



ENVIRONMENT AND ECONOMY OVERVIEW AND SCRUTINY PANEL

Panel Report

Public

Date of Meeting: Thursday 17th January 2012

Title: USE OF GREEN INFRASTRUCTURE

Report of: The Director of Local Environment

Report reference: LE 03/13

Summary: The report defines the term 'green infrastructure' and relates it to the City of Carlisle. It contains a brief summary of the recently published Green Infrastructure Strategy for Carlisle (Carlisle – Big Green City). There is a description of Carlisle's green infrastructure assets and consideration of its uses and benefits. Finally the report considers the future of green infrastructure.

Questions for / input required from Scrutiny:

How can Carlisle's existing Green Infrastructure be safeguarded?

How can new Green Infrastructure assets be incorporated as the city grows in the future?

How can Carlisle derive greater benefit from its Green infrastructure assets?

Recommendations:

1. That Members help to raise awareness of the principles of the Green Infrastructure Strategy and give green infrastructure assets due consideration when discussing matters of land use, planning and application of resources.

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Note: in compliance with section 100d of the Local Government (Access to Information) Act 1985 the report has been prepared in part from the following papers: None

1. INTRODUCTION

- 1.1 Green infrastructure is the term used to describe the living network of green spaces, vegetation, water and other environmental features that bring benefits to people in both urban and rural areas.
- 1.2 In the city of Carlisle the green infrastructure includes the parks and open spaces; the river valleys and floodplains; loonnings and cycleways; woodlands and nature reserves. Apart from the immediate and direct benefits to health and wellbeing these green assets represent a range of natural resources for Carlisle in the form of air and water purification, climate regulation and wildlife conservation.
- 1.3 In a wider context Carlisle is at the centre of a rural hinterland which provides (apart from the products of agriculture, forestry and mineral extraction) a further range of non-market benefits such as flood protection and storage; carbon storage and purification of water.

2. CARLISLE GREEN INFRASTRUCTURE STRATEGY - SUMMARY

- 2.1 Carlisle City Council's Green Infrastructure Strategy (GIS), published in 2012 under the title 'Carlisle – The Big Green City', puts the gross value of these natural resources to the city of Carlisle at £25 billion over the next 50 years. Like all assets the green infrastructure needs to be managed and maintained if it is to continue to provide this level of benefit.
- 2.2 While most economists and developers will happily consider the costs and benefits of a major infrastructure project in a traditional sense, the rationale of putting a monetary value on green infrastructure is a more recent development. Most of the benefits conferred by green spaces and features can not be measured in money and yet there can be no doubt that they add value. Repeated studies have shown that the presence of well-managed green infrastructure assets can be a major factor in attracting economic development. The Carlisle GIS concludes that 'green infrastructure can be used effectively to create the setting and stimulus for economic growth as well as delivering benefits for current residents'.
- 2.3 The very presence of green space can have a direct economic impact; proximity to parks and open space adds between 3% - 11% to the price of residential properties, a simple view of trees from the window can add up to 7% to the price.

2.4 Quality of Life (QOL) indicators support the idea that green infrastructure is a key factor. The 10 most deprived wards in Carlisle have, on average, 27% less green infrastructure cover than the 10 least deprived areas.

2.5 Lack of physical exercise is a contributing factor in a number of public health issues – obesity being one example. Green infrastructure is a vital resource in providing the venues for a range of physical activities from simple walking and cycling to organised sports and games, play and recreation. It is estimated that an annual saving off the cost of public health services of £2.1 billion could be achieved in England if access to green space was equitable and universal.

2.6 £249 million over the next 50 years is the estimated value of carbon storage within Carlisle's stock of woodland and street trees. In addition, street trees filter out up to 70% of air pollution in the summer months and can measurably reduce incidence of childhood asthma.

(NB – All above data taken from Carlisle – The Big Green City, 2012)

3. USES OF GREEN INFRASTRUCTURE IN CARLISLE

3.1 Currently 57 local football teams are registered as playing on pitches provided by the City Council. These include junior teams for both girls and boys as well as adult teams. With typical squads of 16 players and two teams per match, the Council is therefore providing active sport sessions for approximately 1,824 people every weekend – over the course of a season the total number of 'sessions', including training and competitive matches is about 100,000.

3.2 Our allotments provide healthy food, exercise and social benefits for 750 local residents at very low cost. Other non-market benefits from the allotments include flood defence, air purification and wildlife conservation.

3.3 Our parks provide a wide range of uses – sports, informal recreation, wildlife conservation and mental wellbeing. One example may help to illustrate these benefits:

Many thanks for allowing us to use many of the local Parks for this years Schools Orienteering league. We were blessed with fine days for all 6 events and the areas we used looked stunning. I have to say that Carlisle has a unique heritage as far as local Parks are

concerned and many of the 150 children who Orienteered with us were visiting some of the Parks for the very first time!

Please would you convey my thanks and those of Border Liners Orienteering Club to all of your staff who were responsible in one way or other for the Parks. In these difficult times I hope that we continue to appreciate how lucky we are in Carlisle to have such stunning amenities.

(John Roelich, Organiser, Carlisle Schools Orienteering, 31 May 2012 by email)

3.4 Unfortunately there is no methodology by which Carlisle City Council can put a value on this but nobody could be in any doubt, after reading Mr Roelich's comments, that the parks are hugely valuable to local communities are therefore worthy of receiving appropriate investment.

3.5 Usage levels of parks are notoriously difficult to measure as they often have several entrances (making it difficult to count visitors) and are used from early in the morning until late at night (by different age groups) making surveys expensive. As an indication a single 'people counter' installed at Chances Park as part of the Heritage Lottery project has shown 175,000 visitors per annum although this must be an underestimate of the total as there are 4 other entrances with no counter.

3.6 Safe, off-road routes to school and work are a thread of the Movement Strategy for Carlisle published by the County Council. With assistance from developer contributions, Sustrans and County Council funding a number of important links have already been established, for example in the Petteril South area. A new link is planned for the north of the city, funded by contributions from Story Homes linked to the Crindledyke development. With fuel prices rising the demand for non-vehicular transportation options is only likely to grow. Routes for cyclists and pedestrians that connect residential and industrial areas will be an important factor in Carlisle's economy. They have the additional bonus of providing a recreational opportunity with associated health benefits.

4. FUTURE DEVELOPMENT

4.1 In December 2012 the horticulture industry was announcing, with some excitement, the plans for the first new park to be created in the city of Birmingham for 130 years. Carlisle has been more forward thinking than that and the City Council should be proud of its record in this regard. Throughout the 20th century visionary Councillors have created Heysham Park (with the assistance of a legacy from the

late Dr Heysham), Chances Park (partly as a bequest of Robert Chance, MP), Rickerby Park (with assistance of Carlisle Citizens League) and Melbourne Park.

4.2 Residents of Carlisle benefit directly from the excellent provision of green space within the city. The National Playing Fields Society some years ago set the 'six acre standard' as the minimum provision for green space in towns and cities – in other words, six acres of open space for every 1,000 people. In Carlisle the current estimate is 9 acres per 1,000 or 50% higher than the recommended level. Partly this is due to the floodplains of the 3 rivers that converge in the city but it is also a testament to the vision of past generations of councillors and officers in designating and laying out significant open spaces for the enjoyment of local residents.

4.3 The future of parks in Carlisle seems inevitably tied up with the new developments planned in the next 20-30 years. The Council does not have the resources to purchase the land and lay out a new park on the scale of Bitts Park or Hammond's Pond but by careful planning and allocation of land this can be achieved in partnership with developers. While there may be resistance from house-builders to the idea of forfeiting valuable development land, there must also be the realisation that the purchasers of the new homes will want access to green space for all the reasons already outlined in this report and will be willing to pay the premium in order to secure prime locations.

4.4 The Morton Masterplan includes space for allotments, sports pitch, cycling and walking routes, playspace and wildlife conservation within the plan. The developer will set up a management company to carry out maintenance on this green infrastructure once the development is complete – so no additional burden is placed on the City Council.

5. OPPORTUNITIES

5.1 The Local Plan is currently being revised. Developers, supported by planners and Councillors need to be visionary and bold in identifying significant areas to be set aside for green infrastructure as an integral part of every major new development – places for play, sport, safe transport, wildlife conservation and social activities.

- 5.2 Existing assets need to be maintained in order they continue to deliver the benefits described above and in the Green Infrastructure Strategy (GIS). In a difficult financial climate this can be achieved by modernising our systems and managing efficiently; working with partners and engaging the community; and maximising the value of externally derived resources.
- 5.3 We can also capitalise on the assets we hold – green infrastructure is a natural resource. Carlisle is unique as a city in the variety of wildlife species that live among the human population and more could be done to attract visitors to experience some of these sights and sounds. Hadrian’s Wall is a World Heritage Site running right through the heart of Carlisle – more can still be done to use it as an economic driver.
- 5.4 The GIS says that ‘green infrastructure can be central to the economic recovery and future growth of Carlisle’. For this ambition to be realised, the first step is for the green infrastructure strategy to be championed in the city of Carlisle and beyond. There needs to be a wide understanding of the benefits of green infrastructure and enthusiasm for it to be included in the planning of the growing city. There will need a partnership approach that includes a range of public, private and third sector organisations in identifying, establishing and managing Carlisle’s green infrastructure in just the same way as the hard infrastructure is planned and managed.
- 5.5 The Executive Summary of the ‘Big Green City’ document is appended to this report (Appendix 1). It contains an action plan to take forward the vision and which will inform a number of strategies currently being developed within the City Council including the Local Plan and the Green Spaces Strategy.

6. RECOMMENDATIONS

- 6.1 That Members help to raise awareness of the principles of the Green Infrastructure Strategy and give green infrastructure assets due consideration when discussing matters of land use, planning and application of resources.

Impact assessments

Does the change have an impact on the following?

Equality Impact Screening	Impact Yes/No?	Is the impact positive or negative?
Does the policy/service impact on the following?		
Age	no	
Disability	no	
Race	no	
Gender/ Transgender	no	
Sexual Orientation	no	
Religion or belief	no	
Human Rights	no	
Health inequalities	yes	positive
Rurality	no	


If you consider there is either no impact or no negative impact, please give reasons:

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If an equality Impact is necessary, please contact the P&P team.



Carlisle

The Big Green City

Green infrastructure can become a key mechanism for driving economic growth and regeneration whilst delivering improvements to public health, wellbeing and quality of life.

Green infrastructure is a term used to describe the living network of green spaces, vegetation, water and other environmental features that bring benefits to people in both urban and rural areas.

It is often used in an urban context to cover benefits provided by trees, parks, gardens, verges, allotments, cemeteries, woodlands, rivers and wetlands.

Green infrastructure is also relevant in a rural context, where it might refer to the use of farmland, woodland, wetlands or other natural features to provide services such as flood protection, carbon storage or water purification.

Increasingly it is recognised that green infrastructure needs to be managed just like any other vital asset.

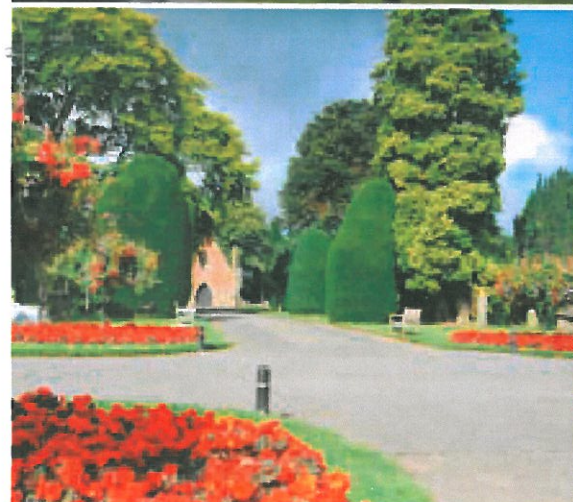
The Big Green City Vision

The Carlisle of the future is being created right now. Carlisle's current green infrastructure will provide over £25 billion of total benefit in the next 50 years, and managing this asset provides Carlisle with its biggest growth and development opportunity of the next ten years.

Carlisle has an opportunity to use its high quality landscapes and green assets to create one of the best places in the UK – The Big Green City. A place with a green core connected by rivers and green spaces, a place that celebrates its environmental quality and puts this at the heart of its future growth and development.

In the future, Carlisle will be distinctly its own place and not a clone of everywhere else. An excellent place for business, communities and wildlife.

By adopting a progressive approach to green infrastructure, the city region will face future economic, social and environmental challenges confident in its own distinctiveness and resilience.



1. ©Grahame Jackson.

2. © North Pennines AONB Partnership/Elizabeth Pickett.

A fusion of economic and environmental aspirations

The future vision for Carlisle is a fusion of environmental and socio-economic aspirations. Despite the potential for tensions, these aspirations can be mutually compatible. A greener city will create the setting and the context for new development and the regeneration of communities that need support. The environmental changes that can make Carlisle attractive to inward investment, tourism and economic development can also make the city region more resilient to future challenges.

The two critical questions facing the future of Carlisle:

What assets does Carlisle have that can drive improvements in quality of life?

What identity can Carlisle develop that differentiates it from the thousands of other cities or regions around the world?

The answer to these questions is simple.

Carlisle can, and should, transform itself, through the process of growth from a city of industrial transition to a place renowned for its forward looking greener, healthier environment and lifestyle. In short, green infrastructure becomes the tool for the city to sell itself to the world.

Carlisle city region is 97% green infrastructure and is surrounded by high-quality landscapes. Carlisle can sell itself as The Big Green City where people will want to live, work and play in.



The benefits of The Big Green City

A progressive approach to green infrastructure in Carlisle can deliver four core benefits for communities and the economy.

Image and perception

Carlisle needs a more positive inward investment message that uses green infrastructure as an asset to improve the image and perceptions of the place.

This is partly about celebrating and communicating Carlisle's existing environmental quality and partly about investing strategically to improve wider perceptions over the long-term. This new identity can provide Carlisle with its unique selling point – The Big Green City – and the catalyst for creating a great place to live, work, invest or play.

Evidence

65%

65% of international inward investment decision-makers say they are increasingly finding it hard to differentiate between different locations – with many places becoming indistinguishable 'clone towns'.

67%

'Agreeable climate and environment' has been rated the second highest factor determining inward investment decisions (67% of respondents).

97% GI

Carlisle district is 97% green infrastructure (within the urban settlement 70% is green infrastructure).

Priority actions

1. Develop and promote a new identity for the city based on The Big Green City vision.
2. Improve the look and experience of the city in key areas like the city centre and on key entrance routes, such as London Road.
3. Make the city a gateway to great landscapes, such as Solway Coast and North Pennines Areas of Outstanding Natural Beauty and Hadrian's Wall corridor, with better access and interpretation for tourists and residents.

Spatial and economic growth

To grow effectively Carlisle needs to add value to its land-based products and tourism experiences. Green infrastructure can be used effectively to create the setting and stimulus for economic growth as well as delivering benefits for current residents.

Evidence

Up to 11%

Proximity to parks and other open green spaces adds 3-11% to property prices, views of trees add up to 7% to property prices.

£25.6 billion

Carlisle's current green infrastructure will provide around £25.6bn of total benefit in the next 50 years: approximately £3.8bn contribution to Carlisle's GVA and £21.8bn of other economic value.

£77 million

Over the next 50 years existing green infrastructure will result in around £77m of residential land and property value uplift.

Priority actions

4. Ensure green infrastructure planning is part of the new spatial masterplan to guide the city's growth over the long-term.
5. Develop the economic infrastructure to unlock and add value to the value of land-based products.
6. Design commercial and residential developments to be high quality, green and sustainable.

Quality of life Carlisle's wealth of open green spaces and its high quality surrounding landscapes are a key tool for enhancing quality of life, particularly for its most deprived residents. There is a strong correlation in Carlisle between ill health and lack of access to high quality green space. Green infrastructure is a key tool for tackling health and wellbeing inequalities and deprivation across the city region – it should be sustained and enhanced to deliver on key public health objectives.

Evidence

£2.1 billion

Lack of physical exercise costs the NHS 2-3% of its budget. Establishing universal and equitable access to green infrastructure would save England £2.1 billion per annum.

£10.8 billion

The existing green infrastructure in Carlisle city region will provide £10.8 billion of benefit in reduced mortality from provision of attractive opportunities for exercise in the next 50 years.

27%

The 10 most deprived super output areas in Carlisle have on average 27% less green infrastructure cover than the 10 least deprived areas.

40% more

There will be 40% more people aged over 65 in Carlisle in 20 years time.

Priority actions

7. Improve health and wellbeing by improving access to open green spaces.
8. Ensure that the quality of open green spaces is high to encourage community usage and community interaction.
9. Actively use green infrastructure to improve health and wellbeing by addressing inequalities of green cover, and targeting measures to achieve health objectives.
10. Make Carlisle's green spaces fit-for-purpose for an ageing population.

Sustainability and resilience A growing city region creates challenges, but also opportunities to future-proof the city to meet environmental, social and economic challenges. Green infrastructure can play a critical role in adapting to climate change and mitigating the risks of flooding and urban heat island effect. Ensuring communities are resilient to climate change and its effects will become increasingly important in the years ahead and green infrastructure is one vital part of ensuring this resistance.

Evidence

£1.6 billion

Existing green infrastructure in Carlisle city region will provide £1.6 billion in energy and carbon emission savings from reduced storm water volume entering sewers over the next 50 years.

£79 million

Existing green infrastructure could save Carlisle city region £79 million in avoided costs for air pollution control measures in the next 50 years.

10%

Green infrastructure can play a significant role in reducing flooding; a 10% increase in green cover in urban areas can reduce water run off by 5%.

£249 million

Existing trees and woodland in Carlisle city region could store £249 million in carbon stored and sequestered in the next 50 years. Street trees can filter out up to 70% of air pollution and can reduce childhood asthma by as much as 29%.

Priority actions

11. Manage flooding and water quality issues more effectively at a catchment scale by working with stakeholders to reduce peak floods, reduce pollution run off, and through measures like sustainable urban drainage systems.
12. Enhance biodiversity and create wildlife corridors, both for its own sake but also because a valued element of living in Carlisle is the wildlife that can be seen and experienced.
13. Sustainable development should become a cross-cutting theme of Carlisle's spatial masterplan.

There has never been a better time to take stock of realities and look to the future with a clear vision of progressive change.

From vision to reality

This report seeks to champion the idea that green infrastructure can be central to the economic recovery and future growth of Carlisle as a community and an economy. It places green infrastructure at the heart of 'placemaking' and Carlisle's future trajectory. It will require bold and ambitious thinking and the energy to see it through.

What's more there is a need to define and develop alternative funding models to ensure the right level of investment is made in enhancing and maintaining Carlisle's green infrastructure assets over the long-term.

This vision and strategy need your support to turn it from ideas and words into reality. Please read the full strategy document and contact us to discuss how you can become a champion of The Big Green City vision.

The full report was designed to provide the evidence and recommendations to assist with the development of the emerging Local Development Framework.

For all sources and references, please refer to the full Big Green City report. The full report can be downloaded from www.carlisle.gov.uk.

To find out more about Carlisle's Big Green City report, please contact one of the following teams on 01228 817200:

The Planning Policy Team
The Green Spaces Team
The Economic Development Team.