] have produced detailed guidelines for building developers in the form of a Sustainable Design and Construction Supplementary Planning Document (SPD), which lists both legislated national standards and optional best practice features, these range from water conservation measures to renewable energy technology installations. Learning from others suggests there is also an opportunity here to secure a new income stream to subsidise low carbon investments elsewhere. In parts of Milton Keynes, for instance, developers pay a levy to compensate for the carbon emissions arising from the use of new properties. Monies are subsequently collected into a council fund which is spent on local schemes such as insulating older homes which are much less energy efficient.[45]

In addition, a more creative use of existing infrastructure is aiding the green economy transition amongst councils – rethinking how green spaces can be of even greater benefit to the area beyond their traditional value as a source of leisure. Glasgow City Council and the London Borough of Lambeth have both been utilising their assets to this end. Glasgow have been using the natural environment, in relation to flood management, and Lambeth have been calling on their neighbourhood management service, with regard to local food growing, respectively. Creative use of existing infrastructure can also

42 Stockport Metropolitan Borough Council (2012) http://www.stockport.gov.uk/events/lowcarbonbusinessnetwork (website accessed January 2012).

43 South Tyneside Council (2012) http://www.southtyneside.info/article/13356/Green-Incubator (website accessed January 2012).

44 Cambridge City Council (2006) *2006 Cambridge Local Plan* (Cambridge: Cambridge City Council).

45 Forum for the Future (2010) *Stepping Up: A Framework for Public Sector Leadership in Sustainability* (London: Forum for the Future).

take the form of smarter use of derelict property. Take for instance an urban farm called Alpha, which is in development in a derelict tower block in Wythenshawe, Manchester. One of a new breed of radical 'vertical farms' in cities across the world, it aims to produce lettuce, tomatoes, vegetables, chickens, bees and fish in time for the city's 2013 International Festival.[46] Another fascinating insight is from the state of Pennsylvania in the USA, which has been renovating old buildings for profit in brownfield sites using energy efficiency measures and solar, wind, and geothermal installations since 2005. Partly as a result of this 'Green Works' venture, Pennsylvania was one of a handful of states in the USA that managed to grow employment in 2011 by over 1.1%.[47]

4.3 Transport and logistics

When it comes to decarbonising the local economy, travel patterns are one of the biggest planning issues local authorities deal with - be it journeys made by business, residents or even council staff themselves! Transport accounts for about 14% of all emissions arising from various economic activities[48] as it plays a critical role in how we live, work and play. It also can cause huge economic loss when it goes awry (traffic congestion is estimated to cost 1% of GDP in the EU).[49]

Consequently, how to enjoy the benefits of travelling whilst minimising the adverse impacts has been a primary focus of policy in many councils including Belfast and Bromsgrove and Redditch in relation to:

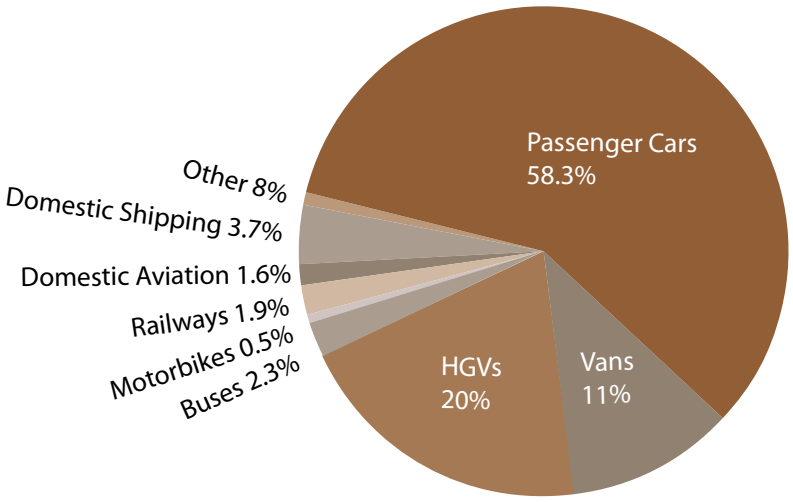
i) **compactness** – the densification of places to help change behaviour when it comes to people feeling able to leave their car at home);

ii) **the electrification of public travel** – a move towards plug-in vehicles; and

iii) **the greening of municipal fleets** – replacing older polluting vehicles with more modern efficient ones.

Statistics from the Department of Transport[50] (shown in Figure 2) below demonstrate, amongst other things why getting UK citizens to use their car less is a priority when it comes to reducing emissions; and further to this that compact policy has major economic benefits beyond the avoidance of congestion such as those detailed in Box 3.

Figure 2: Emissions by mode of domestic travel



46 Sustainable Cities Collective (2012) http://sustainablecitiescollective.com/ (website accessed January 2012).

47 Dean, J. (2011) 'Pennsylvania's Green Economy', The Green Economy http://www.thegreeneconomy.com/ (website accessed October 2011).

48 Stern, N. (2006) *Stern Review on the Economics of Climate Change* (London: HM Treasury).

49 Global Alliance for EcoMobility (2010), http://www.ecomobility.org (website accessed April 2010).

50 Department of Transport (2009) *A Carbon Strategy for Transport* (London: Department of Transport).

Box 3: Compact cities in Belfast and Toyama - greener to live in and cheaper to operate

There is a compelling body of emerging evidence that compact places are ones where residents live greener lives, and where local authorities run more cost efficient public services. (For instance, regard the former, the average Londoner produces around half the emissions of the average Briton[51]). Installing a sewerage network along a city street that can connect thousands in one go, is much cheaper than connecting rural conurbation by rural conurbation.

Given this, the London School of Economics has identified a number of interventions to enhance the efficiency of urban resource flows and improve prosperity of life.[52] These include:

- establishing urban growth boundaries to limit urban sprawl
- land-use regulations that promote redevelopment of city areas and protect green space corridors;
- density regulations to enforce minimum densities
- density bonuses for developments that support city-wide sustainability
- special planning powers for urban development corporations or urban regeneration companies
- vehicle and traffic regulations to reduce emissions, fossil fuels and congestion
- maximum parking standards to discourage private car use
- incentives for car-free developments
- minimum energy efficiency and emissions standards for buildings and vehicles.

Belfast on the Move is an example of compact policy proposals that are aiming to discourage private car use. Developed by the Department for Regional Development in consultation with Belfast City Council, notable features of the draft strategy are to deliver a rapid transit system and the reallocation of available road space in the city centre in favour of buses, cyclists and pedestrians.[53]

There are interesting international lessons again here too. Toyama in Japan is facing up to the challenge of how to ensure its depopulating city remains compact; here walkability is a must as its ageing population becomes less able to drive.[54] Similarly, Freiburg in Germany has designed entire districts which are car-free zones.

51 Barley, S. (2010) 'Escape to the city', *New Scientist* (06 November 2011: 32).

52 UN-Habitat (2011) *What Does the Green Economy Mean for Sustainable Urban Development?* (Nairobi: UN-Habitat).

53 Department for Regional Development (2010) *Belfast on the Move*: Transport Masterplan for Belfast City Centre, Public Consultation (Belfast: DRD).

54 OECD (forthcoming 2012) Compact City Policies: A Comparative Assessment (Paris: OECD).

Often such transport planning policies are developed in conjunction with behaviour change initiatives, to educate the general public and 'nudge' them in the right direction. Devon County Council has introduced a car free day once a year that encourages residents to leave cars at home and try out a more sustainable way of travelling and includes offering discounted bus travel for the day.[55] Craiova in Romania and New York have both gone to the extent of introducing car free weekends in downtown areas.[56]

Of course, it is not just about people using their cars less. This is not always possible. So it is also about helping people to switch from a fossil fuelled to electric vehicles. Electric cars have no tail pipe emissions and it is estimated that an electric car powered from today's grid could emit between 15 per cent and 40 per cent less CO_2 over its lifetime than a similar sized petrol car. To accelerate the mainstreaming of electric vehicles in the UK, the Government launched the 'Plugged-In Places' initiative[57], with areas such as Aberdeen, Cardiff, London and Newry & Mourne leading on this rollout.

As part of practising what they preach when decarbonising frontline services, an increasing number of local authorities have instigated a green fleet review – for instance, in relation to waste collection wagons, street cleansing vans and business cars. Such a review typically involves looking at four key areas: vehicle replacement, choice of fuel, use of grey fleet and smarter driving. A major motivation here for green fleet is obviously resource efficiency as in terms of fuel costs, for instance, the Energy Saving Trust highlights that smarter driving can reduce fuel consumption by up to 15%.

Redditch Borough Council is a particularly interesting example of this, as in 2009 the local authority decided to create a shared management team with Bromsgrove District Council and move to shared services with the aim of making an initial saving of £1.2 million (and then subsequent annual savings of £500,000).[58]

55 Devon County Council (2011) http://www.devon.gov.uk/devoncarfreeday (website accessed January 2012).

56 Civitas (2010) Move: *The Civitas Initiative Quarterly Newsletter* 3 (April 2010).

57 Department for Transport (2012) http://www.dft.gov.uk/topics/sustainable/olev/recharging-electric-vehicles/ (website accessed January 2012).

58 Local Government Chronicle (2009) 'Bromsgrove and Redditch to Share Managers', http://www.lgcplus.com (website accessed January 2012).

Bromsgrove District and Redditch Borough Councils

Carbon management in relation to frontline services is an emerging issue for both Bromsgrove and Redditch. However the green fleet review originally focused on Redditch explains Ceridwen John, Climate Change Manager for Bromsgrove District and Redditch Borough Councils:[59]

> *"Redditch is a new town with an excellent transport network and, as such, is fairly compact and enjoys short average journey times. Being a lower tier authority in Worcestershire, we are responsible for several large services which also include servicing our own housing stock, where we hold 6,000 properties. Consequently, we have a large fleet for the size of authority and run a total of 110 vehicles; 92 of which are medium size diesel 'white van' vehicles. As part of starting to calculate the Council's own carbon footprint in 2008/9 we identified that our vehicle fleet was responsible for a large part of our carbon emissions. Working with the Energy Saving Trust, we decided to examine these emissions in more detail to identify whether or not it would be possible to make any efficiency savings that reduce emissions and our costs."*

Redditch's portfolio holder for Environment, Housing and Climate Change was a committed sponsor of the initiative from the outset, as in particular, the councillor wanted to find a way of incorporating electric vehicles into the council's fleet as well as looking at wider service area efficiencies. So after a two years trial period, a small cleansing vehicle – which would operate around the town centre only, removing litter from bins – was identified as the most suitable match. This was also popular with town centre users because there was less noise and diesel air pollution.

> John adds *"The electric vehicle travels on high footfall pedestrianised areas, so it is also a good tool to increase visibility and awareness amongst the public that we are taking our responsibilities to become a greener Council seriously."*

These cleansing vehicles were coming up for replacement and so following the successful trial with rented vehicles Redditch decided to purchase its first electric vehicle. It cost £18,000 which was more expensive than the petrol van alternative (c£12,000), but the business case was accepted on the basis that the need for petrol fuel over a five year period (c£5,000 not factoring in predicted significant fuel price increases) was eliminated and the cost of electric to charge the vehicle was much smaller, even taking into account predicted increases in these costs too. Combined with the saving of £120 per year on road fund tax costs, over the course of 5 years, the council was at 'break-even' point and because it intended to retain the vehicle for around 7 years, the conclusion was that in the long term, this will result in an overall saving for the authority.

Given this, Redditch want to do more, but is somewhat constrained by market forces in terms of vehicle choice, sich as purchase cost and suitability for service function, and a lack of recharging points outside of the depot, which limits the distances that can be covered. Despite this, Redditch is still aiming to pursue this agenda and is about to undertake a new trial of a similar vehicle for cleansing in its two award winning green flag parks.

A local authority's fleet is of course just one of many assets it needs to manage. The next operational area examined is how new and experimental approaches to asset management and procurement are adding further value when it comes to the green economy.

4.4 Asset management and procurement

Intelligent finance (as a way to resource low carbon solutions) is a well recognised practice for asset managers or procurement officers in UK local authorities. In-house 'pay-as-you save' or revolving funds are a common funding method, which can operate as an internal loan scheme - whereby money is borrowed to fund energy or water efficiency measures which is repaid from the utility savings made as a result. North East Lincolnshire Council, for instance, is aiming to make financial savings of £4 million based on an outlay of £500,000 over five years (2008-2013) by reducing its carbon footprint by 25% through its carbon management programme, such as heating controls, energy efficient light and car sharing.[60] In 2011 Wrexham County Borough Council decided to apply this method to the generation of renewable energy too by planning to install photovoltaic panels onto 3,000 council-owned domestic and non-domestic properties and is expected to save council tenants £100-£300 per

59 Case interview with Ceridwen John, Bromsgrove District and Redditch Borough Councils (16 January 2012).

60 North East Lincolnshire Council (2009) *Carbon Management Programme* (Grimsby: North East Lincolnshire Council).

property year and generate an average £1 million yearly income for the council over the next 25 years by taking advantage of the Government-backed Feed-in Tariff scheme.[61]

But is it possible to apply this technique on a whole area basis, even across a city? The Centre for Low Carbon Futures believes so and indeed that such an investment can prevent a significant amount of GDP leaving an area, whilst stimulating job creation too, as detailed in Box 4.

Box 4: Stopping GDP leaving the area through low carbon investment

A new study shows that UK cities such as the Leeds city region, which has an economy worth £54 billion a year and an energy bill of £5.4 billion a year, could cut their costs by billions through exploiting commercially attractive opportunities in energy and carbon management.[62] According to The Centre for Low Carbon Futures investments increased energy efficiencies could be made in homes, public and commercial buildings, as well as to industry and transport, which would pay for themselves in commercial terms in just 4 years. The study also finds that around 10% of city scale GDP leaves the local economy each year through payment of energy costs (and that this will rise substantially in the next 10 years). However, the Centre also concluded that by 2022 an area such as the Leeds city region, by investing 1% of GDP for 10 years, would typically lead to cuts in the energy bill worth 1.6% of GDP every year (and cut emissions based on 1990 levels by 35%). Crucially this would also create jobs, improve energy security and tackle fuel poverty. So for instance, for £1 billion spent on investment in low carbon options would generate £220 million of cost savings and create 1,000 new jobs and wider economic benefits of a further £50 million per year.

At this huge scale, where would the upfront investment come from? The study authors suggest it could be institutional investors such as pension funds, or in the near future through the Green Deal, the Green Investment Bank or Energy Company Obligations. APSE research also suggests that another major source of investment should be local government's own pension funds.[63]

62 Gouldson, A., Kerr, N., Kuylenstierna, J., Topi, C., Dawkins, E., Pearce, R. (2012) *The Economics of Low Carbon Cities* (Leeds: Centre for Low Carbon Futures).

63 APSE (2010) 'Investing local government pension funds in regeneration schemes', APSE direct news (August/September 2010: 12).

It seems that Birmingham City Council concur with this thinking on asset management, as they are attempting to do something very similar through a pioneering scheme proposed through the government's new 'Green Deal' programme.

Birmingham City Council

Half of UK carbon emissions come from the energy used to heat households and workplaces. The 'Green Deal' is a revolutionary programme that was announced in 2010 attempts to address this through making buildings more energy efficient. Under the scheme bill payers will be able to get energy efficiency improvements without having to provide upfront cash. Instead, the private sector will provide the capital, getting their money back with interest via the energy bill (with the requirement that all savings on bills equals or exceeds the cost of the improvements).[64]

Ambitious leaders at Birmingham City Council intend for the local authority to become a major player in the Green Deal.

> *"We plan to be involved [in the Green Deal] in two ways – firstly as a provider and secondly as a financer. As provider, we would lead on retrofit works for the city itself and also for other, smaller, nearby local authorities. This makes sense for both us them in terms of the economies of scale given it is worth £1 billion in supplies. Wolverhampton and Redditch, amongst others, have already signed up to this. As a financer we will offer a lending mechanism at the UK level. This loan aggregator or 'warehouse function' would most likely be in partnership with other national partners such as housing federations and accountancy groups possibly like the PwC Green Deal Financing Company."* explains Jack Glonek, Assistant Director (Investment, Enterprise & Employment) at Birmingham City Council.[65]

Birmingham is in advanced negotiations with the Government about these trailblazing plans, in

61 APSE (2011) *Creating A Virtuous Green Circle* (Manchester: ASPE).

64 Department for Energy and Climate Change (2010) The Green Deal: A Summary of the Government's Proposals (London: DECC).

65 Case interview with Jack Glonek, Birmingham City Council (25 January 2012).

readiness for the Green Deal programme becoming operational by Autumn 2012. The city also participates in the *Green Deal Network* to exchange ideas about how best to shape practice in this new area – The Green Deal Network is a cross-sector collaboration comprising Asda, British Gas, Kingfisher, Lloyds, Birmingham City Council, as well as other interested business partners.

The City's credentials to undertake this important role were recognised in late 2011 when Birmingham was awarded a prestigious international honour for its Birmingham Energy Savers (BES) programme.[66] The scheme was named as winner of the Urban Retrofit Award by the World Green Building Council during the 2011 UN Climate Change Conference in Durban, South Africa.

BES is set to lead to £1.5 billion of green retrofit work for nearly 200,000 buildings in Birmingham and across the West Midlands over the next 15 years. During the £100million pathfinder phase (2012 to 2015) the programme will deliver energy efficiency improvements along with renewable energy and heat technologies where appropriate for 15,000 houses and 40 public buildings. This will lay the foundation for a wider £1.4billion scheme that by 2026, will see 60,000 homes and 1,000 non-domestic buildings retrofitted in Birmingham, as well as a further 100,000 homes and 1,500 non-domestic buildings retrofitted across the West Midlands. The programme will not only help citizens, but also assist local businesses to take forward new technologies and will create conditions for their engagement in the Green Deal. The scale of the initiative is also sufficient to have a significant impact on the construction industry in the city, as the project is expected to create and safeguard 60,000 jobs, ranging from installation engineers to designers. By 2020, a 4.3% reduction on current carbon emission figures is expected from domestic retrofits performed under the programme. For non-domestic buildings, the scheme is expected to cut emissions by 7.8% over the same period, with further carbon savings expected as the programme progresses.

> Explaining Birmingham's big motivation to undertake both financer and provider role, Glonek says *"Given our size and large housing stock, it is only right for us to take a lead as Green Deal provider. We're delivering many aspects of this role already. By scaling this up and being an early adopter we hope will make boost our competitiveness through first mover advantage. Acting as a Green Deal financer will be new for us, but makes perfect sense too. Through 'Finance Birmingham' (our wholly owned subsidiary that offers financial services to the public sector) we have existing public sector finance expertise that we think we can build upon. This offers a tremendous opportunity to establish Birmingham as a national hub for green skills in both manufacturing and financial services. As finance can often be the 'Achilles heel' for these types of large low carbon investments, shaping this side of the Green Deal programme is a great way to ensure our provider role happens too. Furthermore, as a provider we aim to create a margin that can be recycled in our wider low carbon enterprise schemes."*

Birmingham's aspirations do not stop here though. The local authority in time hopes to deliver these Green Deal services to non-domestic customers and expand the offer to include the supply of renewable power by cultivating surrounding agricultural land to produce wood pellets for biomass energy.

Delivering urban infrastructure on this scale and level of complexity, it can be argued that a new breed of so-called 'smart cities' is needed - ones that deploy smart technologies in key areas such as electricity grids, transport and buildings to unlock information, ideas and energies that create more sustainable modes of living and working. In doing so it is claimed, that up to 15% of world emissions could be cut by 2020 with business also making a financial saving of £574 billion a year.[67]

St Helens Council is one such local authority that is already embracing smart technologies. This started with its street lighting and is to be extended to highways too.

St Helens Council

Since 2009, St Helens Council has been a participant in BLISS (Better Lighting in Sustainable Streets) a five year European lighting project that is underpinned by the need to reduce energy consumption through the trialling of cutting-edge new technology. As part of this, St Helens is exchanging insights

66 Birmingham City Council (2011) http://birminghamnewsroom.com/2011/12/global-recognition-for-citys-green-efforts/ (website accessed January 2012).

67 The Climate Group, Arup, Accenture & The University of Nottingham (2012) *Information Marketplaces: The New Economics of Cities* (London: The Climate Group).

from its pilot work with other participants from Eindhoven (The Netherlands), Interleuven (Belgium) and Kaiserslautern (Germany).

> *"Over the past half decade the council's electricity bill has increased nearly threefold from £500,000 to £1.3 million and street lighting is a significant part of this cost. But, whilst our leadership is committed to reducing energy consumption, they want it to happen without reducing service quality. Street lighting is closely connected to the top political priority of neighbourhood renewal. So, the key is finding ways to make financial and carbon savings in our street lighting whilst not adversely affecting road safety, crime and social acceptance"* says Rory Lingham, Assistant Director (Engineering)[68]

By utilising various equipment and techniques, such as LED technology and variable techniques this is being achieved and the goal is to identify the appropriate 'white light' source that appears brighter but actually uses less energy. The trials of different street lighting include close monitoring of road accidents, anti-social behaviour and resident satisfaction rates as well as energy use. Critically, IPSOS/MORI polls in the pilot areas reveal that users do indeed prefer the new lanterns and lamps to the ones they replaced.

> Lingham concludes *"From the intelligence gathered through the EU pilot (which will complete in 2013) our aim is to progress to an invest-to-save programme, which could potentially see our electricity bill fall to £800,000, with a payback period of 6 years."*

4.4 Environmental services

Waste collection, grounds maintenance and street cleansing are all core services for local authorities. Action is not just set by EU or UK law, but also because clean and green streets is a top priority for most if not all residents. Maintaining these frontline services is a huge cost burden. So it is refreshing that from Glasgow to Stirling, councils are innovating around how they can create new value from these activities. These range from seeing waste not as useless, but instead as a resource flow which can be converted into a more productive asset; through to being creative in extracting extra value from already cherished green spaces.

Reclaiming energy from municipal waste is an increasingly popular way to divert organic waste from landfill sites. Organic waste derived from paper (23%), kitchen food (18%) and gardening cuttings accounts for about two thirds of all household waste (16%).[69] This is solution not only avoids disposal costs and secures local energy supplies but it can even generate a new source of income! Stirling is pioneering energy-from-waste techniques through the use of anaerobic digestion technologies.

Box 5: Food waste is now a valued commodity in Stirling

Anaerobic digestion (AD) is a treatment that composts organic waste in the absence of oxygen, producing a biogas that can be used to generate electricity and heat. It is estimated that AD could produce enough electricity to supply nearly a million UK households. According to the pressure group Friends of the Earth, AD is a 100% renewable energy source that helps tackle climate change, instead of contributing to climate change through landfilling and incineration.[70] The process also creates a biofertiliser that can be used in agriculture as an alternative to chemical fertilisers.

Consequently, Stirling Council is being lauded as a leader in the effort to cut carbon emissions and generate renewable energy for its Scotland through its reuse of organic waste.[71] It follows a decision in 2011 to take food waste collected from more than 26,000 homes in the area for processing at Horizons Environment's AD plant at Deerdykes near Cumbernauld. Horizons Environment is exploring using the heat generated for a district heating scheme for the local industrial estate in Cumbernauld and using surplus energy to produce bio-methane for vehicle fuel.

The council has one of the highest recycling rates in Scotland (47.5%) and is planning to rollout the food waste collection to over 39,500 homes to help it reach the Scottish Government's target of 50% recycling by 2013.

70 Friends of the Earth (2007) *Briefing – Anaerobic Digestion* (London: Friends of the Earth).

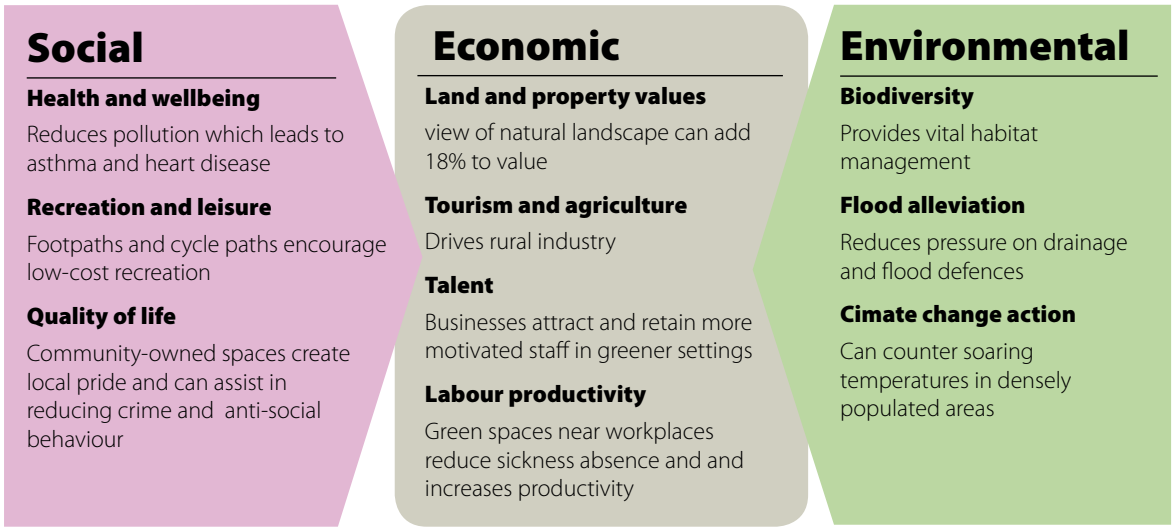
71 Stirling Council (2011) Food Waste From Stirling Powering Scotland, http://www.stirling.gov.uk/ (website accessed January 2012).

68 Case interview with Rory Lingham, St Helens Council (12 December 2011).

69 DEFRA (2007) Composition of Local Authority Collected Waste, http://www.defra.gov.uk/ (website accessed January 2012).

Over the past few years thinking and practice on 'green infrastructure' has moved on from purely ecological and social concerns to economical ones, as depicted in Figure 3. Recognising the value of joining up green spaces like urban parks and natural play areas, woodlands, local wildlife sites and nature reserves, allotments and community gardens and other open spaces, to create 'corridors' or associated facilities which are more than the mere sum of their parts.

Figure 3: The value of green spaces[72]



Glasgow City Council is a local authority that takes the economic value of green infrastructure very seriously indeed. Launched in 2011, the White Cart flood prevention scheme, which is Scotland's largest, aims to reduce the risk of flood damage protecting 1,750 homes, 45 businesses and preventing £100 million damage along the White Cart River. The scheme cost £53 million and created 90,000m^2 of bio-diverse habitat.[73]

There are further lessons from overseas in this regard too. Nillumbik Shire Council (near Melbourne, Australia), which owing to its hot and dry climate suffers from water shortages, has planted drought-tolerant grass species in all of its parks and open spaces. As well as making the town's amenities more resilient to severe weather, it is also contributed to a 35% saving on water costs.[74]

Whilst too much rainfall has historically received more political attention in the UK, there is now an increasing recognition by the Government that too little rainfall represents a major problem too. The UK has less available water per person than most other European countries. London is drier than Istanbul; and the South East of England has less available water per person than the Sudan or Syria; and water is also periodically scarce in parts of Scotland, Wales and Northern Ireland[75].

72 Natural England (2009) The Economic Value of Green Infrastructure (Sheffield: Natural England).

73 Edie.net (2011) Scotland's largest flood prevention scheme launches, http://www.edie.net/news/news_story.asp?src=nl&id=21211 (website accessed January 2012).

74 Monaghan, P. (2010) Sustainability in Austerity: How Local Government Can Deliver During Times of Crisis (Sheffield: Greenleaf).

75 Waterwise (2009) http://www.waterwise.org.uk/pages/our-policy-views.html (website accessed January 2012.

Box 6: Unsustainable water use is damaging UK ecosystems

Defra has warned that the UK must learn to value water, and its use, better due to the effects of climate change and a rising population.[76]

The Government is proposing that businesses and households need to be incentivised to become more water efficient through changes to tariffs. This way, it is argued, scarce ecosystem services will be properly valued.

Insights can be applied from Quito in Ecuador in this regard whereby ecosystem services have been in operation in the Ecuadorian capital for over a decade due to severe water shortages.[77] In 2000, the municipal government established a trust fund which users pay into to undertake hydrological activities to restore or maintain land important to water provision. Users include farmers, industry and households, who pay differentiated rates depending on use and ability to pay, with the water utility contributing the largest share (1% of monthly water sales).

76 The Environmentalist (2012) 'Water is key challenge for UK', *The Environmentalist* (January 2012: 4).

77 UNEP (2009) *The Green Economy Initiative* (Paris: UNEP).

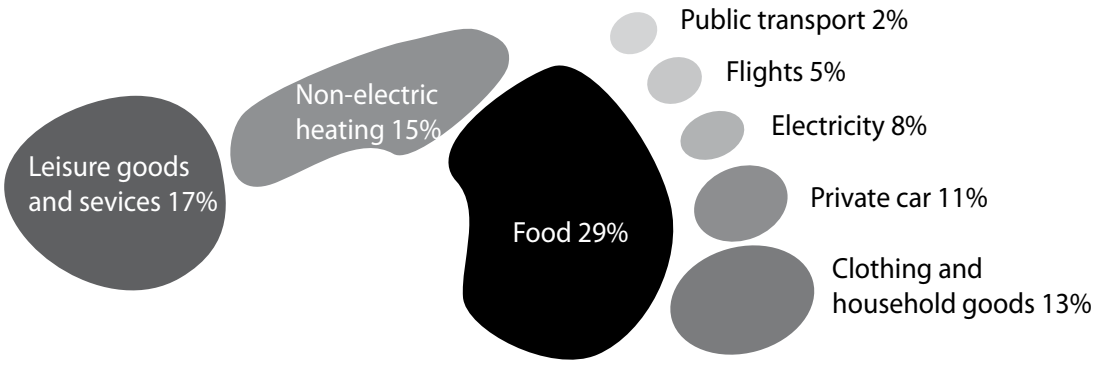
There is a possibility that such policy development could result in a further evolution of local authorities' responsibilities on water management, ergo how they seek to extract further value from their area's green infrastructure. Forward-thinking local authorities including Glasgow and Peterborough are already proactive when it comes to water management, will be well placed to respond to such challenges.

4.5 Neighbourhood management

Decarbonising neighbourhoods across the UK is not just about the local authority investing in major low carbon infrastructure, but also ensuring councils work with residents to protect the vulnerable, as well as boosting the wider community's capacity for self-help.

To do this, it is important to appreciate the carbon footprint of the typical UK person (as illustrated in Figure 4[78]) and then understanding how this relates to people's quality of life.

Figure 4: Carbon footprint of a 'typical' UK resident



From the above figure, it is evident that heat and electricity (23%) and food (29%) are two big priorities for local leaders. This is particularly relevant during an economic downturn when the rising cost of energy (89%) and food (83%) tops consumers' concerns.[79] Pendle Borough Council and the London Borough of Lambeth are examples of local authorities which are already taking positive action on these issues. Pendle have improved housing quality within the borough to tackle fuel poverty and Lambeth have boosted community capacity to grow food locally – each is now explored further.

78 Vaze, P. (2009) *The Economical Environmentalist* (London: Earthscan).

79 Which? Ltd (2011) Rising Cost of Energy Tops Consumers' Concerns, http://www.which.co.uk/ (website accessed January 2012).

Pendle Borough Council

Pendle has significant challenges with regard to fuel poverty and housing. Its latest stock condition survey showed two thirds of the borough's housing is stone built and through terraced which is classified as 'hard to heat'. In practice this means that around 8,000 properties are deemed to be so energy inefficient that they will cause the inhabitants to become ill during the course of a year. As a result East Lancashire has some of the worst excess winter death figures in the UK.

Pendle Borough Council is committed to tackling this and has addressed the issue through a number of means (including the appointment of a dedicated officer to deal with fuel poverty 10 years ago).

> *"Our starting point was to help as many people as possible with the emphasis on improving the overall energy efficiency and SAP ratings of our stock. We were fortunate to receive substantial Regional Housing Board funds which were able to fund loft insulation and boiler replacement schemes across the borough. But over time, as the demand for loft insulation was satisfied and fuel poverty figures steadily worsened (we are currently the third worst in Lancashire), our focus shifted to helping those in most need"* explains Matthew Pearson, Home Improvement Manager, Pendle Borough Council.[80]
>
> *"We began by enhancing Warmfront cases, to ensure excesses didn't prevent vulnerable residents getting a basic form of heating, and also helping those people who fall between the 'able to pay' market and utility and Warmfront funding. We were also able to provide a higher subsidy/grant to help these people improve their living conditions. In the background, we have been signposting residents to utility companies for priority funding, obtaining subsidised insulation for able to pay customers and offering advice on lifestyle changes and fuel tariff switching."* continues Pearson.

In 2010, the council was also one of a select few local authorities across the UK that were successful in securing match funding from British Gas for insulation improvements under government's Community Energy Saving Programme (CESP).

However, due to a combination of reductions in public spending, the borough's housing stock and Conservation Area constraints (which prevent large scale cavity wall insulation programmes) the council has now re-focused its activity. This means the council no longer retains a budget for home energy measures, and so its role is now purely advisory, with an emphasis on fuel price contracts and poor public health issues caused by a lack of efficient heating.

This requires it to be more creative when it comes to championing the cause of the most vulnerable through better partnership working with other agencies on preventative action. Pendle is tackling this by working with the local PCT on a pilot project to improve the links between housing and health, with referrals coming to the council from health professionals; as well as a longer term a project which aims to reduce the impact on the NHS of cold housing by targeting patients with cardio vascular, stroke and respiratory problems.

> Given the current public spending squeeze and rising needs of vulnerable residents, Pearson concludes: *"The Green Deal could be of enormous help to us. But we need clear and concise information from the government about what this will look like for a local authority like us".*

Pendle's amazing work is literally saving the lives of vulnerable residents when it comes to efficiently heating homes. But how can a local authority enhance resident's capacity for self-help? Lambeth's work on local food production appears to be one way.

London Borough of Lambeth

As home to 'Transition Town Brixton', Lambeth is no stranger to trying to do things differently, especially when it comes to fostering the low carbon communities of tomorrow. Brixton is 1 of 10 places designated as a Low Carbon Emission Zone by the Mayor of London and has also established its own energy co-operative. Thus, a resident-led initiative to make use of unused or underproductive land in the borough for local food production has been warmly welcomed by the local authority.

> *"Local food growing is something we have been working on for the past 3 years. This is in response to resident demand that was stimulated by the 'Incredible Edible Lambeth' initiative. During this time over*

80 Case interview with Matthew Pearson, Pendle Borough Council (26 January 2012).

1,000 people have become involved in 120 food growing projects across the borough. The groups and locations range from housing estates, schools and faith centres to streets and unused highways" explains Susan Sheehan, Green Community Champions Officer, the London Borough of Lambeth[81]

Contributing to local food growing is part of Lambeth's broader 'Green Community Champions' programme whereby, given its limited resources, the local authority's role is to offer advice and staff time and to transfer skills in order to build capacity for self-help. Whilst original motivations were environmental, the wider benefits of community cohesion and well-being (i.e. improved diet, health benefits and an increased sense of happiness) are now just as prominent drivers through working with partner agencies (including the local PCT).

"This is the type of support the growers want anyway. It is a bottom-up, community-organised group of projects. People come together for instance to share tools and skills. For the council, this forging of a new form of partnership very much fits in with Lambeth's wider ambition to become a co-operative council. Our next to step is work with these partners to help them formalise this common vision by developing a Food Strategy for the borough." continues Sheehan.

Lambeth's emphasis on boosting capacity for self-sufficiency is to be applauded. Local authorities in other countries are accomplishing similar outcomes, but doing so in different ways. With regards to food, Amsterdam has a campaign to support local food supply chains that calls upon supermarkets, restaurants and large employers with staff canteens to make a priority of stocking commodities produced by its surrounding farmlands. (Interestingly, these agricultural areas also act as a flood defence).[82] In terms of wider use of green spaces, Philadelphia in the USA has its decentralised stormwater management function following successful pilots which show tax rebates to communities and local businesses on the purchase of rain barrels and green roofs are more effective, popular and cheaper. City leaders have calculated that over 20 years it will reduce costs from £2.54 billion to £1.01 billion.[83]

4.6 Education and schools

New learning and skills are clearly paramount to the transition to a green economy. This goes beyond awareness raising efforts in neighbourhoods to also include more formal education.

Traditionally, local authorities have focused on working with schools through the now widespread 'Eco-School' or Sustainable School' programmes, to inform the way they incorporate sustainability principles into their class curriculum as well manage the carbon footprint of the school buildings themselves, given this can account for up one third to a half of all area emissions. Again, this is not unique to the UK. In the Canadian city of Toronto, children are taught how to prepare healthy and environmentally-friendly family meals[84]; whilst in Växjö (Sweden) the local authority ensures every cinema in the city plays a short clip on how to have a low carbon lifestyle prior to screenings of children's films.[85]

Over the past few years there has been a step change in education, with a much greater emphasis on collaborations with and universities and community colleges in a broader way. Greater Manchester in particular is breaking new ground here. In partnership with its world-class research departments at the universities located along the Oxford Road corridor in Manchester City centre, it is also testing new low carbon building equipment and techniques as part of a £54 million project to transform the zone into a public transport dominated 'green corridor'.[86] Greater Manchester became the UK's first LCEZ for the built environment in 2009. Over the next five years it aims to deliver an additional £650 million into the economy, support 34,000 jobs and save six million tonnes of carbon.

As well as university-level interventions, education alliances that involve up-skilling unemployed

81 Case interview with Susan Sheehan, London Borough of Lambeth (9 January 2012).

82 Monaghan, P. (2012) *How Local Resilience Creates Sustainable Societies* (London: Earthscan).

83 The Economist (2010) 'The world in 2011', *The Economist* (22 November 2010).

84 Foodshare (2010), Field to Table Schools, http://www.foodshare.net/ (website accessed April 2010).

85 World Clean Energy Awards (2007) http://www.cleanenergyawards.com/ (website accessed 19 May 2011).

86 Manchester Evening News (2010) Oxford Road will be 'Low Carbon Lab' for Green Projects http://menmedia.co.uk/manchestereveningnews (website accessed January 2012).

people so they can get on the green jobs 'ladder' is just as vital. A trailblazer in this regard is Blaenau Gwent County Borough Council.

Box 8: The Green Apprentices of Tomorrow in Blaenau Gwent?

The British Gas Green Skills Training Centre in Tredegar in Blaneau Gwent, South Wales opened in 2010[87] and aims to train more than 1,300 people each year (including local long-term unemployed people). Developed in partnership with the Welsh Assembly Government, JobMatch, Jobcentre Plus, Summit Skills and Blaenau Gwent County Borough Council, the state-of-the-art centre offers training and qualifications for would-be energy efficiency assessors and installers of new green technologies as well as providing opportunities for British Gas engineers to increase their skills.
The centre features fully functioning heating installations, energy efficient and microgeneration technologies housed in specially designed bungalows - from 'single brick' construction to timber-framed properties. By doing so, it aims to provide the best possible hands-on practice and experience, reflecting the challenges trainees could encounter as qualified energy assessors or installation engineers. Among the green technologies at the centre are smart gas and electricity meters, solar thermal panels and solar photovoltaic panels that generate hot water and electricity.

The area in which the centre is located has the lowest employment rate in Wales - 64% compared to 71% nationally. The aim is that this new collaboration will redress this imbalance by re-skilling the local workforce so they are able to enter the green technologies marketplace.

87 British Gas (2010) UK's First Green Skills Training Centre Opens, http://www.britishgasnewsroom.co.uk (website accessed January 2012).

Blaenau Gwent's pioneering work is needed now more than ever of course as youth employment and disillusionment continues to rise during a prolonged economic downturn.[88]

It also puts these local authorities amongst a vanguard of peers around the world, such as California in the USA. To help stimulate the energy efficient lighting industry, the state has is collaborating with utility companies, trade unions and electrical contractors association to develop 'journey upgrade' training for installers[89]. Targeting training to electricians (who must be licensed in California) and limiting participation in incentive programmes to those who have achieved a standard of training has enabled contractors in the advanced light controls industry to compete on the basis of quality for new construction and retrofit developments.

The UK and USA experiences show that big wins can be realised through local authority led interventions that combine educational innovation with political boldness.

88 www.parliament.uk (2011), 'Young People in the Labour Market' (website accessed 31 January 2012).

89 McNeil, C. and Thomas, H. (2011) *Green Expectations: Lessons from the US Green Jobs Market* (London: IPPR).

5. What would help councils do even more when it comes to the Green Economy?

Based on feedback from case interviews and discussions with its member network, APSE strongly believes there are actions the Coalition Government can take to support local authorities to overcome the challenges and barriers in making the transition to a green economy.

Listed below are policy proposals by APSE that the Government should commit to delivering. APSE will be writing to the relevant Ministers to gauge support for these recommendations.

National transition plans

APSE welcomes the government clarifying its position on the green economy through the document *Enabling the Transition to a Green Economy: Government and Business Working Together*. However, this policy roadmap does not make any reference to the role of local government in this big transition. This omission means that the nationally important and entrepreneurial work by local authorities – for example to attract new investment into renewable technology installations or to fulfil duties under the Flood and Water Management Bill - are not properly valued or even accounted for. This is bad news for everyone as such a fragmented approach undermines collaborative efforts between central government, industry and local authorities for the UK to compete in the global low carbon technologies market, to become more energy independent, and to adapt to weather extremes.

Consequently, the Government needs to reboot its long-term planning to 2050 (the target date for the UK to reduce its carbon emissions by 80% under the Climate Change Act). Such a re-aligned strategic vision should acknowledge the vital role of local authorities in this bold journey, clarify what the Government expects of local authorities and set out how it will help them to deliver bottom-up solutions (e.g. area-based carbon reduction targets). Specifically, as well as setting out the policy details in relation to the Green Deal, Government also needs to provide further leadership by committing more resources to public marketing to drive the changes forward. As part of this it should be made clear how local authorities are to contribute, and why the general public (including the poorest) will benefit. In terms of the new National Planning Policy Framework, the Government needs to underline how this will favour low carbon development such as higher sustainability standards for building regulations.

Green Investment Bank

The Green Investment Bank (GIB) is a big and inspirational initiative by the Government to increase the pace and scale of low carbon investment in the UK. So it is crucial that the Government ensures the GIB supports strategic investments by local authorities in this sector too. The GIB should deliver preferential interest rates on loans for local authorities to take on 'invest-to-save' carbon reduction schemes; and loans should be given without any match funding requirements. The rate should be below the level set by the Public Works Loan Board and ideally at zero %. In addition, the GIB should support capital and revenue projects which are not suitable for Salix finance, have very long pay back periods of 5 years or more or which would otherwise not go ahead in the current financial climate.

Feed in Tariff

The Feed in Tariff (FIT) is a very important incentive for small scale renewable power, both in acting as an economic stimulus for new generation and in terms of installing trust in the marketplace that the Government has a long-term commitment to nurturing the low carbon energy sector.

Since the Government announced it was reducing the tariff rate (for schemes up to 4kW in size to 21 pence per kWh from 1 April 2012 onwards) for new solar PV installations, the market's confidence to invest has been undermined and some planned projects have been cancelled.[90] APSE appreciates the Government's concerns that the FIT mechanism is both unsustainable and not working properly if private firms make huge amounts of money from large scale FIT-funded installations, as was beginning to be seen in initiatives such as 'rent a roof'.[91] However, the reduction has had the unintended

90 The Environmentalist (2011) 'Coalitions' environment agenda goes up in smoke', *The Environmentalist* (December 2011: 05).

91 DECC (2011) *Feed in Tariffs Scheme: Summary of Responses to the Fast-track Consultation and Government Response* (London: DECC).

consequences of hurting genuine community projects, such as those supporting tenants in social housing, many of whom are trapped in fuel poverty. Consequently, it is only fair that the government should consider a variation on the proposed provision so that large-scale multi-installations to social housing are exempt and allowed to benefit from FIT at the earlier rate.

Pension funds

UK pension fund managers are understandably careful when it comes to making investment decisions, but they need to better understand their potential and key role in funding low carbon infrastructure. In order to overcome this and to correct any misperceptions about reward and risk of pension investment in low carbon infrastructure, the Government should bring the leading institutions together, along with local authorities, to offer clear direction and help unlock this investment source. This should be over and above the £5 billion of capital investment in the national infrastructure programme the Chancellor announced in November 2011.

At the same time, the government needs to take the opportunity to secure a legal ruling or amendment on the Government Pension Scheme Regulations which should clearly state that local authorities are allowed to use their area's own local government pension funds (valued collectively at a significant £143 billion) to invest in low carbon regeneration projects in instances where the return on the investment matches the level set out in the pension fund's Statement of Investment Principles.(APSE research suggests that whilst the investment of local authorities own pension funds for regeneration purposes is *most likely* to be legally permissible under current rules[92], mixed messages on the matter amongst law professionals is undermining pension fund managers' and council leaders' ability to act with confidence.

Local Government Finance legislation

The Government needs to make further amendments to the financial legislation to allow local authorities greater scope for self-determination when it comes to the green economy, over and above new powers for 'Core Cities' announced by the Deputy Prime Minister in December 2011. These amendments should include the option of offering a council tax rebate to households which retrofit their homes to reduce carbon, by for example installing wall insulation, or adapt to extreme weather such as green roofs. This is intended to provide an extra incentive for homeowners and especially to those not yet able or willing to access the Green Deal scheme. Councils should also be encouraged to consider green economy issues when utilising the new General Power of Competence provided to English councils under the Localism Act 2011. In light of local government spending cuts, where council tax freezes are also in place this measure would need to be funded by the Government. In addition, this could be complimented by a tax exemption on low carbon regeneration projects that are financed through municipal bonds. The exemption would be a temporary measure to simulate green growth until the UK economy fully recovers and private investor confidence is stronger – indeed, this stimulus would itself help drive the recovery and so more than pay back the investment[93].

Energy Company Obligation

Energy Company Obligations (ECO) are a powerful instrument by which the Government regulates the commercial electricity market in the UK to ensure it is operating in the most economically productive and socially progressive way. A new ECO should be developed by the Government which requires distribution network operators and retail energy suppliers to work with all local authorities on area-based smart electricity grids and sustainable energy action plans. Specifically, this should include the provision of revenue to fund a feasibility study (including a technical specification and project financing options) for every local authority in the UK. This should be over and above commitments made through the Ofgem Low Carbon Networks Fund.

Youth Jobs Fund

The eligibility criteria for the successor to the Future Jobs Fund should be broadened to include the development of life skills beyond work experience. In particular, to provide capital and revenue grants to support community-led projects that involve knowledge transfer between generations such as local food growing groups that exchange techniques and equipment.

92 APSE (2010) 'Investing local government pension funds in regeneration schemes', ***APSE direct news*** (August/September 2010: 12).

93 Adapted from: Local Government Group (2010) *Funding and Planning for Infrastructure* (London: Local Government Group).

6. APSE policy position on the Green Economy

APSE recognises that the green economy can act as the stimulus to redressing economic decline in UK towns and cities as well as rural and coastal communities. To enable local economies to make the transition to local green economies APSE calls upon Governments and administrations throughout the UK to recognise the core role of local government in acting as a provider, facilitator and financier to the development of local green economies.

APSE states that:

Climate change represents one of the most important challenges to our environment, economy and society and believes that local government has a leading role to play in combating climate change and building a more sustainable future for our communities through the development of local green economies.

Well managed public services have a key role in improving the sustainability of their local areas. Such services also help to alleviate the conditions which lead to inequalities in the quality of the environment which ultimately impact on the health, wealth and well-being of citizens.

Local authorities should have a political vision of how they aim to reduce carbon by improving energy efficiency and developing the micro-generation of renewable energy. This should be implemented through a coherent long term strategic plan which clearly identifies the actions they will undertake to achieve a local sustainable economy. This should also include an effective 'green economy management system' which integrates green economy issues into their daily operations, service planning and service delivery.

Local Communities deserve long term sustainable benefit from any money invested in public sector infrastructure in their areas. As finance becomes increasingly scarce during the global economic recession the value of this investment must be maximised to enable local authorities to truly realise the full potential in supporting the transition to a green economy. This will enable UK communities to gain the skills and knowledge required to gain benefit from the £4 trillion global market in green technologies.

APSE believes that green economic matters should be incorporated within all reviews, service specifications, tenders and contract evaluations.

A green economy policy, adopted at a local level, will ensure that councils are able to:

- Abate the impact of climate change;
- Demonstrate leadership of place;
- Promote energy efficiency measures across all property and assets within its area to improve efficiency and effectiveness;
- Address fuel poverty by promoting energy efficiency schemes such as Green Deal;
- Promote the development of a broad portfolio of approaches to the micro-generation of renewable energy to increase energy security;
- Create local economic benefit through green jobs, skills and training opportunities;
- Reduce the health impact of pollution and reliance upon fossil fuels;
- Address social exclusion; and
- Improve the local environment, including housing, transport and public open spaces.

The refined APSE policy position can be filtered into the corporate plans of member local authorities. Possible statements of commitment by local authorities could be made in response to those set out by the Government in its strategy *Enabling the Transition to a Green Economy: Government and Business Working Together.* In Table 3 below, APSE has taken the table provided in the Government document and inserted a new column (on the far right hand side) detailing suggested actions for local authorities.

Local authorities' ability to deliver on some of these will of course be greatly influenced by the Government taking on board the recommendations APSE are proposing, as out in the Chapter 5 previously.

Table 3: Local authority commitments to support a green economy[94]

Government will develop a green policy framework which:	Business should work with Government to:	Local authorities shall establish a strategic vision for the greening of the economy in their area which:
• is effective, clear, stable and as streamlined and minimally burdensome as possible • encourages investment • protects existing investments, where possible, through use of 'grandfathering' (protecting pre-existing rights)	• explore voluntary approaches to greening products and services • identify areas of green policy and regulation which can be streamlined whilst remaining effective • invest in greener products, services and production processes	• provides local leadership; • fosters partnership working with government and business • identifies areas for investment in low carbon regeneration (e.g. offering clear direction via LDF and Regeneration Strategy)
• promotes the UK as a global leader in green exports and encourage green inward investment	• help Government publicise the skills and expertise of UK-based business	• helps Government publicise the skills and expertise of UK-based business (e.g. showcase achievements through APSE publications and events)
• provides accessible advice and support to enable business to increase their resource efficiency, resource security and resilience to climate change	• become increasingly resource efficient and builds risks of energy/resource security and climate change into future business planning	• becomes increasingly resource efficient and build in the risks of energy/resource security and climate change into future business planning (e.g. develop a carbon management plan).
• ensures that Government 'green' policies take into account the competitiveness of UK-based companies, including Energy Intense Industries and develop measures to support businesses most hit by transitional costs.	• continue to explore production processes and business models which reduce use of resources and carbon emissions.	• helps local businesses explore production processes and business models which reduce use of resources and carbon emissions (e.g. launch a low carbon business network in partnership with the local chamber of commerce).
• ensures the skills system responds to the demand for skills created by a shift to green economy.	• help articulate skills demand through involvement in LEPs, and Sector Skills Councils.	• helps articulate skills demand through involvement in LEPs, and Sector Skills Councils.
• supports the development of greener products, services, and technologies, through continued support for R&D and innovation	• design, develop and promote greener products and services, including enabling technologies.	• designs, develops and promotes greener products and services, including enabling technologies (e.g. pilot smart electricity grids and trial cutting-edge street lighting techniques)
• encourages investment in infrastructure supports the green economy, including through the Green Investment Bank	• invest in infrastructure that will support the green economy	• invests in infrastructure that will support the green economy (e.g. green spaces, local transport networks and district energy systems)
• enables UK-based businesses to compete in green, low carbon supply chains where the UK has expertise.	• work together, where possible, to help build UK-based supply chains	• work together, where possible, to help build UK-based supply chains (e.g. establish a LCEZ with business clusters).
• produces products that meet cost-effective sustainability standards	• adopt sustainability standards for their procurement	• adopts sustainability standards for their procurement (e.g. adopt the APSE Sustainable Procurement Toolkit)
• Help businesses understand the value of and their impact on the natural environment.	• Consider the value of the natural environment to their business.	• Help businesses understand the value of and their impact on the natural environment (e.g. develop a climate change action plan for the local area that business are asked to sign up to through the LSP or LEP)

94 Source: Page 11, HM Government (2011) *Enabling the Transition to a Green Economy: Government and Business Working Together* (London: HM Government).

7. The APSE framework for an ensuring council to manage the Green Economy transition

From the insights collated through this study and APSE's wider activities with network members, it is possible to set out in simple steps how the ensuring council of the future will confidently lead the transition to the green economy, as depicted in Figure 5.

Crucially, the ensuring council will effectively navigate the journey to a greener local economy by establishing a high-level vision and then developing capacity to deliver this on behalf of the local area.

It is a local authority that is lean but also one that has a strong core of services and know-how to co-ordinate low carbon policy. This kind of local authority has the legitimacy to intervene on behalf of communities and is able to secure broader strategic agreements with business and central government about the respective low carbon responsibilities of each. Consequently, the ensuring council makes certain that local economies are greener and the area is more resilient by both mitigating climate-related risks and nurturing innovative cleaner solutions.

What this means in terms of practical interventions is mapped in Table 4, which illustrates service-level insights collated in Chapter 4 against each of the system themes described in Chapter 2. The result is a sample checklist of possible ways for local authority managers to intervene.

Figure 5: How the ensuring council manages the green economy transition

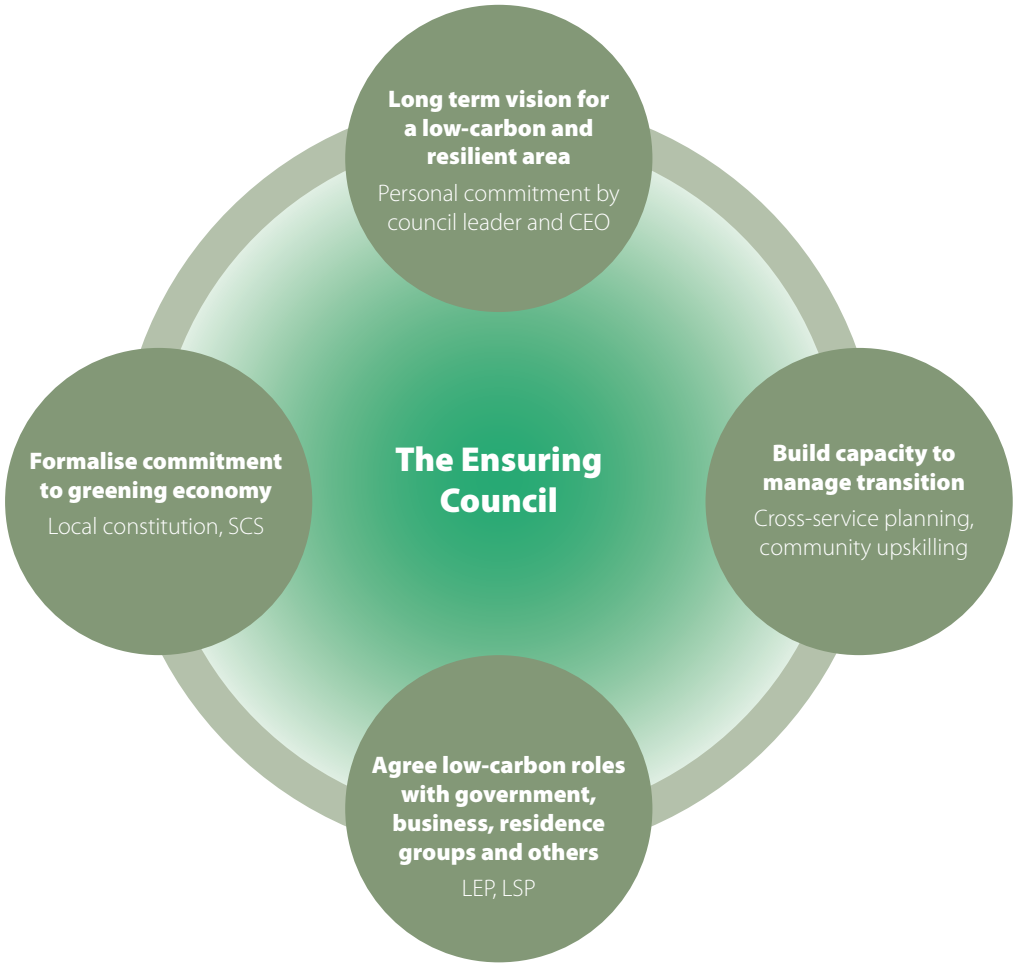


Table 4: Sample checklist of key leverage points to green the local economy

Frontline operations	
Leadership SCS and all key decisions subject to carbon scrutiny	✔
Transport and logistics Green fleet review for waste collection and street cleansing	✔
Asset management and procurement Revolving fund for energy and water investments	✔
Environmental services Energy recovery from organic waste	✔
Neighbourhood management Housing Strategy links carbon reduction and fuel poverty	✔
Education and schools Participation in Eco Schools programme	✔
Enterprise	
Leadership LEP priorities include low carbon sectors	✔
Regeneration and spatial planning LDF and Regeneration Strategy both include decarbonisation	✔
Transport and logistics Compact policy that prevents traffic congestion	✔
Asset management and procurement Sustainable procurement stimulates local supply chains	✔
Education and schools Skills development and innovation with colleges and universities	✔
Ecosystem services	
Regeneration and spatial planning LDF and Regeneration Strategy both protects natural assets	✔
Environmental services Green Space Strategy values natural assets beyond leisure	✔
Neighbourhood management Food Strategy that includes local growing	✔

In putting forward this checklist, APSE appreciates that depending on a local authority's particular context, the ability if any to take action will vary, especially across the devolved nations which have different policy environments and powers. So, again, it is a matter of each local authority doing the best it can, given the circumstances and licence to operate.

8. Conclusion

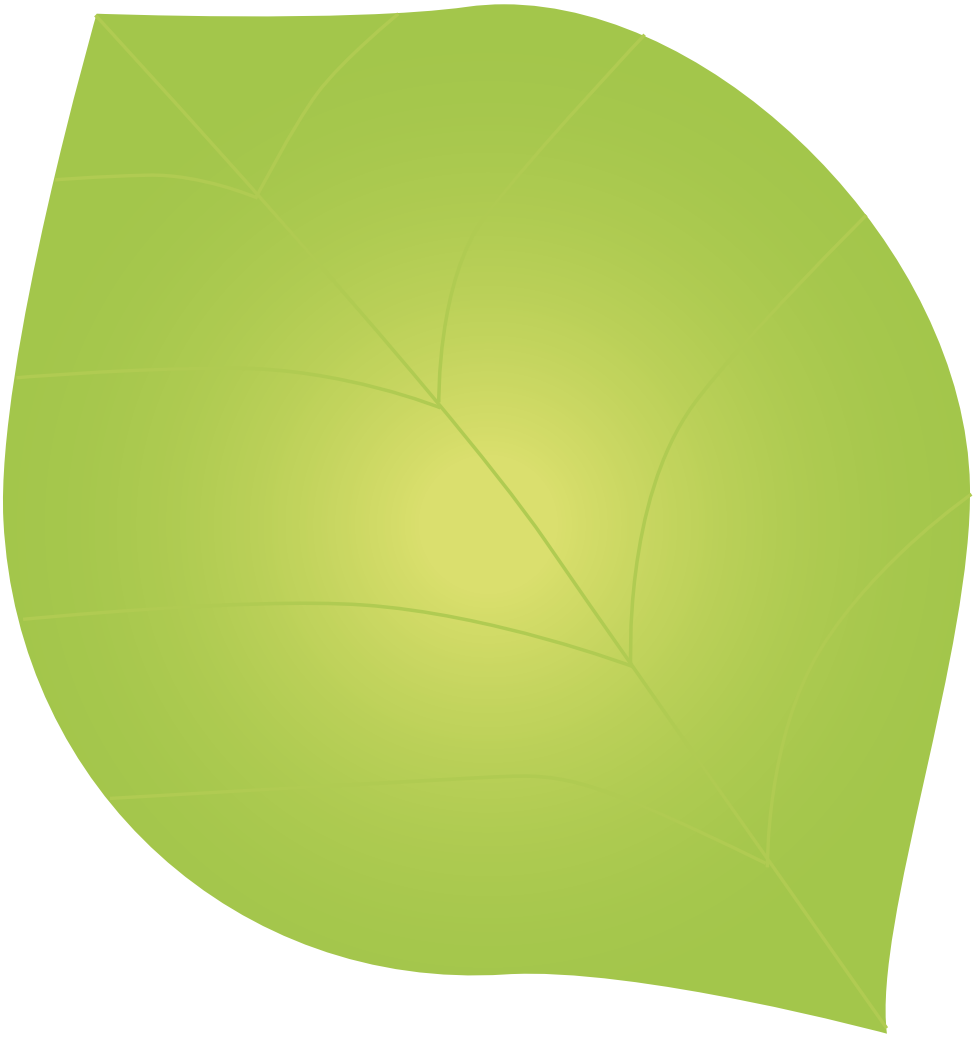
There is a powerful business case for greening the UK economy. It allows the UK to compete in the huge £4 trillion low-carbon technologies global market and will enhance energy security by reducing the nation's dependency on imported fossil fuels. Moreover, it helps avoid the huge cost of failing to deal with climate change, such as cleaning-up after flash flooding.

In short, the primary motivation to act is to boost national resilience.

APSE believes that local authorities are pivotal to the delivery of national resilience as every aspect of their role shapes how people live their lives – from democratic elections and education, through to spatial planning and waste collection. The same is true for the transition to a green economy.

APSE members across England, Northern Ireland, Scotland and Wales are already committed to innovation when partnering with business to green their local economies. This ranges from the UK's first Green Skills Training Centre in Blaenau Gwent through to creating the UK's largest smart electricity grid in Liverpool. Taken together across the UK, this kind of leadership is protecting or creating hundreds of thousands of jobs, providing new career opportunities for young people and helping to alleviate poverty.

The Government should recognise this in its national strategising on the green economy. It can also support local authorities to achieve even more - ranging from helping to unlock pension fund investment in low carbon regeneration projects, through to requiring the electricity industry to work with local authorities on district energy planning. By doing so, everyone wins - it allows the public sector to do more with less, for the UK to bounce back from an economic downturn and for the nation to boost its resilience to future shocks and surprises.



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