Health and the Material World:
Perspectives on Prevention Research

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We know:
<table>
<thead>
<tr>
<th>Factors</th>
<th>Constructs</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Quality of the fabric of the physical</td>
<td>Design, construction and maintainance of buildings,</td>
<td>Houses requiring major repair, broken structural elements, graffiti,</td>
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<tr>
<td>environment</td>
<td>the spaces between buildings and associated</td>
<td>rubbish, vandalism, lack of recreation space, public drinking, public</td>
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<td></td>
<td>infrastructure</td>
<td>drug use, abandoned buildings.</td>
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<tr>
<td>Quality of the ambient environment</td>
<td>Lighting</td>
<td>Access to sunlight and windows</td>
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<td>Noise/Acoustics</td>
<td>Living near airports, neighbour noise, mould and damp.</td>
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<td>Thermal quality</td>
<td>Excessive built form with no green space or no views (ie concrete jungle)</td>
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<td>Access to nature</td>
<td></td>
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<td>Psychological impacts of physical and</td>
<td>Density</td>
<td>Numbers of residents, crowded settings and lack of privacy or space for</td>
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<td>ambient environment</td>
<td>Accessibility</td>
<td>play inside dwellings.</td>
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<td>Safety and fear</td>
<td>High-rise and numbers of floors.</td>
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<td>Way finding</td>
<td>Crime and fear of crime as a result of urban form and lighting. Poor</td>
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<td>layout.</td>
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Foresight
Health and Wellbeing

Lifestyle
- Alcohol
- Food/Diet
- Tobacco

Obesity
- Heart disease
- Diabetes
- Cancer
- Lung disease
- Depression

Engineering, Science and Design Knowledge and Practice

Indirect
- Product eg medical equipment
- Services eg care pathway design
- Comms eg public health or tele
- Place eg hospital design

Direct
- Product eg medical equipment
- Services eg care pathway design
- Comms eg public health or tele
- Place eg hospital design

The Urban Challenges

9.3m additional urban in UK residents by 2062

- in the next 15 to 20 years
  - 30% more water
  - 45% more energy
  - 50% more food

Estimates of demand require 245,000 new homes per year

by 2050 eight million aged over 80 most will live in cities
We do research:
Active Parks

Co-designing a Health trail in Ryelands Park
Physical

Natural & Built Environment
Transport
Consumption: products and services

Digital
We are living in the Internet of things
Every day, we create 2.5 quintillion bytes of data
Director Prof Ian Craddock, Bristol.
Procurement / Manufacturing
Consenting / Installation process
Metadata capture on homes and participants
Ethics
A fabulous opportunity to bring all disciplines together to work at Scale a true collaboration of communities:

• Architecture, Engineering, Design Environmental Science, Computing, Maths, Analytics, Complexity Science, Behavioural Science, etc. etc.

• Health care and NHS; public health; planning and design; politicians and policy makers; developers and land owners; Local government; charities; large and small companies.

• Interventions through co-design or mediated design
Thank You