

# **Evidence, data and maximising the potential from benchmarking**



Thursday 24 March 2016

Debbie Johns, Head of Performance Networks



## Are parks really important?

- Growing recognition as to the value of parks to the nation's mental, physical and social well-being.
- Wider environmental value of parks to flood alleviation, ameliorating impacts of climate change, improving air quality, enhancing biodiversity and contribution to natural capital.
- Economic value of parks included in regeneration projects, attracting inward investment and promoting tourism.
- 68% of park users say spending time in parks is essential to their quality of life – rising to 71% in urban areas (80% of UK's population is urban)
- Parks are considered to be essential to 81% of parents with young children
- **34 million visits are made to UK parks each year (2014)**

# Obviously the argument is won - isn't it?



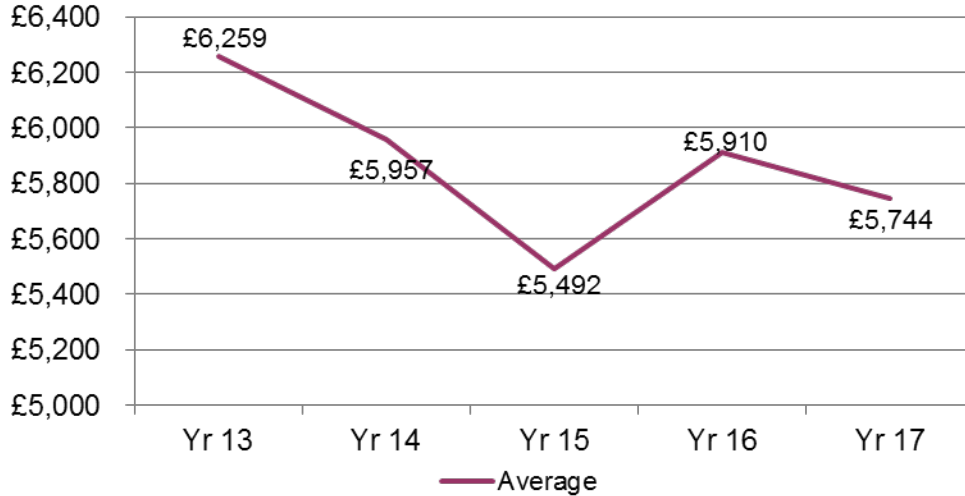
- Still a non-statutory service – rarely a political priority
- Easy target for budget cuts – anticipated up to 60% of parks and greenspace funding will be lost by 2020.
- Value is difficult to measure – generational benefits
- Saleable assets – local authorities have or are considering selling some of their greenspace



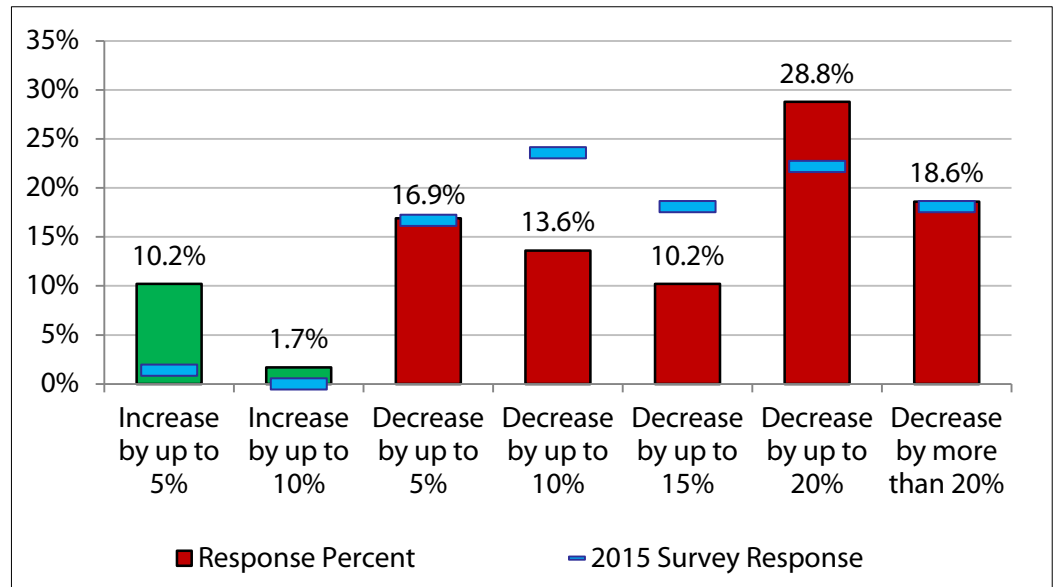
# What is the evidence saying?

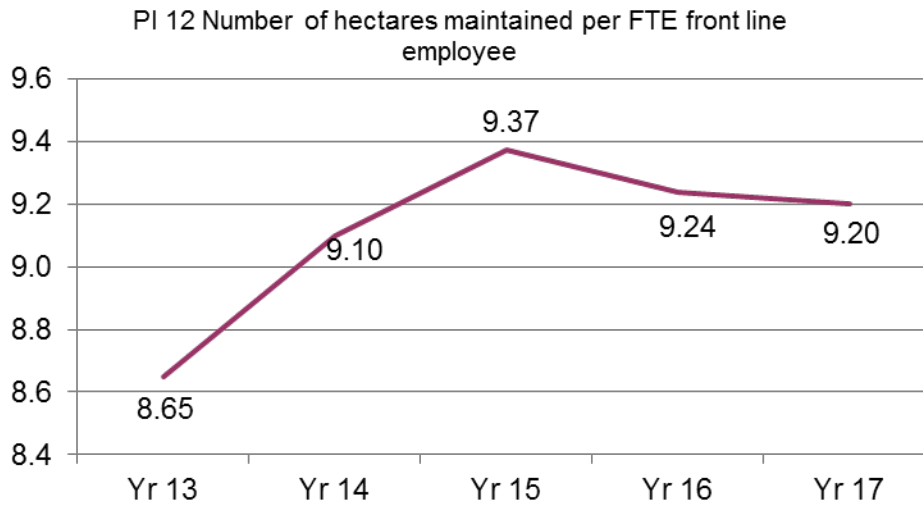


PI 02 Cost of service per hectare of maintained land (including CEC)

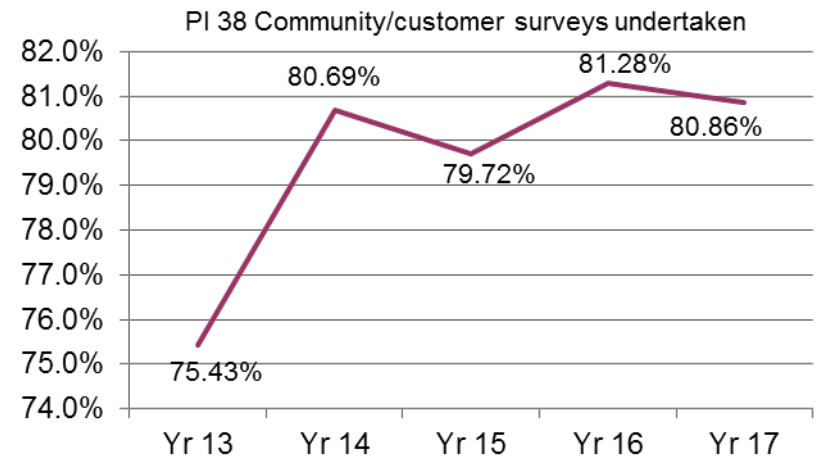
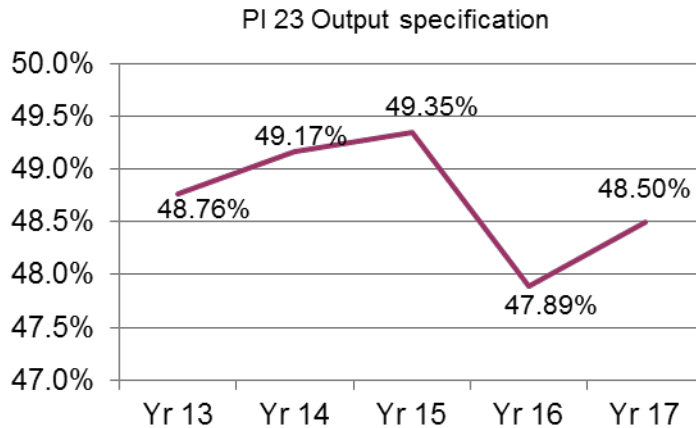


## What is your expectation of the level of funding in your service budget in the coming five years?





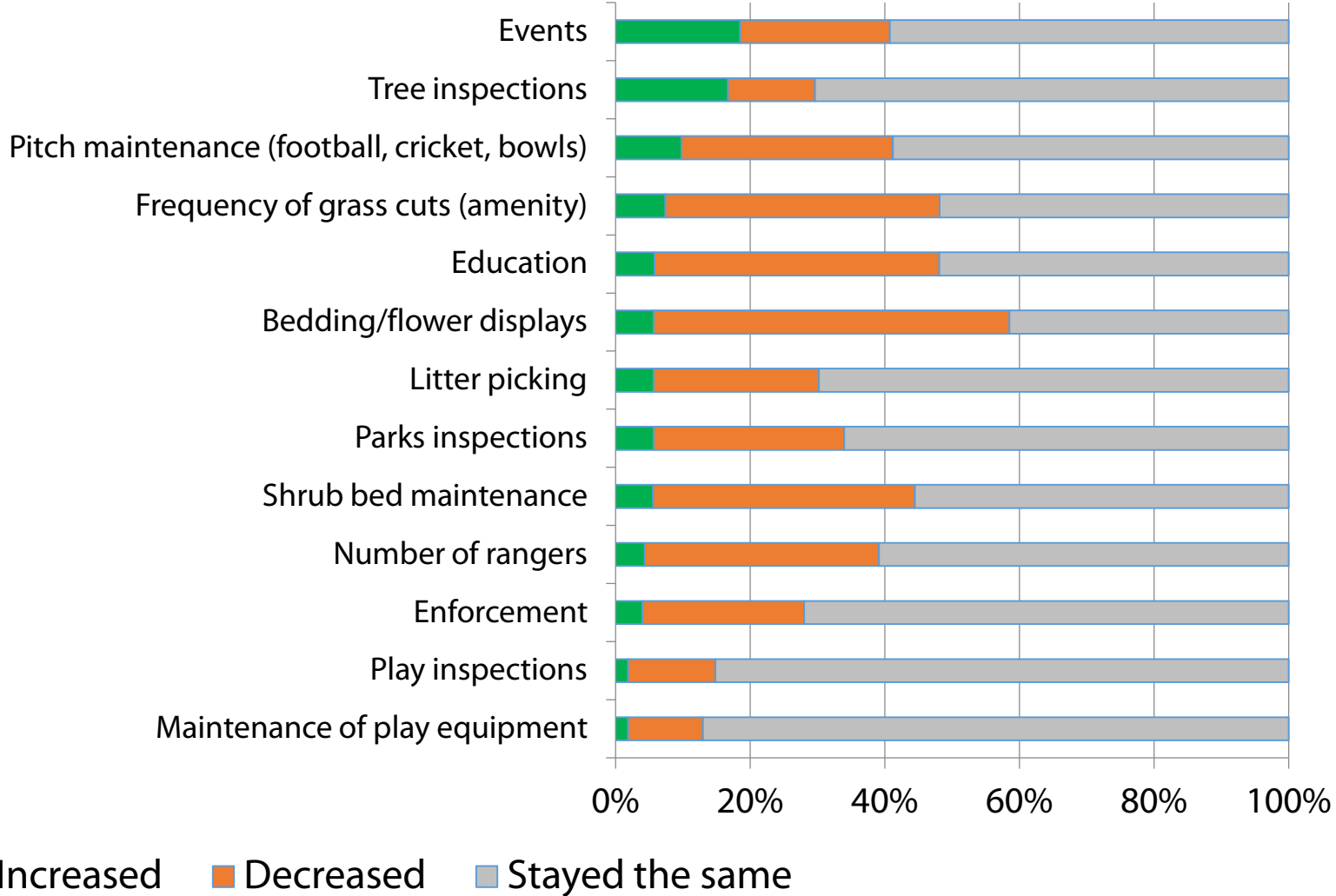
## Are productivity and quality being affected?



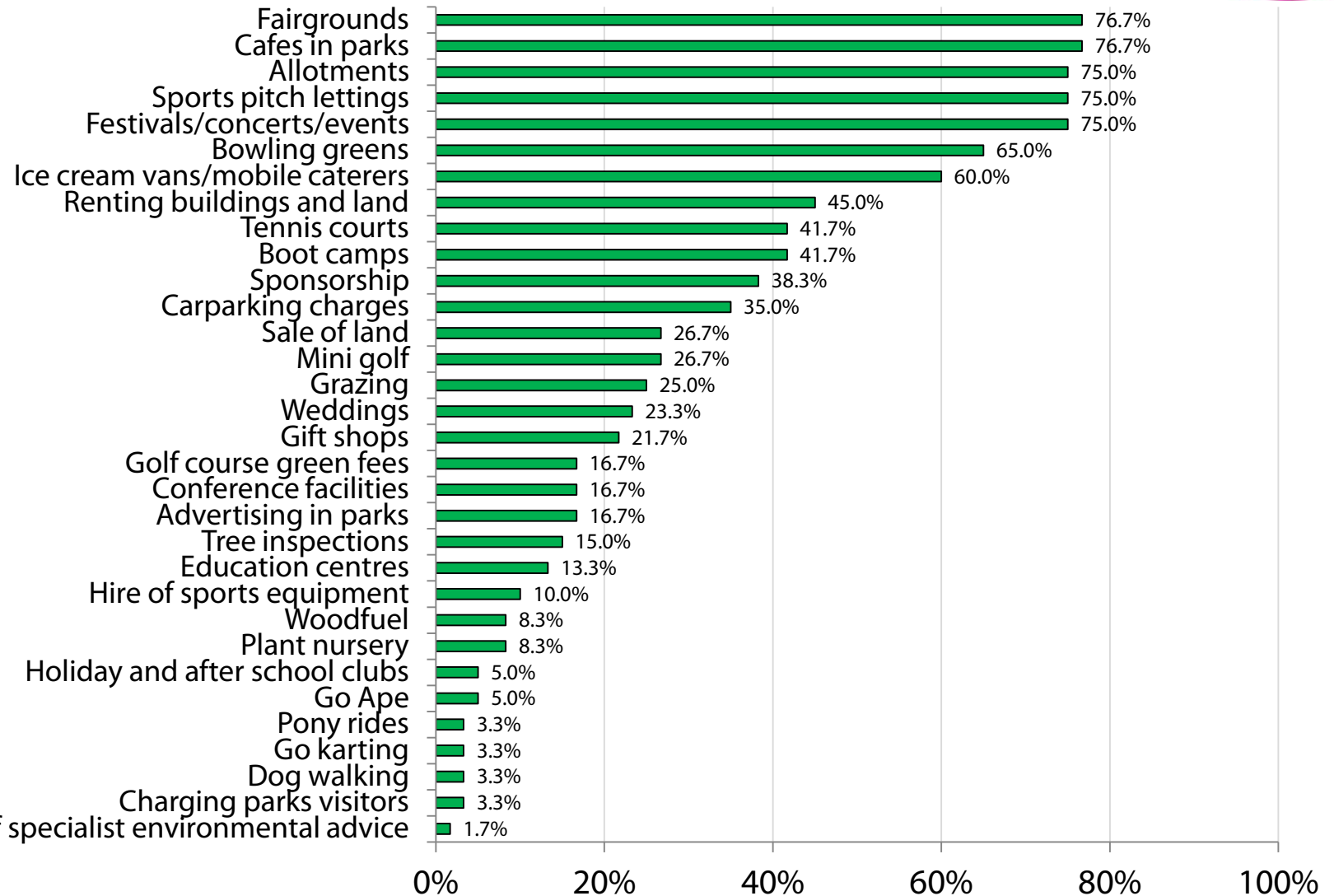
## What do you think?

| Answer Options  | Agree strongly | Agree        | Disagree | Disagree strongly | No opinion |
|---|----------------|--------------|----------|-------------------|------------|
| The squeeze on public sector resources is affecting parks and green spaces disproportionately to other service areas  | <b>40.6%</b>   | <b>37.5%</b> | 18.8%    | 0.0%              | 3.1%       |
| Reductions in funding has resulted in a withdrawal of maintenance from some land and an increase in unmaintained land | <b>35.9%</b>   | <b>50.0%</b> | 12.5%    | 0.0%              | 1.6%       |
| Lack of investment in parks and green spaces will have health and social impacts                                      | <b>68.8%</b>   | <b>25.0%</b> | 4.7%     | 0.0%              | 1.6%       |
| There is a clear link between parks/play provision and levels of crime/anti-social behaviour                          | <b>42.2%</b>   | <b>32.8%</b> | 6.3%     | 1.6%              | 17.2%      |
| There's a limit to the extent to which volunteers can be involved in delivering parks and green space services        | <b>77.4%</b>   | <b>14.5%</b> | 4.8%     | 3.2%              | 0.0%       |
| The public should get free access to all parks  | <b>60.9%</b>   | <b>26.6%</b> | 9.4%     | 3.1%              | 0.0%       |

# Over the past year, have the following increased, decreased or stayed the same?



# What areas do you currently generate income in through fees and charges?



# Environmental

## Broxtowe Borough Council

- Vehicles readily available
- Encouraging teams to be out between certain times
- Vehicle tracker
- Reviewed maintenance of equipment
- Joined up working
- More responsibility to Team Leaders

## Chelmsford City Council

- 12,800 volunteer hours p.a. ensuring standards are maintained
- More natural biodiversity maintenance
- Machinery and equipment changed
- Using quality assurance programmes

## Conwy Council

- Introduced wildflower and pictorial meadow areas
- Introduced newer herbicides
- Reviewed rounds and work schedules
- Reviewed boundaries/areas covered
- Amalgamation of Countryside services and Parks & Gardens

## Gedling Borough Council

- New management regime including team suggestions to improve efficiency
- New waste management software
- Regular review of rounds
- Listening to customer feedback and keeping customers informed

## Gateshead Council

- Building capacity with friends of and community groups
- New machinery
- New thinking to support wildlife and biodiversity
- Changing working arrangements to meet demand
- Maximising event utilisation
- Partnerships with local groups

## Leicester City Council

- Introduction of grassland strategy
- Organisational review aimed to reduce management costs
- Introduced a volunteering programme
- Removed bonus payment scheme and undertook job evaluation

## West Dunbartonshire Council

- Re-alignment of front line staff structures
- Maximised use of ride-on/stand-on mowers and tractor mounted equipment
- Changed weed-killing and summer bedding supply contracts

## Preston City Council

- Review of collection methods
- Changes from recycling boxes to wheeled bins
- Round design software and vehicle tracking
- Scheduled replacement of most waste management vehicle fleet and CCTV recording equipment fitted

# Where do you see growth for the service over the next 12 months?



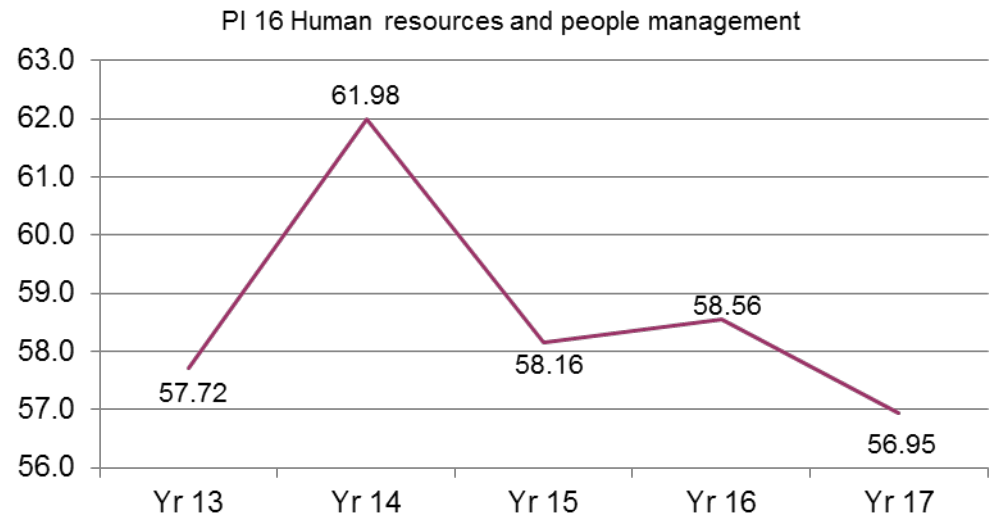
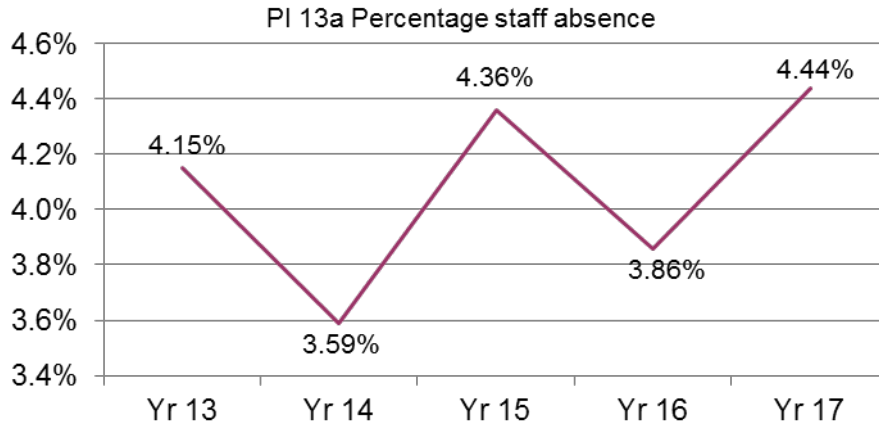
|   |              |
|---|--------------|
| <b>Community involvement/engagement</b>                               | <b>71.2%</b> |
| <b>Partnership working with other public bodies</b>                   | <b>65.4%</b> |
| Sharing services with other local authorities                         | 40.4%        |
| Events in parks   | 34.6%        |
| Offering a maintenance service to external organisations/private work | 30.8%        |
| Additional open space from housing developments                       | 28.8%        |
| Allotments/community gardens  | 25.0%        |
| Capital projects (e.g. section 106)                                   | 21.2%        |
| Offering a maintenance service to other local authorities             | 19.2%        |
| Children's play   | 15.4%        |
| Conservation and management of climate change                         | 13.5%        |
| Training  | 9.6%         |
| Nursery production  | 1.9%         |

# Where do you see future decreases in work for the service?

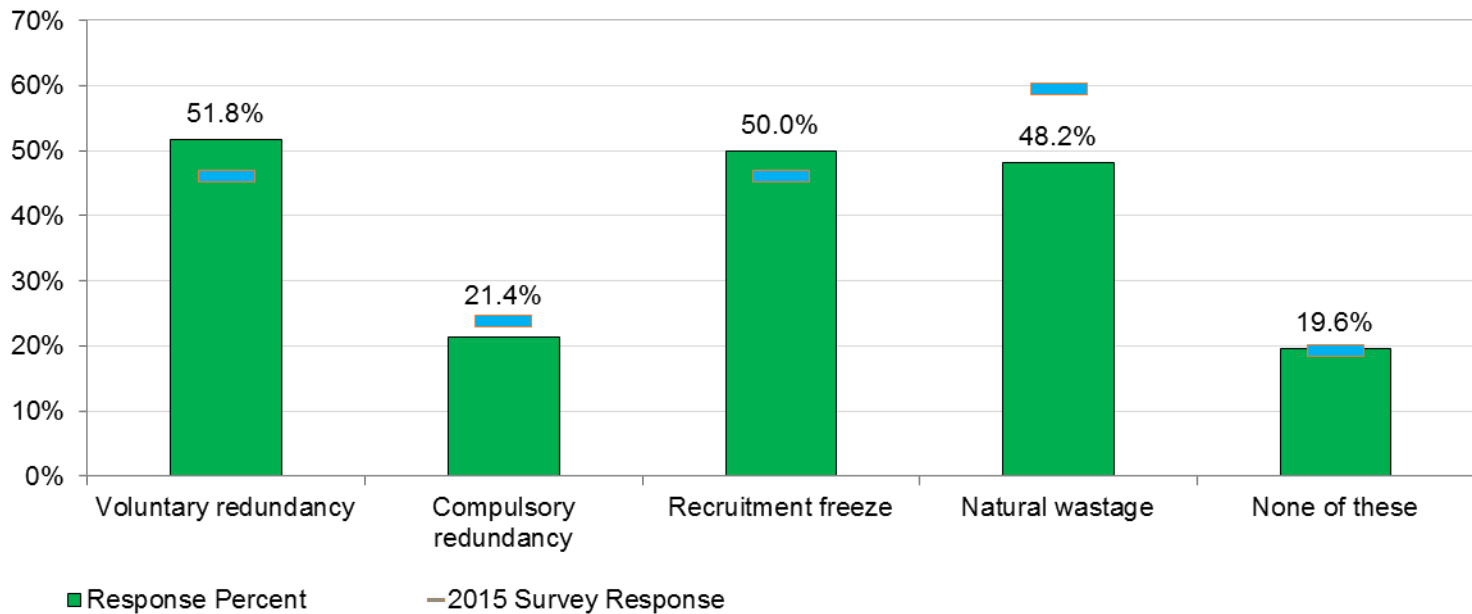


|   |              |
|---|--------------|
| <b>Reduced maintenance or frequency of maintenance of grounds</b>   | <b>76.0%</b> |
| <b>Bedding, floral displays, regional shows, ornamental grass cutting, bowling greens, high amenity areas</b> | <b>74.0%</b> |
| <b>Reduction in service or standards</b>  | <b>70.0%</b> |
| Transfer of assets  | 40.0%        |
| Sports provision  | 36.0%        |
| Parks development activity  | 36.0%        |
| Fewer parks and facilities  | 34.0%        |
| Litter picking  | 32.0%        |
| New development projects/capital investment schemes e.g. play area refurbishment                              | 28.0%        |
| Ranger service  | 28.0%        |
| Landscaping and country parks   | 26.0%        |
| Achievement in awards   | 26.0%        |
| Housing grass cutting contracts   | 18.0%        |
| Other council department service level agreements e.g. education, housing and leisure                         | 16.0%        |
| Cemeteries and closed churchyards   | 14.0%        |
| Parks-specific community engagement   | 14.0%        |
| Schools grounds maintenance   | 12.0%        |

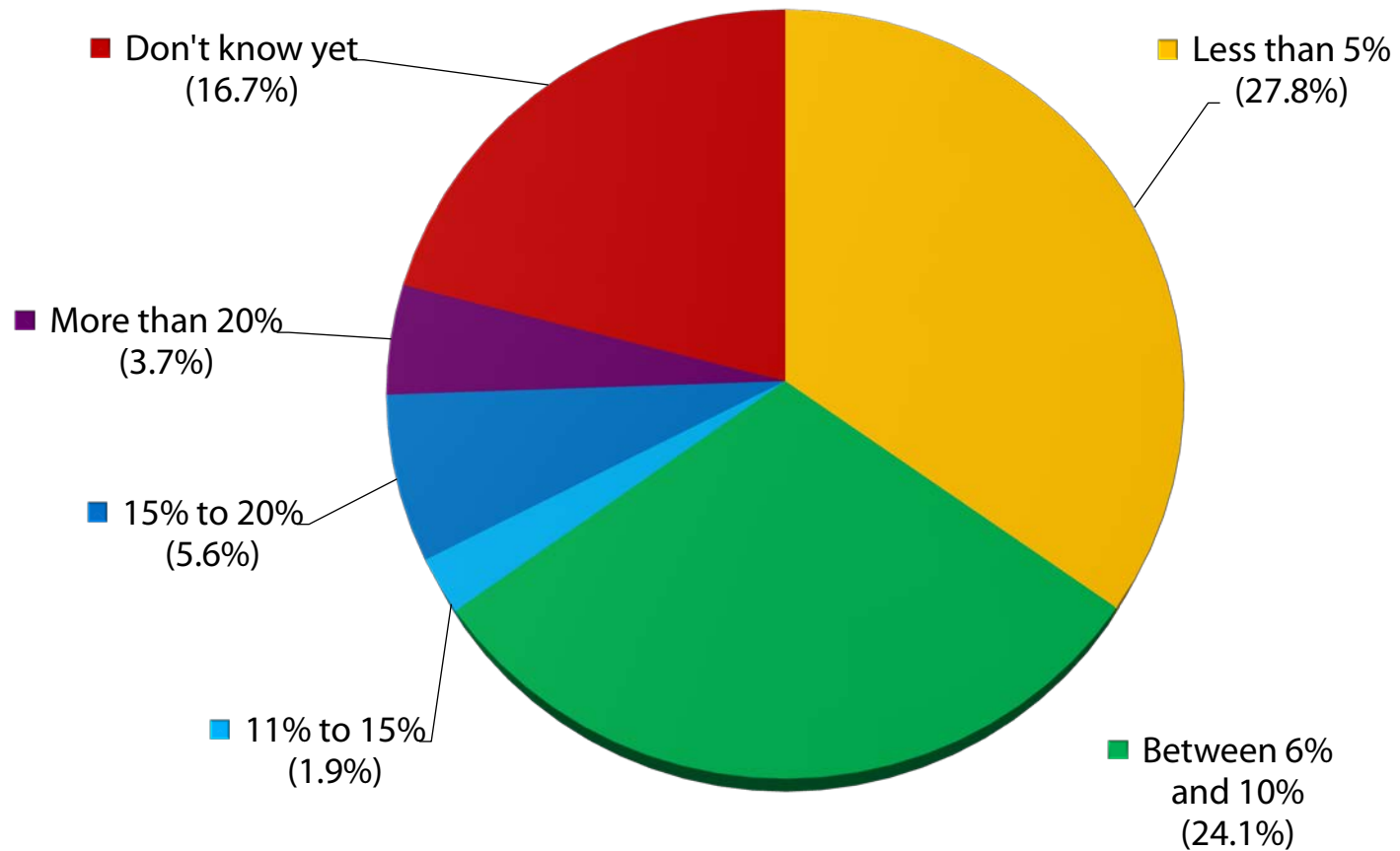
# Staffing



# Has or does your service intend to implement any of the following within the next 12 months:



# If your service area is subject to workforce reductions, what percentage of staff do you expect to lose from the service?

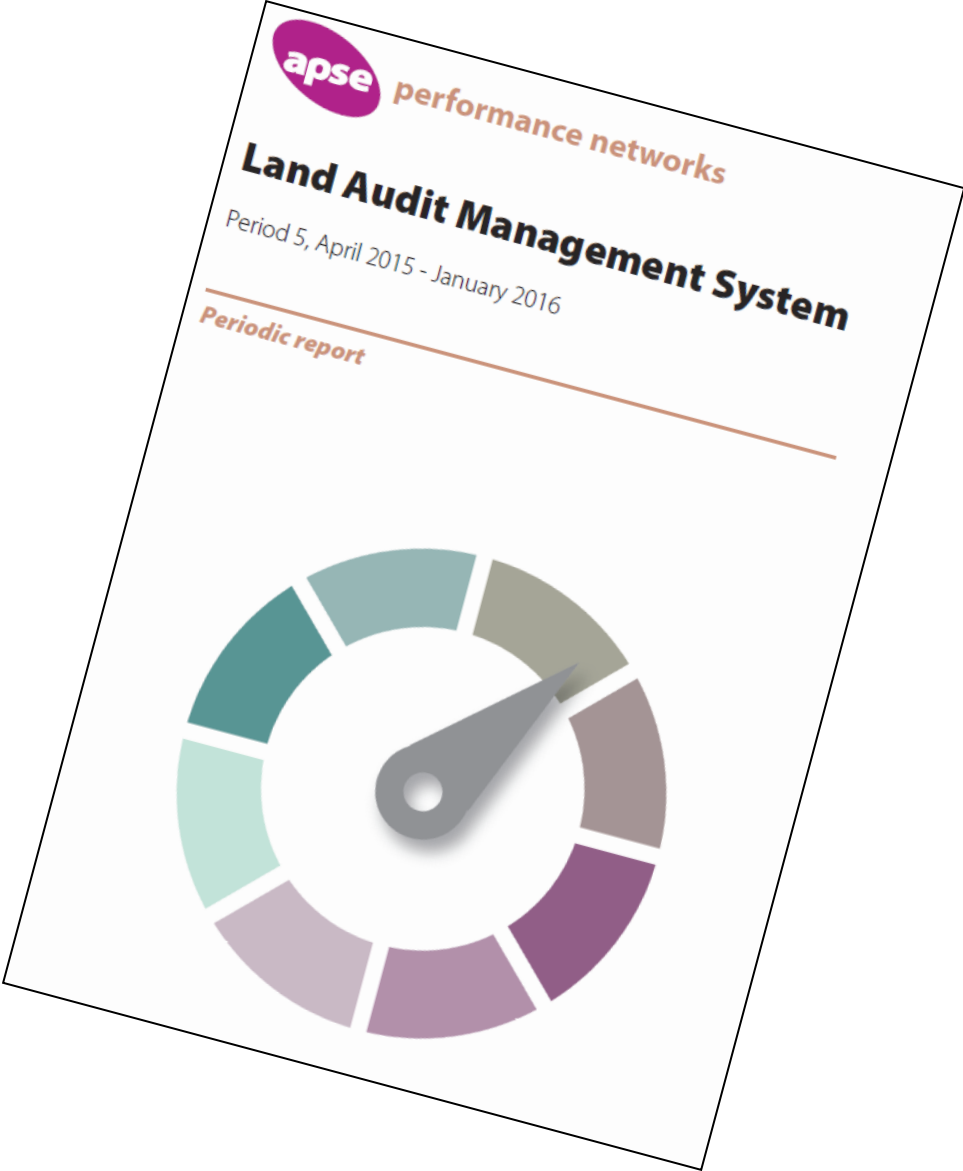


# Key findings



- Reducing frequency and increasing costs
- Reductions in staffing levels
- Reducing budget expectations
- Customer satisfaction still high
- Reducing maintenance in areas of least impact
- Effective communication – greater awareness of public/service users
- Managing demand
- Reducing areas of high cost
- Income generation schemes
- Learning from the case studies
- Importance of data in demonstrating competitiveness, efficiency and cost effectiveness

# Land Audit Management System (LAMS)



# Land Audit Management System (LAMS)



## WHAT IS IT?

- A consistent quality audit of grounds (and streets) maintenance standards
- Trigger for immediate intervention at local level
- Data source for comparative Performance Indicators at national level (real time & annual)
- Balance against cost & productivity PIs
- Simple to undertake & administer
- Will contribute to annual performance awards

# Land Audit Management System (LAMS)



## Grading and Zones

All areas maintained are allocated a zone type

Zone 1 – High amenity (high maintenance)

Zone 2 – General/medium amenity (standard maintenance)

Zone 3 – Low amenity (low maintenance)

# Land Audit Management System (LAMS)



## Grading and Zones

Areas to inspect are randomly selected and 'transects' identified (50m – 100m). These are graded & points awarded

Grade A – 3 points

Grade B – 2 points (acceptable standard)

Grade C – 1 points

Grade D – 0 points

*Consistency is 'key'. The grade is based on the inspectors perception of the maintenance standard of the site – it does not demand detailed examination of technical standards.*

*Detailed standards for each grade for each zone are produced in a Guidance Manual & on Inspection Scorecards for inspectors to use on site.*

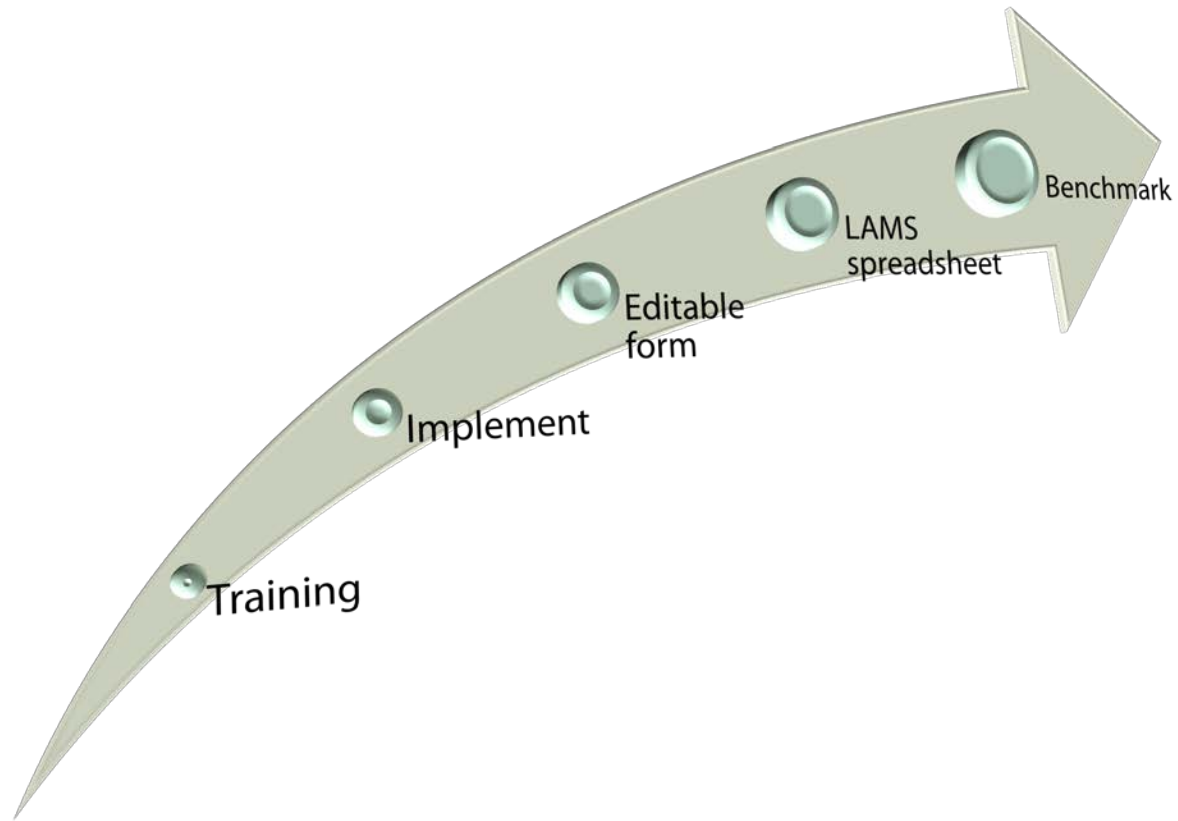
# Land Audit Management System (LAMS)



LAMS requirements and local options:

| <b>Local</b>                                       | <b>National</b>   |
|--|---|
| Frequency of inspections set locally               | Bi-monthly data input timetable must be met             |
| Number of inspections (transects) per period/annum | Agreed minimum requirement of 10 inspections per period |
| Intervention levels / times                        | Grading standards using Guidance Manual                 |

# Land Audit Management System (LAMS)



# Land Audit Management System (LAMS)



|                               |                  |                  |                  |
|-------------------------------|------------------|------------------|------------------|
| <b>April &amp; May</b>        | <b>31-May-16</b> | <b>03-Jun-16</b> | <b>10-Jun-16</b> |
| <b>June &amp; July</b>        | 31-Jul-16        | 05-Aug-16        | 12-Aug-16        |
| <b>August &amp; September</b> | 30-Sep-16        | 07-Oct-16        | 14-Oct-16        |
| <b>October &amp; November</b> | 30-Nov-16        | 02-Dec-16        | 09-Dec-16        |
| <b>December &amp; January</b> | 31-Jan-17        | 03-Feb-17        | 10-Feb-17        |
| <b>February &amp; March</b>   | 31-Mar-17        | 07-Apr-17        | 14-Apr-17        |



## Contact details

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**tcpa**

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# **Planning obligations to support the maintenance of green spaces**

**Julia Thrift  
Head of Projects & Events  
TCPA  
24 March 2016**



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## about the tcpa

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Founded in 1899; a national charity that aims to:

- Secure a decent, well designed home for everyone, in a human-scale environment combining the best features of town and country
- Empower people and communities to influence decisions that affect them
- Improve the planning system in accordance with the principles of sustainable development

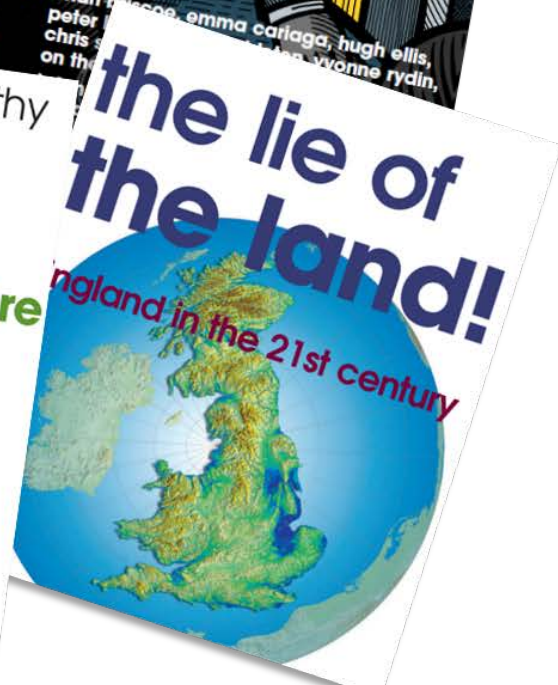
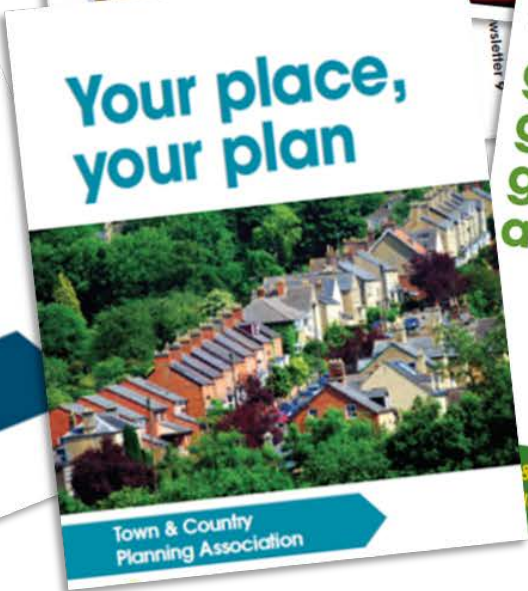
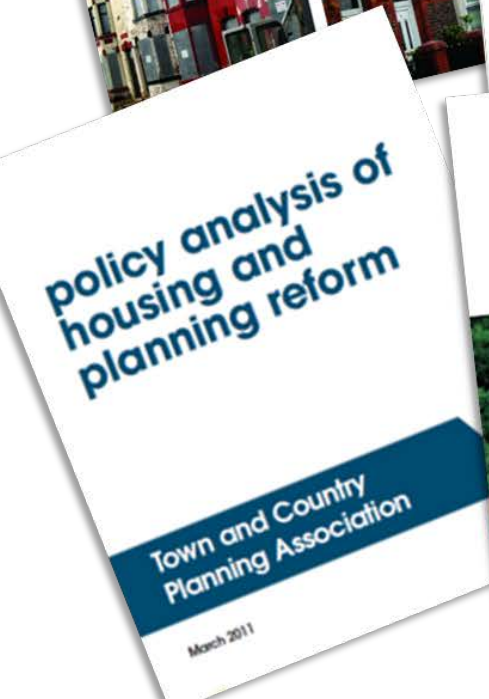
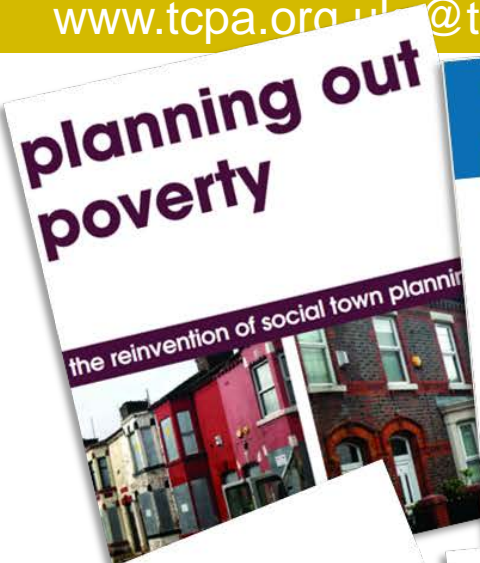


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# About the TCPA

## Leading the planning debate in the UK

www.tcpa.org.uk @thetcpa



# Victorian England and the progressive origins of planning...





## Garden cities

- Well designed buildings and landscape
- High proportion of social housing
- Healthy green spaces
- Space to grow food
- Access to jobs, social life, culture

*Garden cities have always been about creating environments in which everyone can thrive...*



# Green Infrastructure Partnership

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A rapidly growing network of 1,000+ people and organisations that promote green infrastructure, share information, influence decision-makers...

Set up as a result of the Natural Environment White Paper, now managed by the TCPA

**Free to join – see:**

**[www.gip-uk.org](http://www.gip-uk.org)**



# Parks or green infrastructure?

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A park is usually thought of as an individual site managed for amenity...



Green infrastructure is a network of green spaces, trees, green roofs, river corridors etc managed to maximise 'ecosystems services' such as sustainable drainage, urban cooling, active transport, public health...



# Green infrastructure

The importance of green infrastructure is recognised at EU level:

‘a **strategically planned network** of high quality natural and semi-natural areas with other environmental features, which is designed and managed to deliver a wide range of ecosystem services...

‘One of the key attractions of GI is its ability to perform **several functions in the same spatial area...**’



[http://ec.europa.eu/environment/nature/ecosystems/docs/green\\_infrastructure\\_broc.pdf](http://ec.europa.eu/environment/nature/ecosystems/docs/green_infrastructure_broc.pdf)

# An overview of planning

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## Local planning authorities do two key things:

### 1) Make a plan for their area

(Work with planning colleagues to ensure the plan includes a commitment to high quality parks and green infrastructure and is supported by a parks / green infrastructure strategy.)

### 2) Decide (or 'determine') individual planning applications.



## Section 106

- A developer agrees to pay money to the local authority to 'mitigate the impact' of a particular development.
- The money has to be spent within or very close to that particular development.





# Section 106 and CIL

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## Community Infrastructure Levy (CIL)

- Each local authority fixes how much CIL it will levy on every new development above a certain size.
- The money can be spent anywhere within the local authority.
- It pays for infrastructure.



# CIL can be spent on parks

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## Community Infrastructure Levy (CIL)

What is infrastructure? List might include schools, bridges, roads, sewers, social housing...

It could include the creation of new parks – and it could also include the maintenance of existing parks.

If you want parks maintenance funded, you need to get it included on your local authority's 'Regulation 123 list' setting out what the local CIL will fund.

Talk to your planning colleagues!



# CIL can be spent on parks

## Spending the levy

Appeals

Other developer contributions

Relief

Forms and templates

## What can the Community Infrastructure Levy be spent on (and by whom)?

The levy can be used to fund a wide range of infrastructure, including transport, flood defences, schools, hospitals, and other health and social care facilities (for further details, see [Section 216\(2\) of the Planning Act 2008](#), and [Regulation 59](#), as amended by the [2012](#) and [2013](#) Regulations). This definition allows the levy to be used to fund a very broad range of facilities such as play areas, parks and green spaces, cultural and sports facilities, academies and free schools, district heating schemes and police stations and other community safety facilities. This flexibility gives local areas the opportunity to choose what infrastructure they need to deliver their relevant Plan (the Local Plan in England, Local Development Plan in Wales, and the London Plan in London). Charging authorities may not use the levy to fund affordable



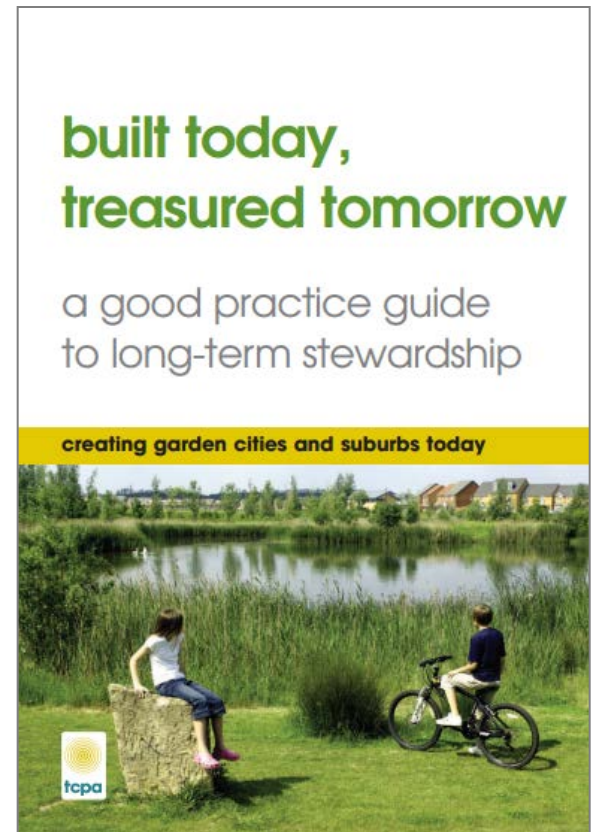
# CIL can be spent on parks

## Community Infrastructure Levy (CIL)

TCPA publication about how to fund the creation and maintenance of community assets, including parks.

Has information about using CIL to fund parks...

<http://www.tcpa.org.uk/pages/built-today-treasured-tomorrow.html>



## Making the case for green infrastructure

Multifunctional benefits of strategically designed networks of green infrastructure:

- Urban cooling
- Reduced water run-off to drains
- Better mental health
- Better physical health
- Social cohesion
- Economic attractiveness
- Active travel
- Biodiversity...



Evidence of the multiple benefits of high quality green infrastructure have been documented widely...

This 'PostNote' is a useful round-up


**HOUSES OF PARLIAMENT**  
 PARLIAMENTARY OFFICE OF SCIENCE & TECHNOLOGY

**POSTNOTE**  
 Number 448 November 2013

## Urban Green Infrastructure



Urban green infrastructure is a network of green spaces, water and other natural features within urban areas. A green infrastructure approach uses natural processes to deliver multiple functions, such as reducing the risk of flooding and cooling high urban temperatures. This POSTnote summarises research evidence of the effectiveness of green infrastructure, and challenges to its implementation.

**Overview**

- 80% of people in the UK live in urban areas. Green space has decreased in many cities in recent decades.
- This reduction poses risks to human health and natural systems that may increase with climate change. Urban green infrastructure can help to mitigate these risks.
- Green infrastructure can often provide the same functions as conventional infrastructure, such as water management and flood risk abatement, with other benefits for health and biodiversity. However, these benefits are not always well quantified.
- Constraints on green infrastructure provision include a lack of understanding of natural systems and their associated benefits, a lack of strategic green infrastructure plans and a lack of co-ordination within local authorities.

**Green and Grey Infrastructure**

Familiar urban infrastructure such as roads, sewer systems and storm drains is known as 'grey infrastructure'. Such conventional infrastructure often uses engineered solutions typically designed for a single function.

'Green infrastructure' includes parks, playing fields, private gardens, allotments, green roofs and walls, and cemeteries. The term refers to ecological processes rather than colour, so includes sustainable urban drainage systems, wetlands, rivers and canals, which are also sometimes referred to as 'blue infrastructure'. Green spaces in cities are not new, for example urban parks were implemented widely by the Victorians, but ways of incorporating green infrastructure into modern urban design are still being explored.

80% of the UK population lives in urban areas<sup>1</sup> and with an increasing population,<sup>2</sup> many UK urban regions are becoming more densely populated. This is often at the cost of green space.<sup>3</sup> Loss of which is associated with risks to human health that are greatest in deprived areas. This briefing outlines the evidence for how green infrastructure may help to address these problems, and examines the reasons for green infrastructure delivery.

**Health and Wellbeing Benefits**

There is evidence that access to green spaces can provide health benefits, through improved mental wellbeing and levels of physical activity, reduced exposure to pollution and high urban temperatures.<sup>4</sup> For example, the LBC is increasing green space on its estates through the LBC Forest Project, which will plant 1.3 million trees by 2015.<sup>5</sup> However, there are many factors that affect human health and wellbeing, of which access to green space is just one. It is usually not practical to conduct experiments to test the effects of green space on health, so researchers often rely on observations. As a result, the evidence is statistically less certain than would be expected for medical treatments.

**Mental Health and Wellbeing**

The UK Public Health White Paper 2010 notes that green spaces can improve mental health and the quality of community life.<sup>6</sup> Researchers have observed a link between increasing urbanisation and problems in depression,<sup>7</sup> being closer to urban green spaces is also associated with lower mental distress.<sup>8,9</sup> However, such observations may not indicate a causal relationship and could be explained by other factors. For example, socially deprived areas typically have low levels of green space (20%); One study aimed to reduce the prevalence of self-reported factors by studying the same 10,000 people over 18 years.

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## Making the case for green infrastructure

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The Mayor of London's 2050 Infrastructure plan included a chapter on green infrastructure, supported by this taskforce report setting out what needs to happen to improve the functionality of London's green infrastructure, manage it and fund it...

<https://www.london.gov.uk/what-we-do/environment/environment-publications/green-infrastructure-task-force-report>



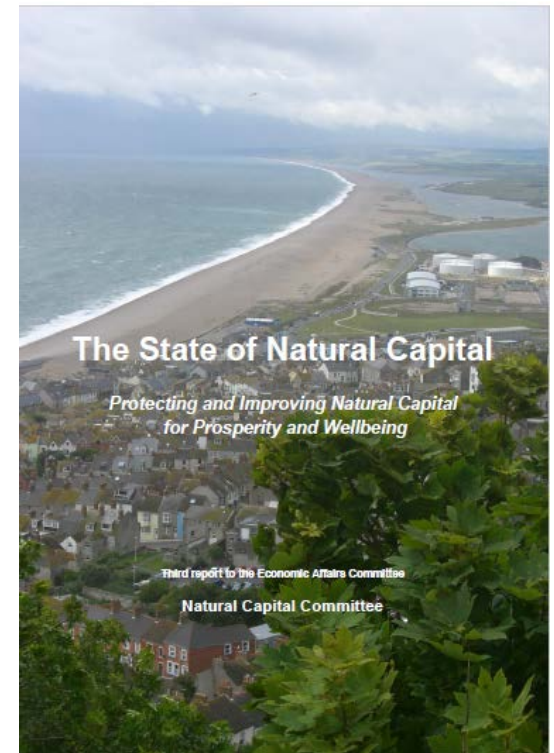
## Making the case for green infrastructure

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The Natural Capital Committee's 2015 report argued that green infrastructure close to where people live is of huge economic value to the country...

Their work will be feeding into the Government's 25 year natural environment plan, due later this year.

<https://www.gov.uk/government/groups/natural-capital-committee>





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## What you need to do...

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1. Make sure your local plan has a strong vision for high quality well-maintained parks and green infrastructure, supported by a parks and green infrastructure strategy.
2. Make a strong case for including parks maintenance in your local authority's CIL schedule.
3. Support your arguments by using all the evidence available about the benefits of green infrastructure for health, flood mitigation, air pollution control, urban cooling, public health...

## Who can help you?

Your colleagues in the planning department...

Your **director of public health**...

Parish councils / neighbourhood forums (they decide how 25% of CIL in their area is spent if their neighbourhood plan is agreed by a referendum)...





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Thank you!

**Julia Thrift**

Head of Projects & Events

**TCPA**

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[www.tcpa.org.uk](http://www.tcpa.org.uk)

[www.gip-uk.org](http://www.gip-uk.org)



# Two Birmingham Challenges



**Birmingham City Council Leader-** leading global green city;

**Planning-** 2031  
150,000 population;  
40,000 new homes;



## Presentation

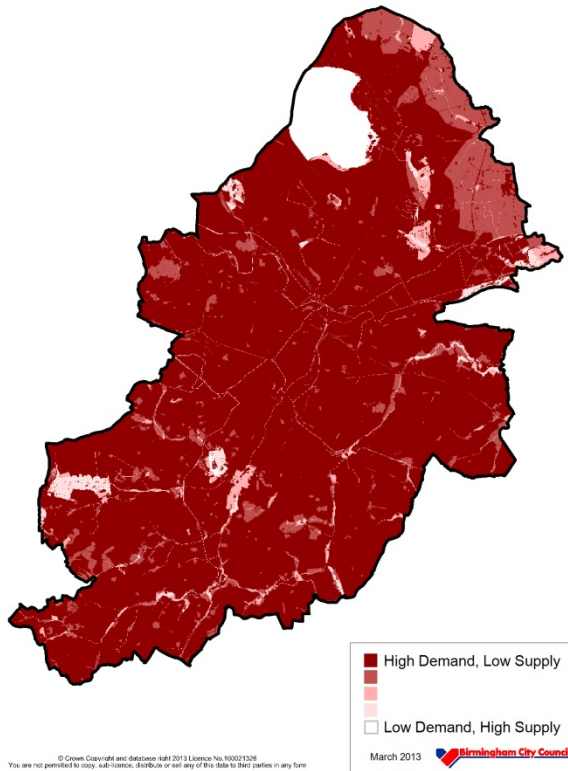
1. Urban Well-being Park
2. Natural Capital Planning Tool



Nick Grayson, Climate Change & Sustainability Manager,  
Senior Research Fellow, University of Birmingham

# Two Birmingham Challenges

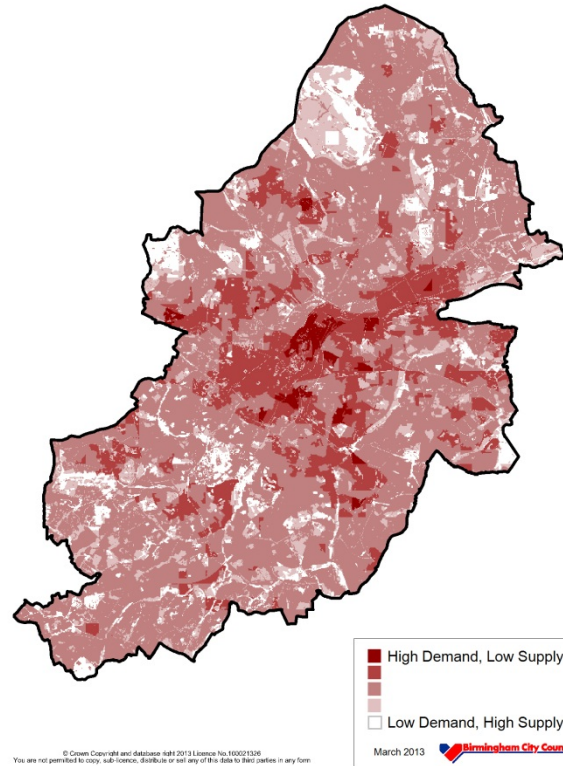
Biodiversity Services Supply and Demand map



• Biodiversity

• Education

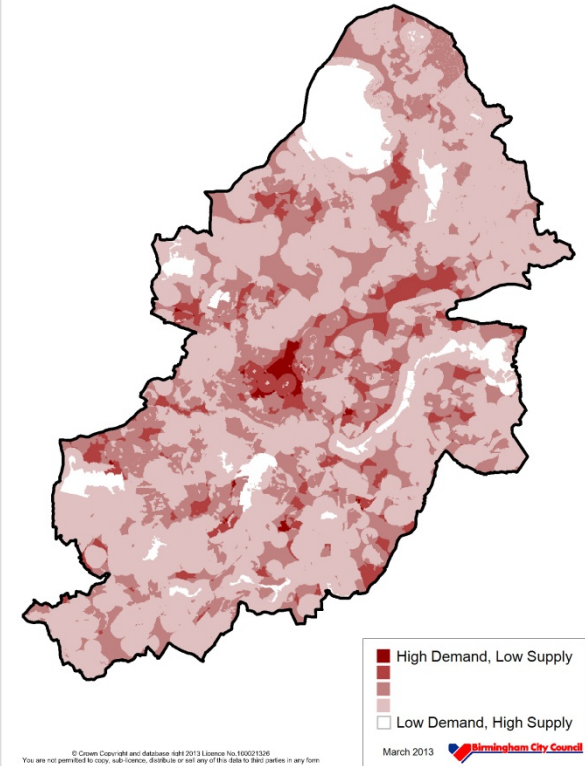
Local Climate Services Supply and Demand map



\* Local Climate

\* Aesthetics & mobility

Recreation Services Supply and Demand map



\* Recreation

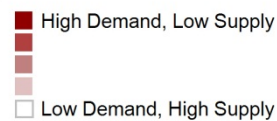
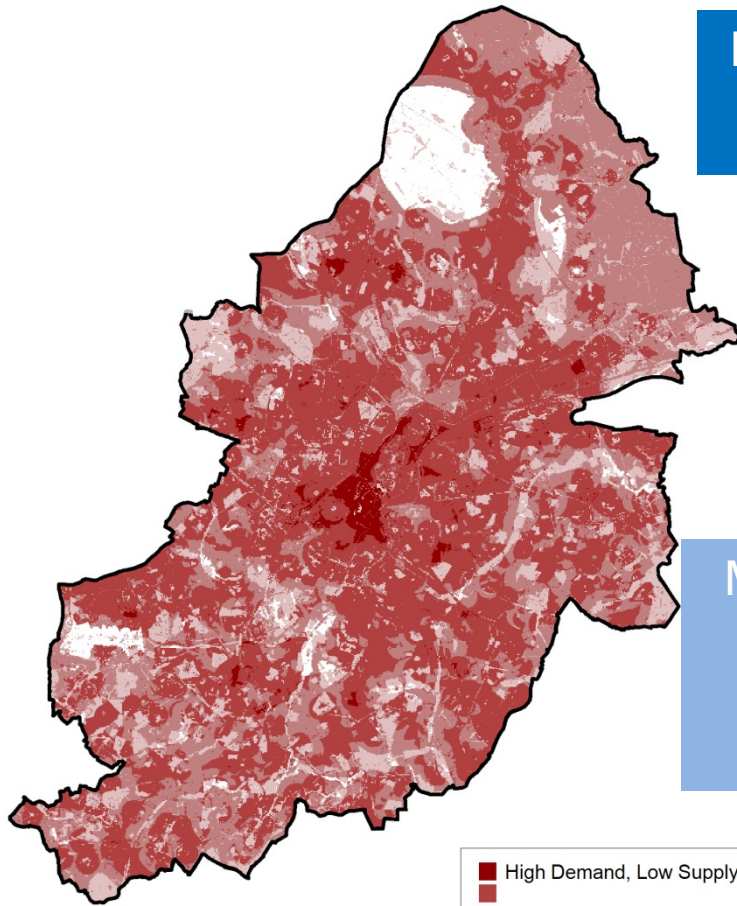
\* Flood risk

# Two Birmingham Challenges

The Multi-layered Challenge map for Birmingham

Birmingham –  
a global first

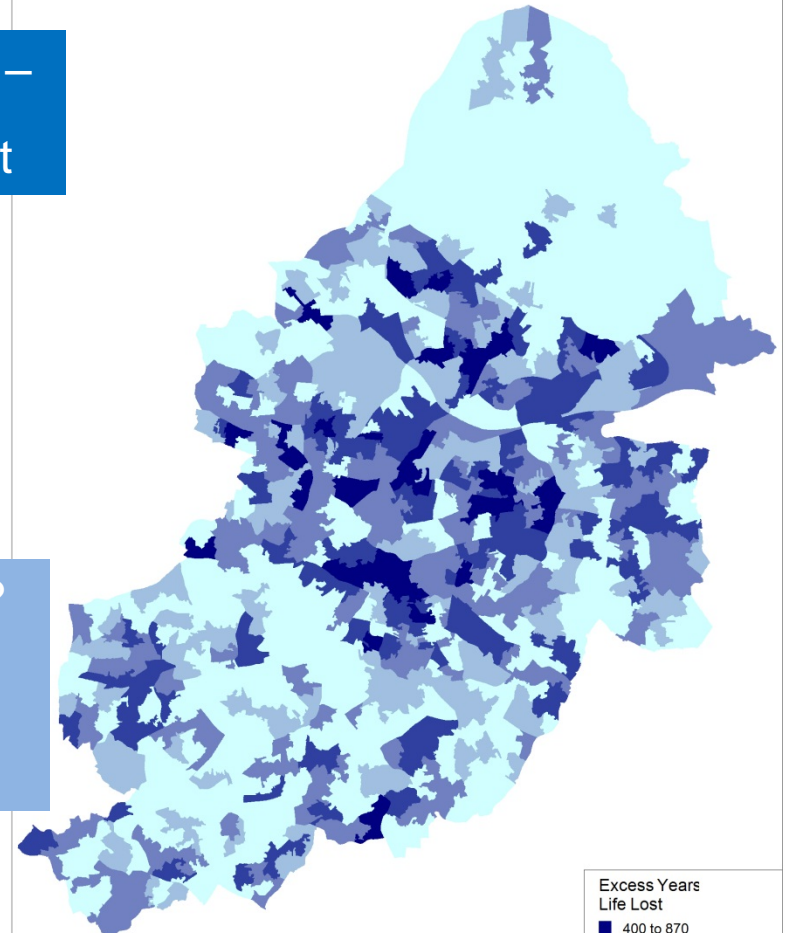
Manchester?  
GLA?  
New York?



March 2013 Birmingham City Council

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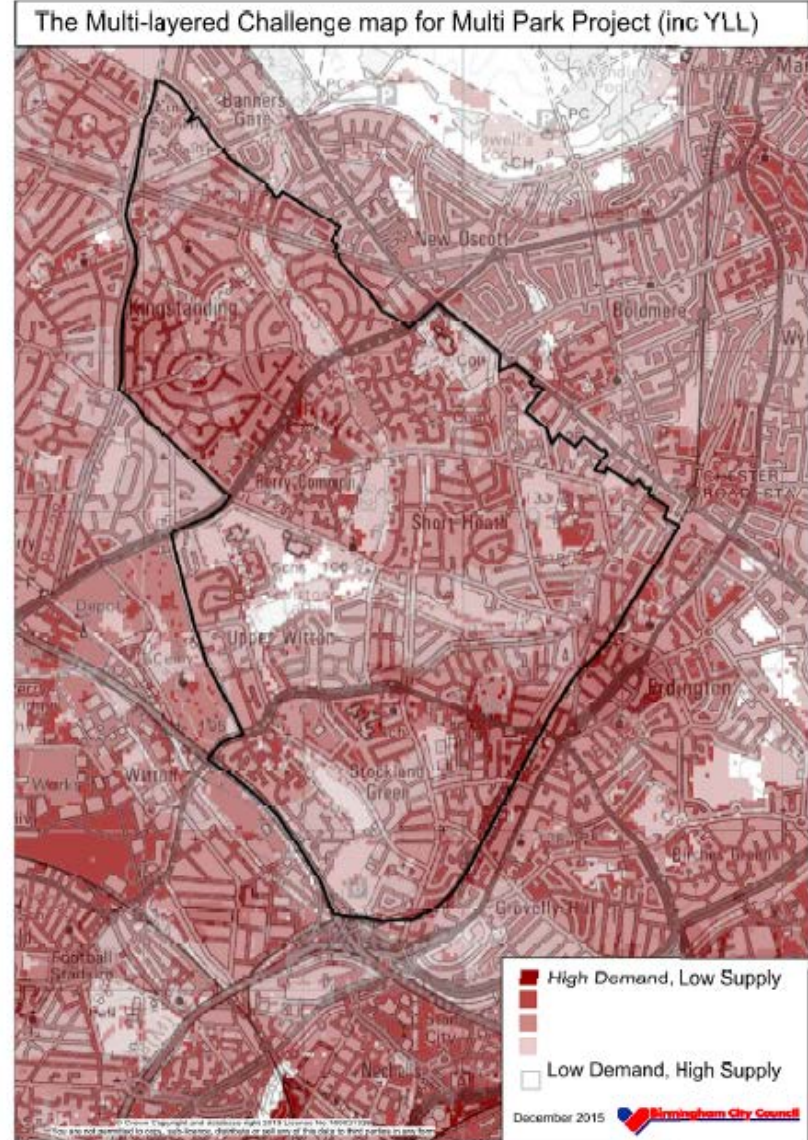
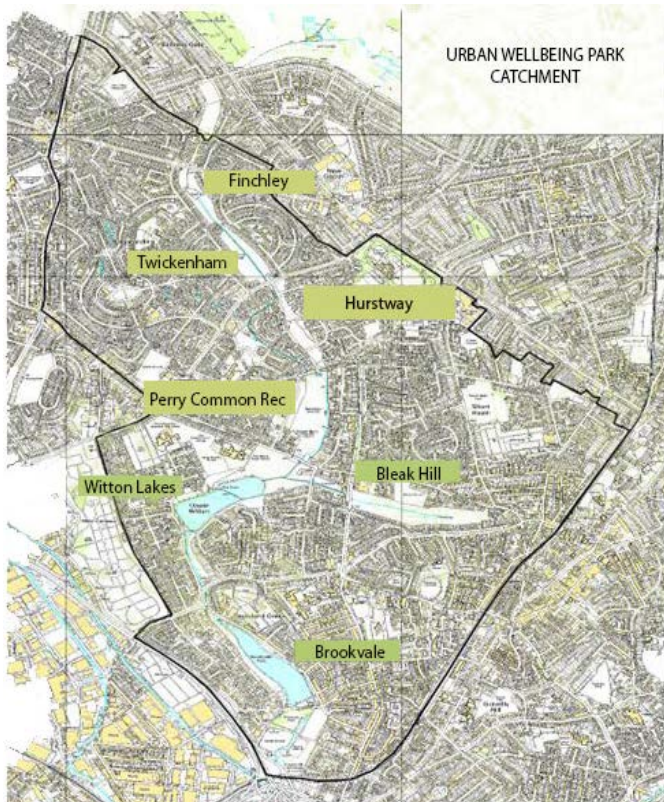
Excess Years Life Lost at LSOA



# Two Birmingham Challenges

## Urban Wellbeing Park Operational Plan

*“Creating living parks with people that are well used and managed for wellbeing”*



# Two Birmingham Challenges

## Birmingham Urban Wellbeing Park Cost-Benefit Analysis

February 2016

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Table 1.1 UWP CBA Summary

| Central Estimate<br>Net Present Value (NPV) 2016-2040; 2015 prices |                   |
|--|-------------------|
|  | UWP Project       |
| Total Benefits   | £3,172,781        |
| Total Costs  | £2,044,668        |
| <b>Net-Benefit</b>   | <b>£1,128,114</b> |
| <b>Benefit-Cost Ratio (BCR)</b>                                    | <b>1.55</b>       |

Source: Author calculations

## Birmingham Urban Wellbeing Park Impact Framework

Version 1.0 February 2016

| Theme    | Impact Category | Indicator                         | Metric |
|----------|-----------------|-----------------------------------|--------|
| Economic | A1 Volunteers   | A1.1 Number of Volunteers Engaged | Count  |
|          |                 | A1.2 Volunteer Hours              | Hours  |
|          |                 | A1.3 Value of Volunteer Hours     | £      |

| Theme         | Impact Category           | Indicator   | Metric    |
|---------------|---------------------------|---|-----------|
| Economic      | A2 Education              | A2.1 Number of people engaged in UWP outdoor education activities | Count     |
|               |                           | A2.2 Total hours spent on UWP outdoor education activities        | hours     |
|               | A4 Food                   | A4.1 Area Managed for Food Production                             | Ha        |
|               |                           | A4.2 People engaged in food growing/ foraging activities          | Count     |
| Social        | B1 Recreation             | B1.1 Visitor Counts   | Count     |
|               | B5 Aesthetic Appreciation | B5.1 Sites/area with Green Flag Status                            | Nr & ha   |
| Environmental | C1 Biodiversity           | C1.1 Area of Habitat/Land-Use Change                              | Type & Ha |

Number one outcome –  
Over 5 years  
Prove the health benefits

# Two Birmingham Challenges

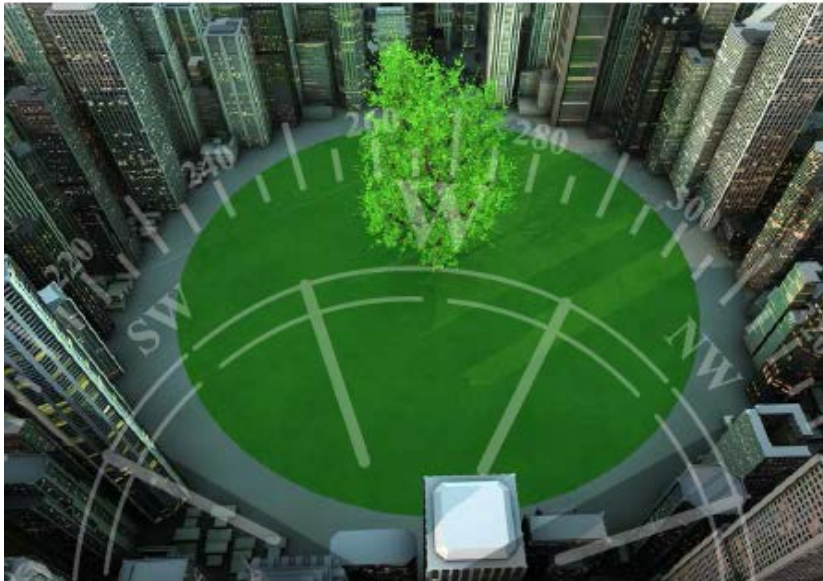
Research



November 2015

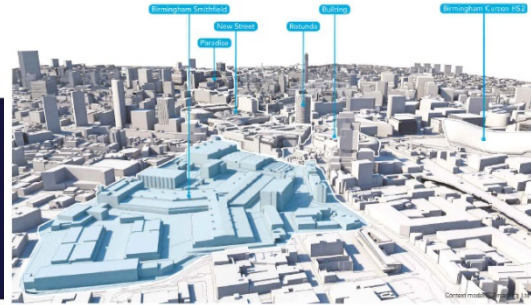
## Planning for Sustainable Land-Use: The Natural Capital Planning Tool (NCPT) Project

[A new planning tool that directly links the delivery requirements of the National Planning Policy Framework with the aspirational values in the Natural Environment White Paper]



[rics.org/research](http://rics.org/research)

## Green Infrastructure Innovation Projects call ? £100,000 grant



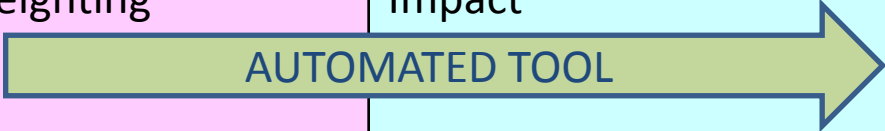
## 2016-18 to test NCPT as a National Industry Standard Tool?

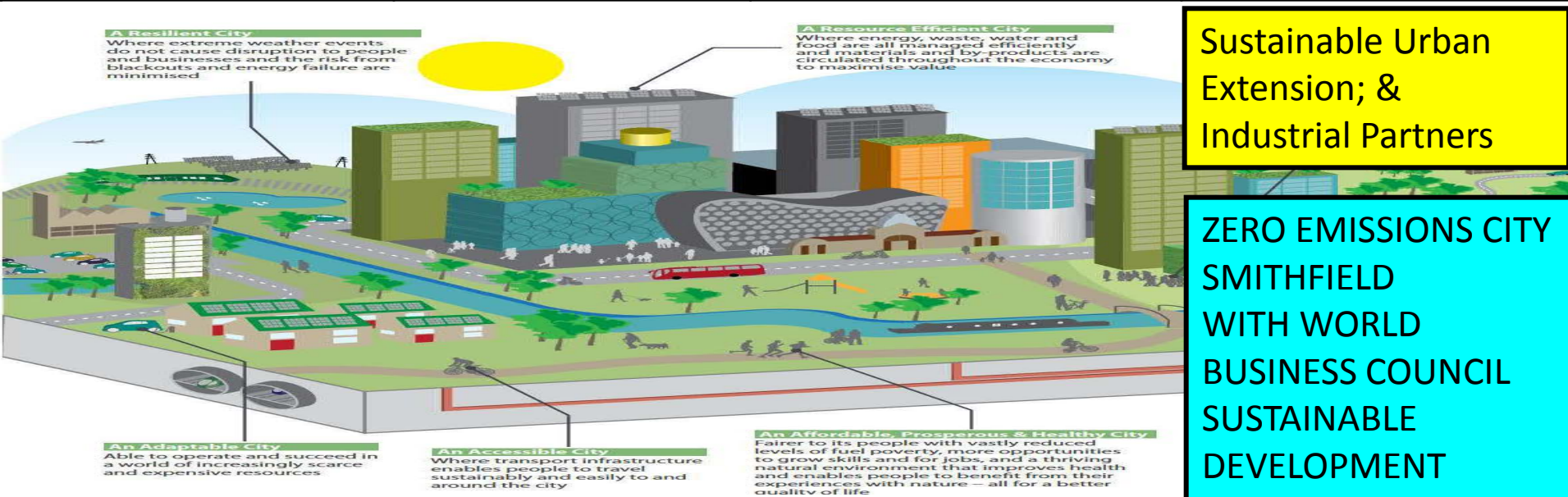
- To be tested:-
- Smithfield (ZEC)
- Southern Gateway
- Langley-SUE
- UK Central (HS2)
- Southampton
- Central Bedfordshire



# Two Birmingham Challenges

| Natural Capital Planning Tool - NCPT     |                             |                             | (R.I.C.S.)                                       |
|--|-----------------------------|-----------------------------|--|
| 10 Ecosystem Services                    | Multiple Benefits           | Stakeholders & Co-investors | Returns on Investment                            |
| 25 indicators<br>Ecosystems Impact Score | Ecosystem Service Weighting | Ecosystem Service Impact    | Development impact score<br>& options <b>+VE</b> |





Sustainable Urban Extension; & Industrial Partners

ZERO EMISSIONS CITY SMITHFIELD WITH WORLD BUSINESS COUNCIL SUSTAINABLE DEVELOPMENT

# Two Birmingham Challenges

## Development Impact Score

Total for 71.5 Ha of Assessed Land-use Changes

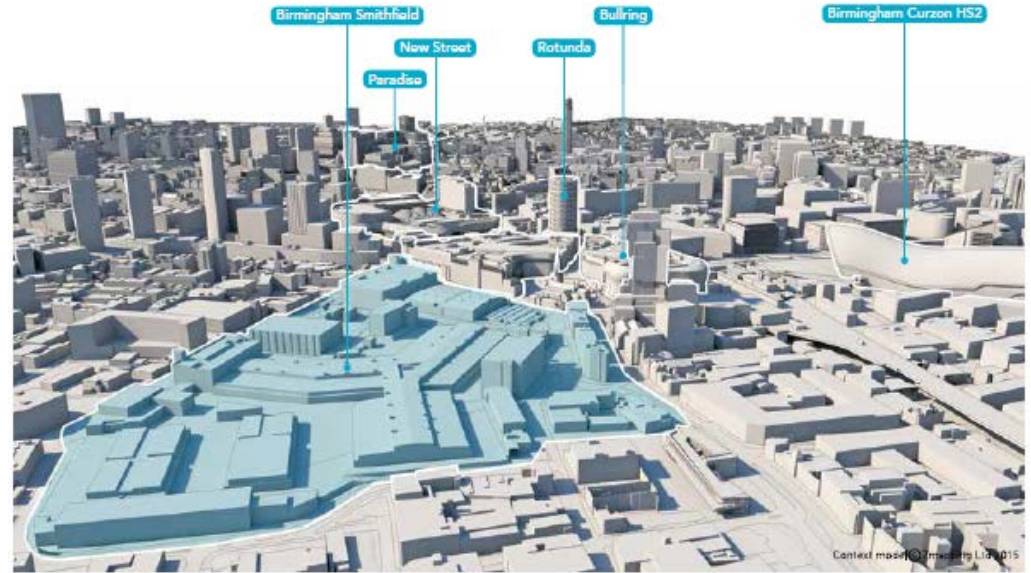
| Ecosystem Service               | Adjusted Scores | Unadj. Scores |
|---------------------------------|-----------------|---------------|
| 1. Harvested Products           | -359.1          | -359.1        |
| 2. Biodiversity                 | +55.7           | +55.7         |
| 3. Aesthetic Values             | -7.7            | -7.7          |
| 4. Recreation                   | +72.3           | +72.3         |
| 5. Water Quality Regulation     | +1.9            | +1.9          |
| 6. Flood Risk Regulation        | +1.1            | -0.7          |
| 7. Air Quality Regulation       | +22.6           | +22.6         |
| 8. Local Climate Regulation     | -1.6            | -1.6          |
| 9. Global Climate Regulation    | -57.8           | -57.8         |
| 10. Soil Contamination          | +0.0            | +0.0          |
| <b>Development Impact Score</b> | <b>-27.3</b>    | <b>-27.4</b>  |

## Langley SUE initial master plan concept capacity test

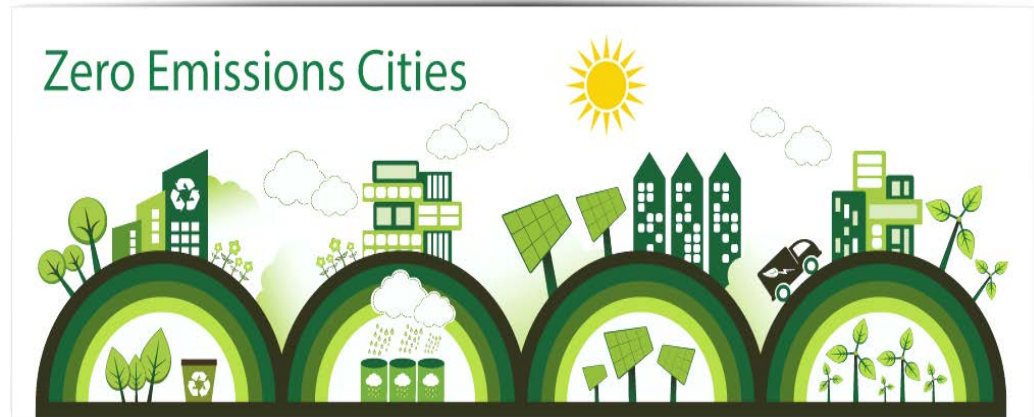


1. Housing quality and design
2. Access to healthcare services and other social infrastructure
- 3. Access to open space and nature**
4. Air quality, noise and neighbourhood amenity
5. Accessibility and active travel
6. Crime reduction and community safety
7. Access to healthy food
8. Access to work and training
9. Social cohesion and lifetime neighbourhoods
10. Minimising the use of resources
11. Climate change

# Two Birmingham Challenges



context / birmingham smithfield



Net +ve for natural capital; global learning for wbcspd

# Birmingham: The UK's First Biophilic City

**BiophilicCities** - Cities that achieve a deep affinity with nature



# Two Birmingham Challenges

## Questions & Answers?

Nick Grayson, Climate Change & Sustainability Manager,  
[nick\\_grayson@birmingham.gov.uk](mailto:nick_grayson@birmingham.gov.uk);

<http://www.birmingham.gov.uk/greencommission>

<http://www.birmingham.gov.uk/greenlivingspaces>

<http://www.birmingham.gov.uk/plan2031>

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<http://www.un.org/apps/news/story.asp?NewsID=48773#.VrnAcVLctjo>

<http://biophiliccities.org/>

<http://liveablecities.org.uk/>

