

# **SUSTAINABLE URBAN ENVIRONMENTS**

Presentation to the conference

‘Sustainable Air Quality for London’

By

**Professor Paul Ekins**

Professor of Energy and Environment Policy, King’s College London

King’s College

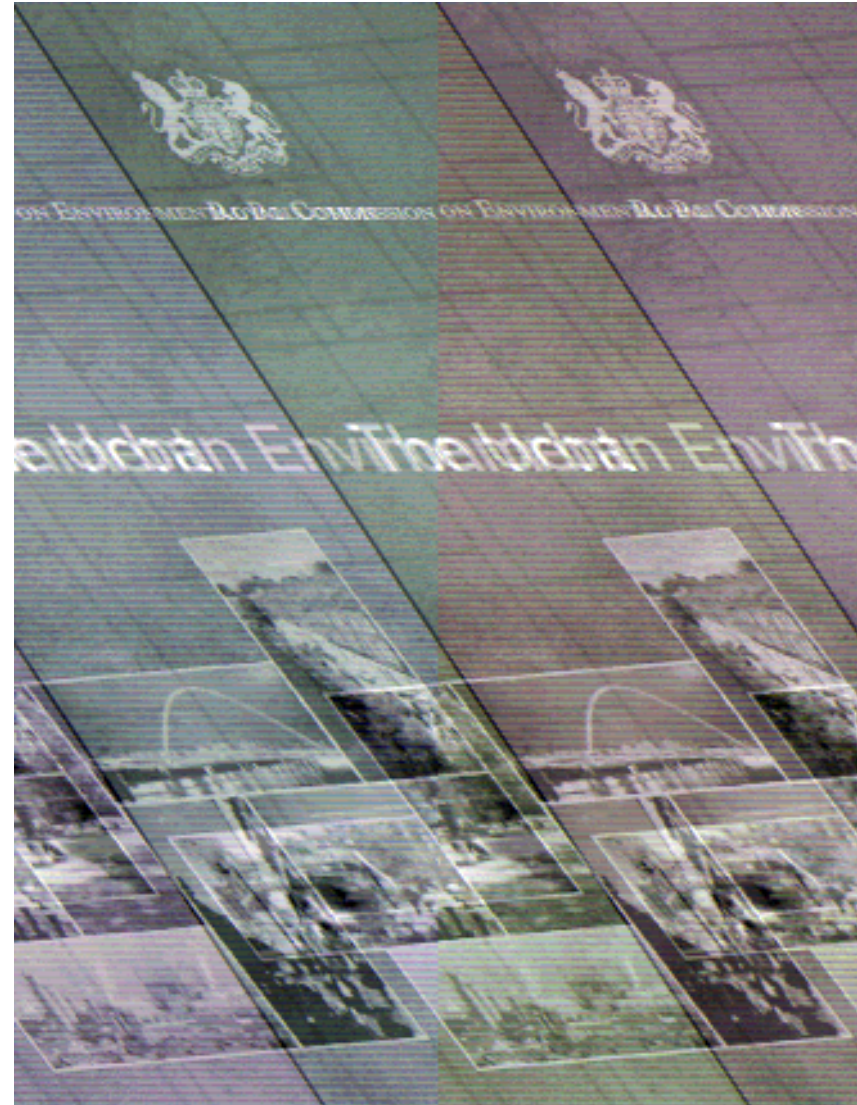
Wednesday 23<sup>rd</sup> January 2008



**ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION**

# **The Urban Environment**

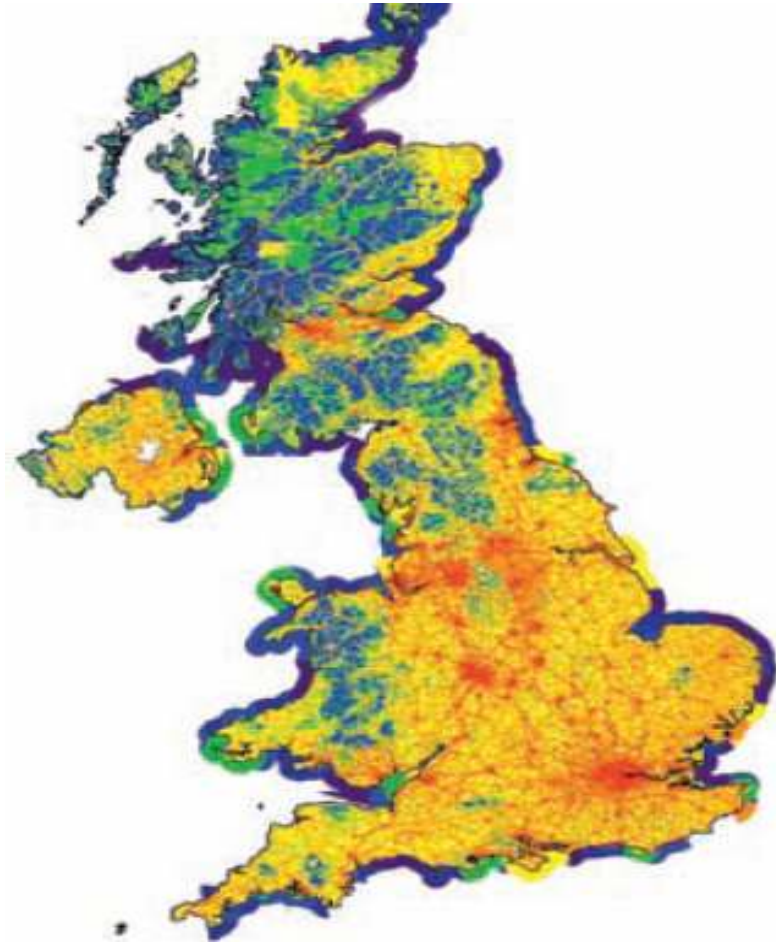
**Royal Commission on  
Environmental Pollution**





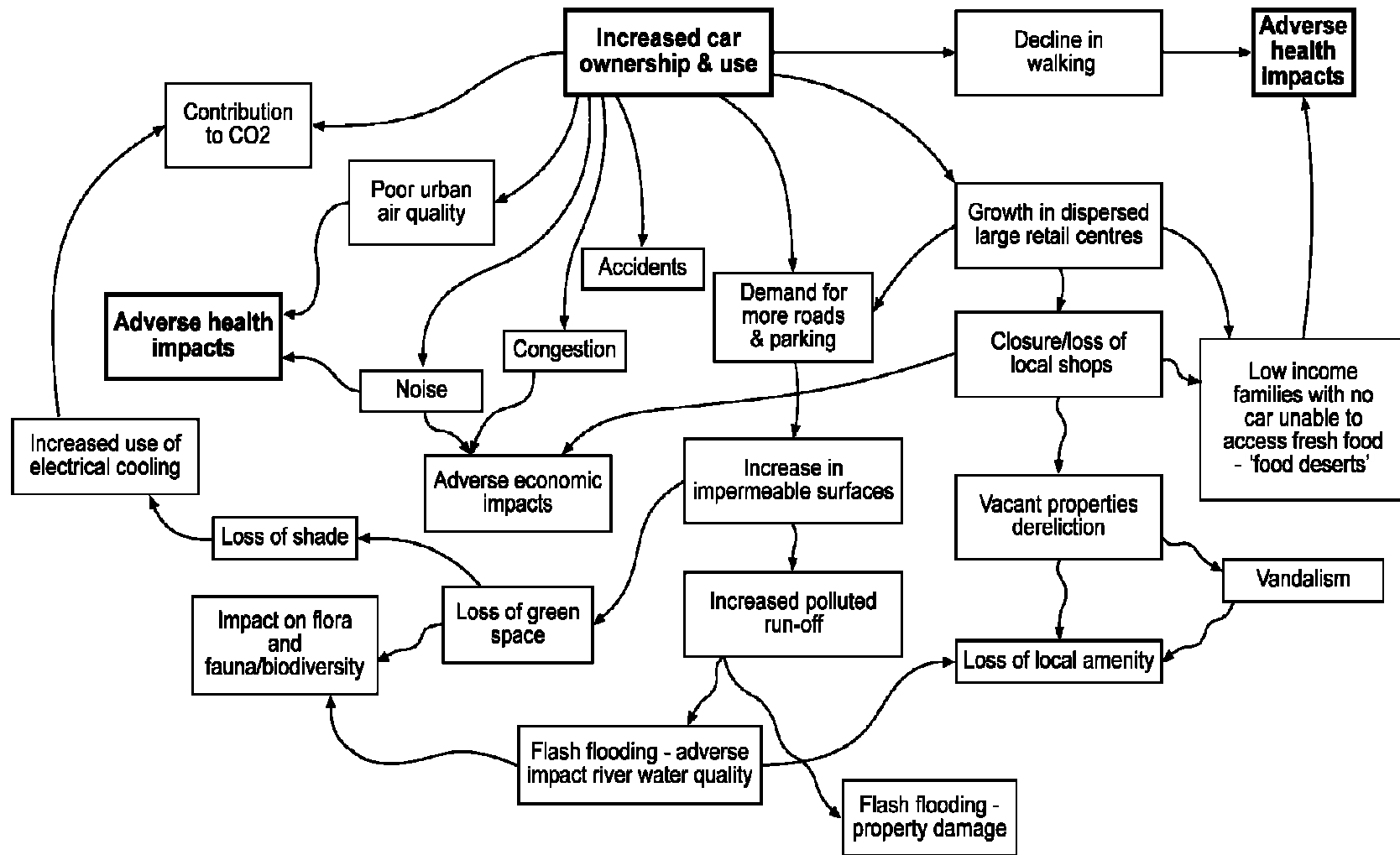
## Why towns and cities matter

- Over 80% of UK population already live in urban environment and rising.
- Impact of urban areas on environment is large.
- But no over-arching policy.
- **Presents us with a great opportunity.**





# Urban Complexity



'THE WEB OF CONNECTIONS'

# MAJOR THEMES

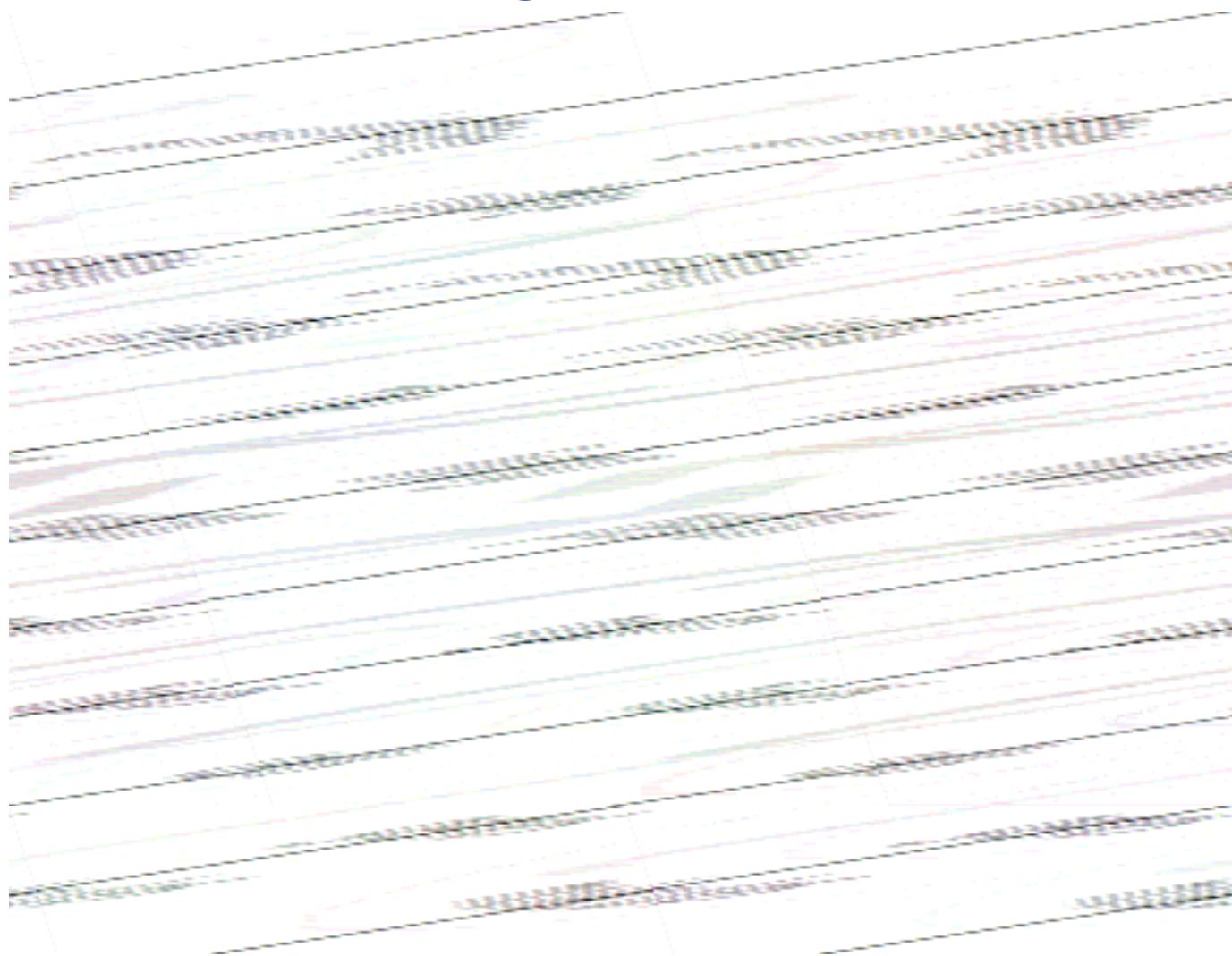
- Urban environment and human health
- ‘Natural’ urban environment
- Built environment
- NB Transport not covered in detail because extensively covered in earlier RCEP reports





ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

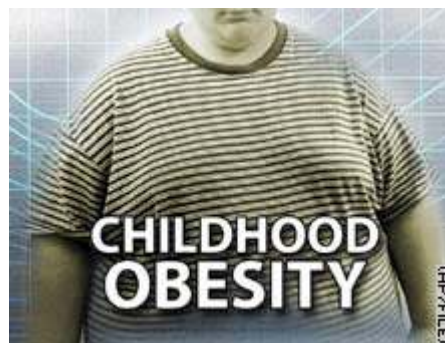
# Complex Interactions Influencing Individual Health





ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

# Unravelling Environmental Factors Shaping Health



**Air pollution**



**Obesity**



**Mental illness**



ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

# The Natural Urban Environment

- Need a broader understanding of special character and value.
- Natural environment has a key influence on health and wellbeing.
- But the natural urban environment can provide essential ecosystem services, enhanced biodiversity and social benefits.
- Needs enhancement and protection.







# Ecosystem Services

- Biodiversity enhancement through river restoration; tree planting; preserving some brownfields.
- Create green infrastructure – SUDs; green roofs.
- Moderation of climate change, traffic pollution and urban heat island effects.





# Community Benefits

- River restoration to provide access to and recreation along our urban waterways.
- Create and maintain green spaces that provide for recreation, exercise, amenity, local food (allotments).
- Protect properties from flooding – through integrated drainage and avoidance of high risk areas.
- But will have to plan improvements to the natural environment in an integrated way.





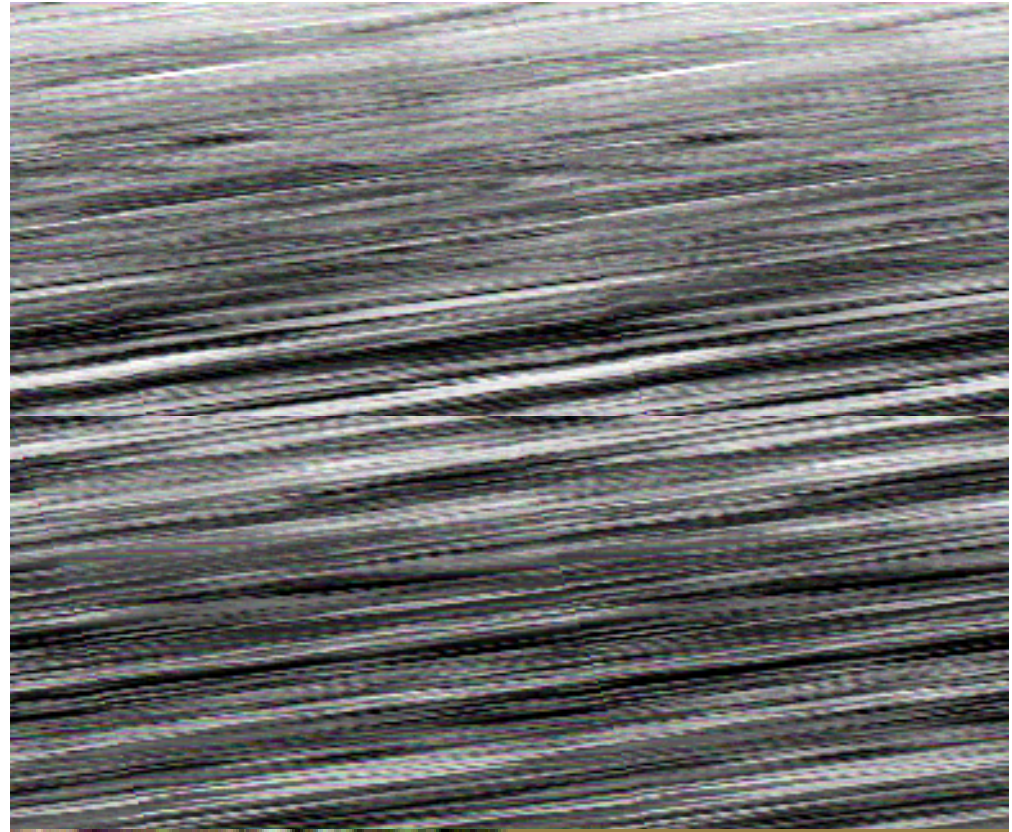


ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

# Priorities for the Built Environment

Integrated approach to:

- Transport
- Energy
- Water and Sewerage
- Waste Management
- Urban Design





## The Web of Constraints

- Created by interactions between existing
  - infrastructure, incentives, instruments and institutions, people's inclinations and lack of information.
- Addressed through policy package
  - economic instruments, voluntary agreements, regulation and information provision.

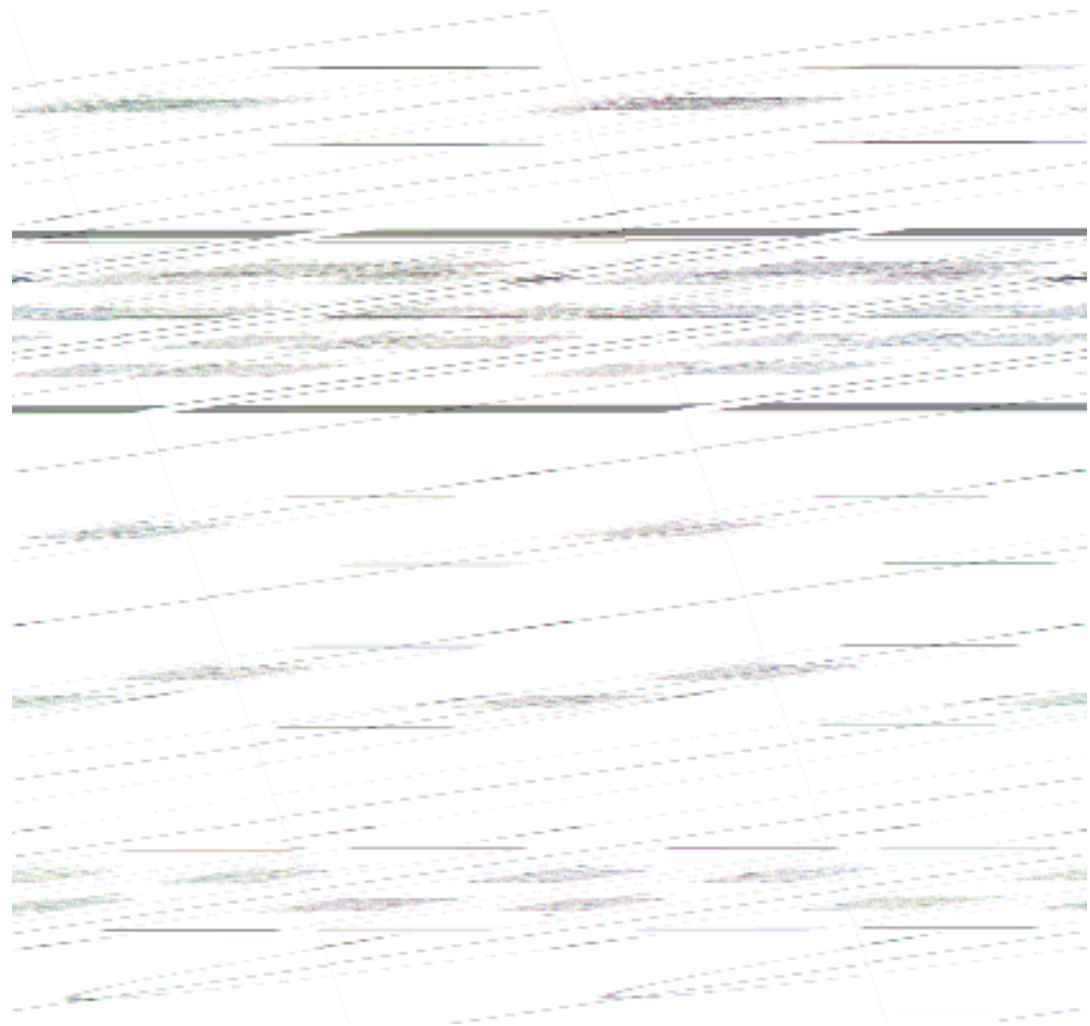




ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

# An Environmental Contract

- Between Central + Local Gov.
- Forging partnerships with the wider community.
- Delivered through existing plans + structures.
- Covers whole range of environmental issues.





ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

# An Environmental Contract

- Features:
  - Local Government Innovation Fund.
  - Aspirations – encouragement to attain higher standards.
  - Standards to be achieved by all local authorities.
    - i.e. Government sets ‘high level’ requirements that local authorities must deliver on;
    - Much more local choice (negotiated in contract) on local environmental priorities.

## MAJOR RESEARCH NEEDS FOR SUSTAINABLE URBAN ENVIRONMENTS

- Impacts of climate change on air pollution
- Potential of urban green space to mitigate both urban heat island effect and air pollution
- Other benefits of urban green space (health, water management)
- Health and climate benefits of reducing urban traffic
- Integrated policy approaches to achieve multiple benefits