Significant Findings

- Municipal Planning
- Municipal Finance
- Municipal Governance

Birmingham City Council
Leader- leading global green city;
Planning- (2031)
150,000 population;
51,300 new homes;

Presentation: from..Research ...to Rethink.... via multiple values...

Nick Grayson, Climate Change & Sustainability Manager, Senior Research Fellow, University of Birmingham
The Value of Green Infrastructure in Cities

Streets for the 21st Century

Multiple Values
The Value of Green Infrastructure in Cities

Natural Capital can be defined as the world's stocks of natural assets which include geology, soil, air, water and all living things. It is from this Natural Capital that humans derive a wide range of services, often called ecosystem services, which make human life possible. (Natural Capital Committee Third Report 2015)

Figure 1: Protecting and improving natural capital over a generation – a stylised interpretation

IUCN 2016
Article 63
$200-300bn
1%

25 YEAR NATURAL CAPITAL PLAN

Multiple Values

4 PILLARS OF THE 25 YEAR
NATURAL CAPITAL PLAN-V1

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The Multi-layered Challenge map for Birmingham

CITY SCALE

Birmingham – a global first

Manchester?

GLA?

New York?

Biodiversity

Education

Recreation

Local Climate

Flood Risk

Aesthetic & mobility

Excess Years Life Lost at LSOA

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Development Impact Score
Total for 71.5 Ha of Assessed Land-use Changes

<table>
<thead>
<tr>
<th>Ecosystem Service</th>
<th>Adjusted Scores</th>
<th>Unadj. Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Harvested Products</td>
<td>-359.1</td>
<td>-359.1</td>
</tr>
<tr>
<td>2. Biodiversity</td>
<td>+55.7</td>
<td>+55.7</td>
</tr>
<tr>
<td>3. Aesthetic Values</td>
<td>-7.7</td>
<td>-7.7</td>
</tr>
<tr>
<td>4. Recreation</td>
<td>+72.3</td>
<td>+72.3</td>
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<tr>
<td>5. Water Quality Regulation</td>
<td>+1.9</td>
<td>+1.9</td>
</tr>
<tr>
<td>6. Flood Risk Regulation</td>
<td>+1.1</td>
<td>-0.7</td>
</tr>
<tr>
<td>7. Air Quality Regulation</td>
<td>+22.6</td>
<td>+22.6</td>
</tr>
<tr>
<td>8. Local Climate Regulation</td>
<td>-1.6</td>
<td>-1.6</td>
</tr>
<tr>
<td>9. Global Climate Regulation</td>
<td>-57.8</td>
<td>-57.8</td>
</tr>
<tr>
<td>10. Soil Contamination</td>
<td>+0.0</td>
<td>+0.0</td>
</tr>
</tbody>
</table>

Development Impact Score: -27.3

Net Positive for Natural Capital over a 25 year period, (273 ha)
Circa 6,000 homes

SITE SCALE

LC- NERC NATIONAL TRAIL-University Of Birmingham Lead

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NATURAL CAPITAL

Multiple Values

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Zero Emission Cities (ZEC) – Birmingham Smithfield

Sustainability Principles
Sustainability Key Performance Indicators
1. Energy and Climate Action
2. Water
3. Waste
4. Buildings
5. Natural Capital
6. Transport and Accessibility
7. Materials and Resources
8. Community and Culture
9. Local Economy
10. Health and Wellbeing

6-12 key questions
67 KPI’s
Compliant-9
Best Practice-32
Aspirational-26

ZEC-PLUS (THE BIRMINGHAM MODEL)

A NEW COMPREHENSIVE MODEL – KPI COST BENEFIT ANALYSIS

NATURAL CAPITAL FINANCING – VIA – LC RESEARCH LEAD
NEW INVESTOR FINANCE MARKETS

Zero Emissions Cities

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Urban Investment Portfolio

- Acceptable projects have high Financial Value and High Non Financial Value
- Unacceptable projects score low on both
- All other projects get adjusted to make the best overall fit and return.

UCL - Professor Francesca Medda - QASER

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Who benefits?

What multiple values?

Sustainable finance?

Governance models?

Who benefits?

What multiple values?

Sustainable finance?

Governance models?

MENU CHOICES

SITE SCALE
- Planning
- Finance
- Governance

NEIGHBOURHOOD SCALE
- Planning
- Finance
- Governance

CITY SCALE
- Planning
- Finance
- Governance

REGION SCALE
- Planning
- Finance
- Governance

Streets for the 21st Century
Birmingham: The UK’s First Biophilic City

Biophilic Cities - Cities that achieve a deep affinity with nature

Streets for the 21st Century

Rethink
The Value of Green Infrastructure in Cities

Questions & Answers?

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http://www.birmingham.gov.uk/greencommission
http://www.birmingham.gov.uk/greenlivingspaces
http://www.birmingham.gov.uk/plan2031
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