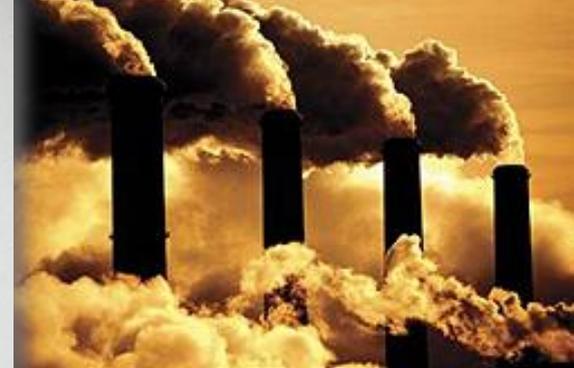
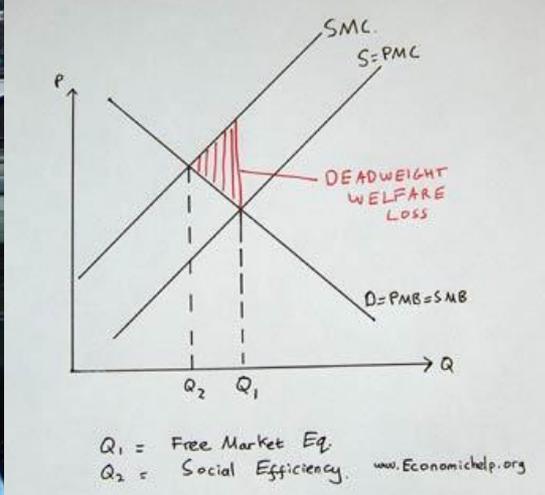




Moving health upstream in urban development decision-making



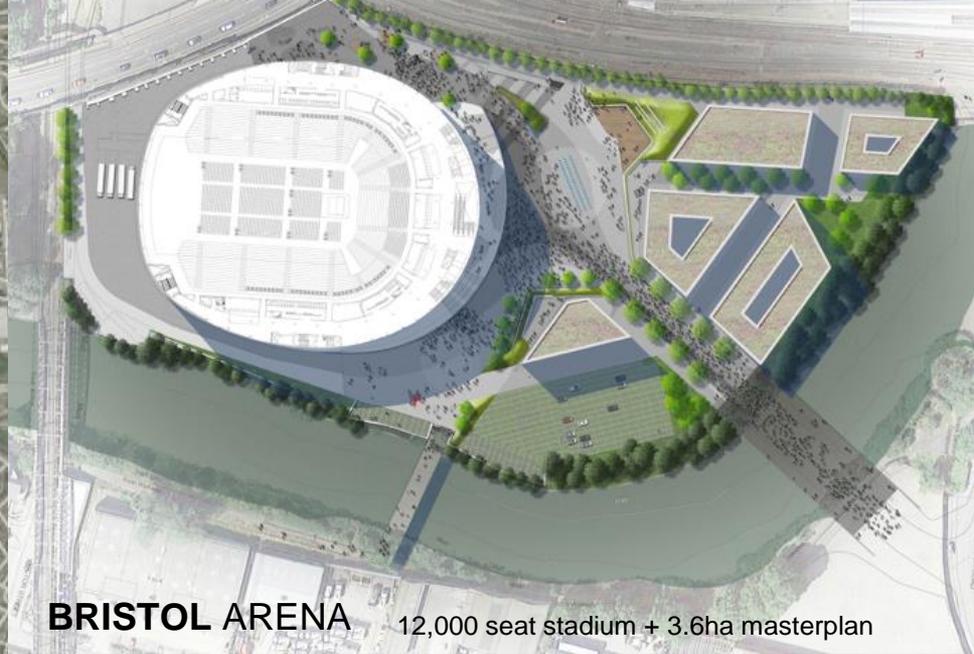


No charge?

Valuing the natural environment

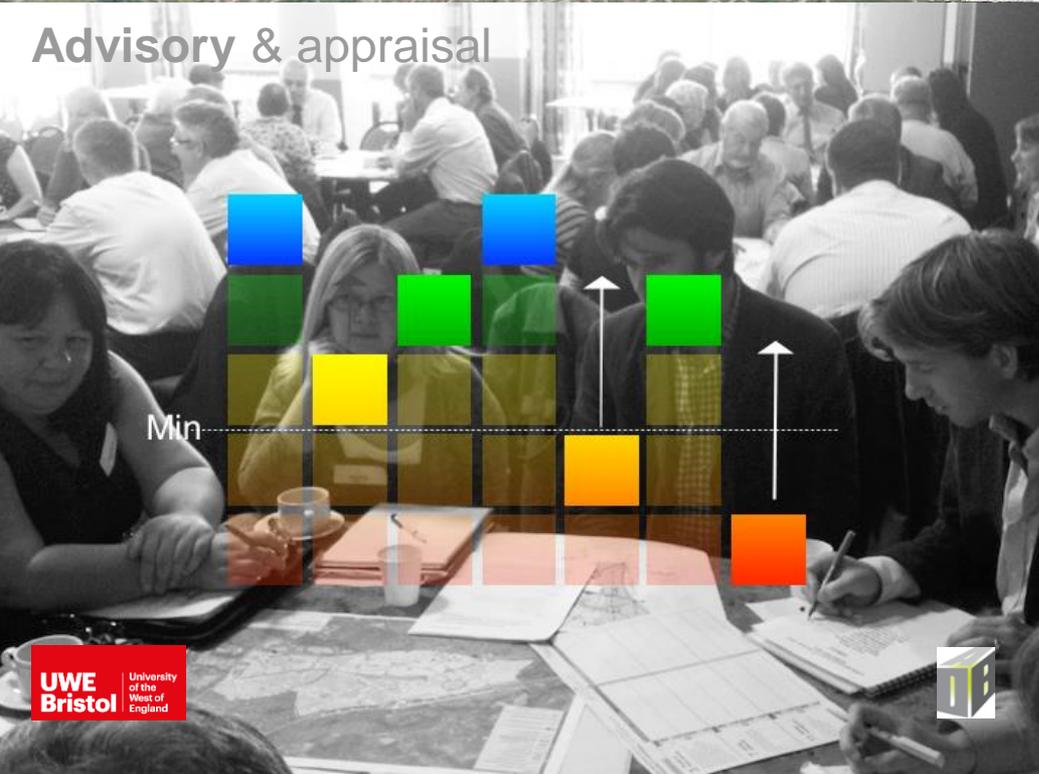
NORTH BRISTOL URBAN EXTENSION

5,700 homes +
50ha employment



BRISTOL ARENA 12,000 seat stadium + 3.6ha masterplan

Advisory & appraisal

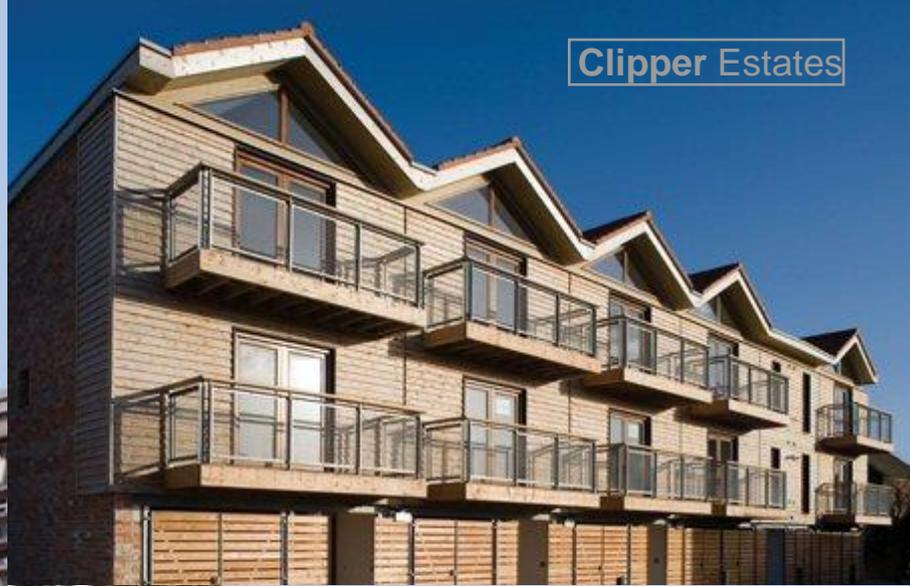


FORMER LAUNDRY SITE 115 units + 3.5 acre masterplan

What makes an eco-town?

A report from BioRegional and CABE
inspired by the eco-towns challenge panel

Clipper Estates



GREAT BOW YARD

Exhibition of **Excellence** - Housing Design Awards 2006

Best Sustainable Development, Gold Award - What House Awards 2006

Gold Standard - Building for Life 2007

Winner, Building Regeneration - RICS Awards 2008 South West

Winner, Sustainability - RICS Awards 2008 South West

Project of The Year - RICS Awards 2008 South West

Finalist, Community Benefit - RICS Awards 2008 South West

Finalist - RICS National Awards 2008

Commendation for Restoration and Conservation of a listed building -
Somerset Building Awards 2008



BioRegional



**What is 'GOOD DENSITY' and
how can real estate finance invest in it?**



**THE
NEW
CLIMATE
ECONOMY**

Transport
Green/blue infrastructure
Buildings
Governance
Employment



CLIMATE RISK ASSESSMENT

Impact on Bristol's health system





OUR PLANET OUR HEALTH

OVERPOPULATION
CLIMATE CHANGE
URBANISATION
FOOD

Fantasy...



1 Latest urban fantasy



2 Standard volume delivery



3



...reality



...reality

1



Estimating cost of poor
quality urban environment

2



Exploring barriers and opportunities for
creating healthy urban environments



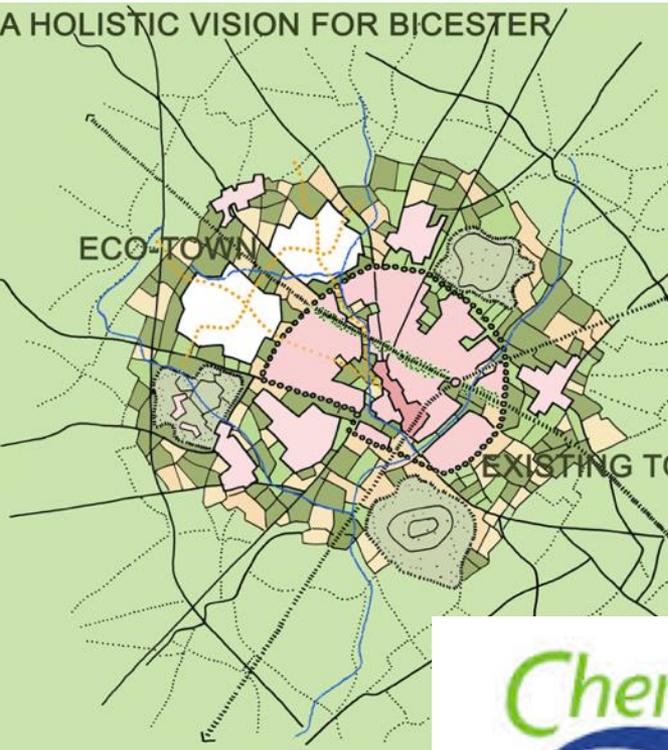


Bristol & Bath
Regional Capital CIC

CASE STUDY: VOLUME BUILDER



CASE STUDY: LOCAL AUTHORITY



HEALTHY NEW TOWN

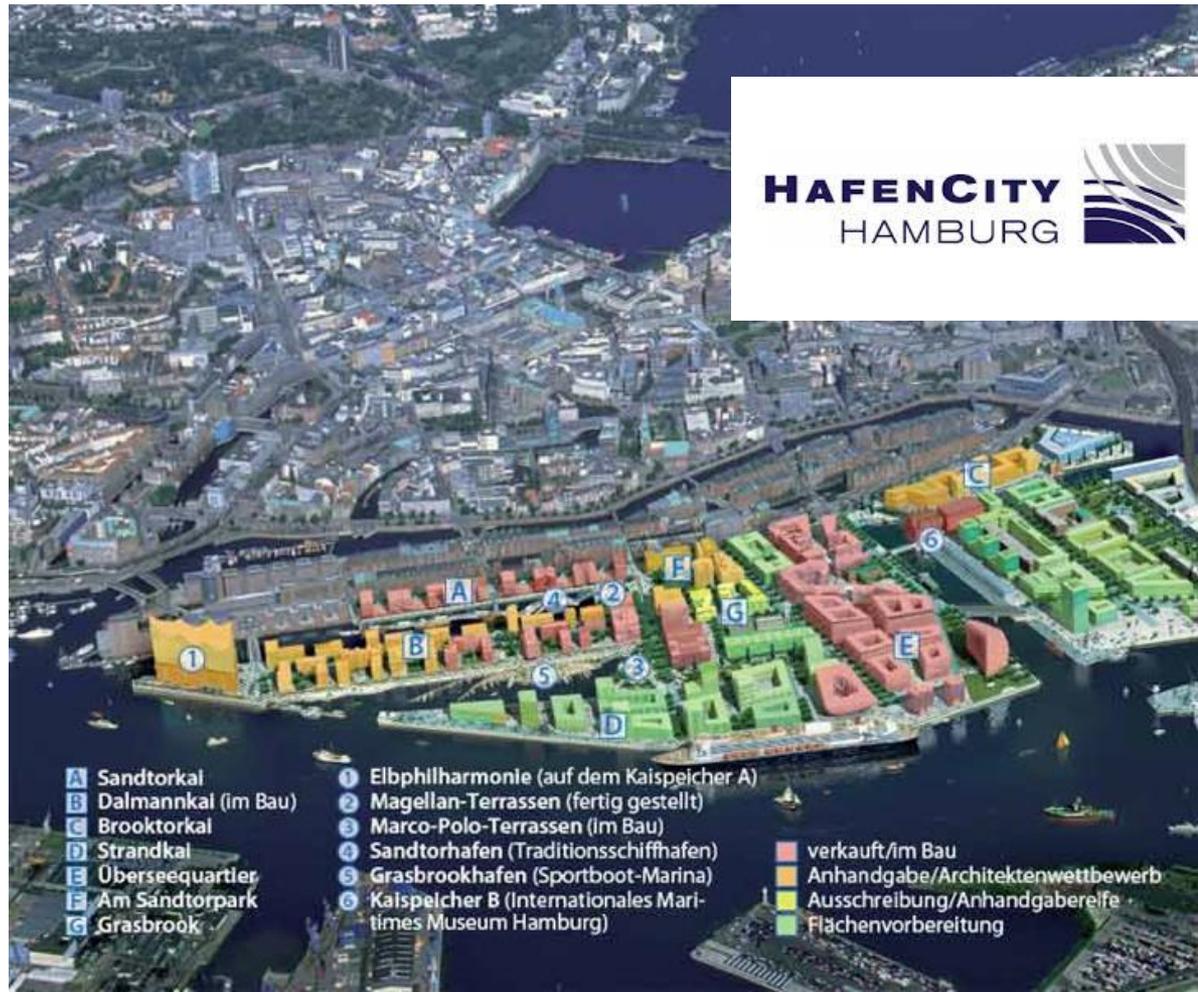
CASE STUDY: SOCIAL HOUSING




CompendiumLiving™
CREATING A REAL SENSE OF PLACE

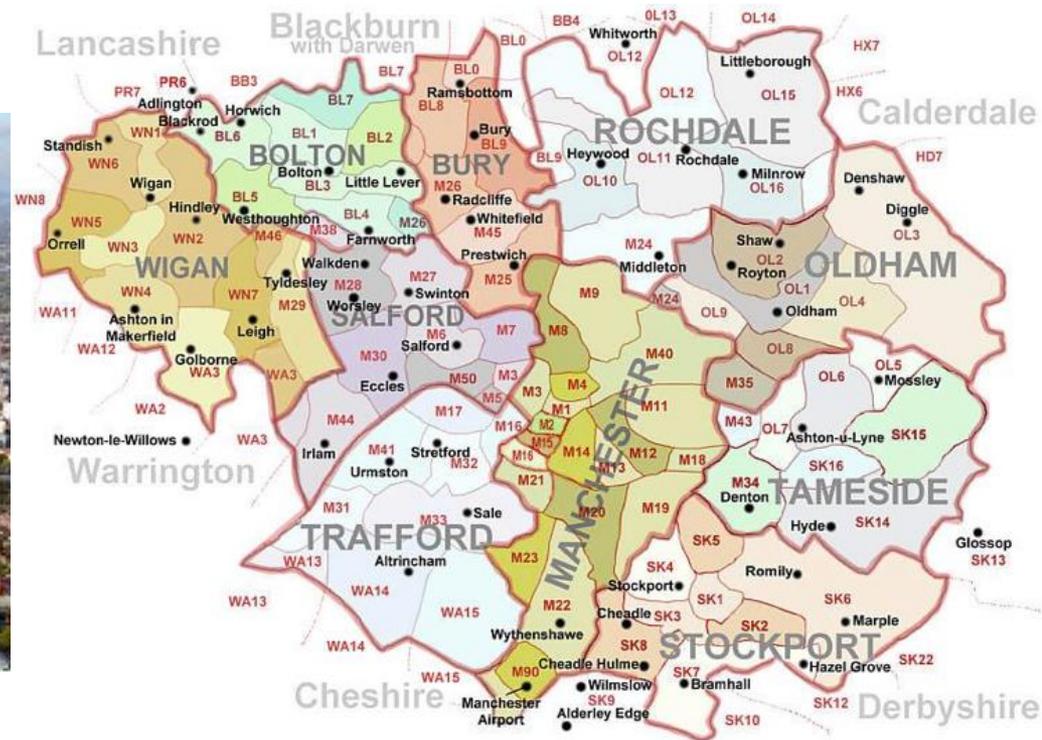


ULI Building Healthy Places Initiative



CASE STUDY: CITY AUTHORITY

(with £6bn NHS budget?)



GMCA

GREATER MANCHESTER
COMBINED AUTHORITY



Homes &
Communities
Agency

GARDEN VILLAGES, TOWNS + CITIES

**WHERE ARE THE
NEW GARDEN
TOWNS AND
VILLAGES GOING
TO BE?**



ST CUTHBERTS NEAR CARLISLE CITY, CUMBRIA

BAILRIGG IN LANCASTER

NORTH CHESHIRE IN CHESHIRE EAST

HALSNEAD IN KNOWSLEY, MERSEYSIDE

INFINITY GARDEN VILLAGE IN SOUTH DERBYSHIRE

SPITALGATE HEATH, LINCOLNSHIRE

LONG MARSTON IN STRATFORD-ON-AVON

DEENETHORPE IN EAST NORTHANTS

OXFORDSHIRE COTSWOLD IN WEST OXFORDSHIRE

DUNTON HILLS, ESSEX

CULM IN MID DEVON

LONGCROSS IN RUNNYMEDE AND SURREY

WEST CARCLAZE IN CORNWALL

WELBORNE, HAMPSHIRE

HEATH

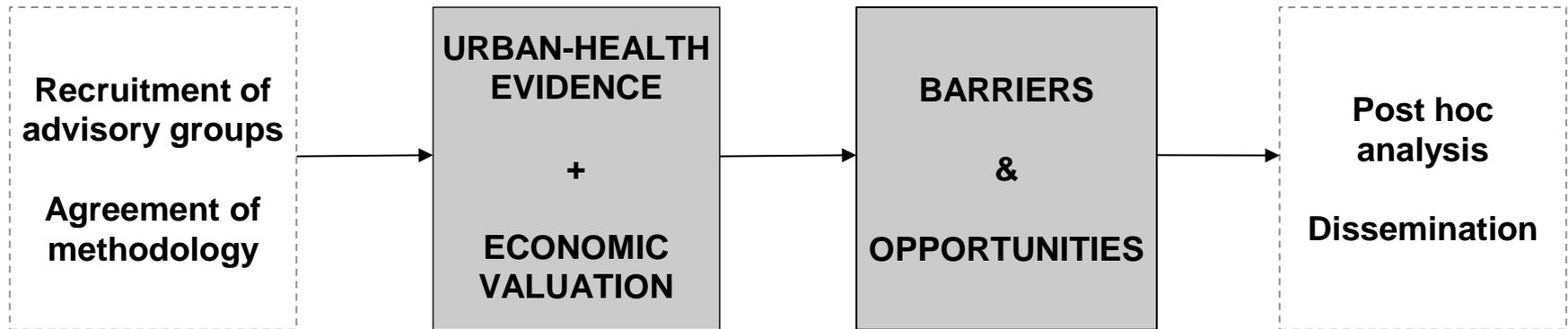
4 PHASE PROCESS

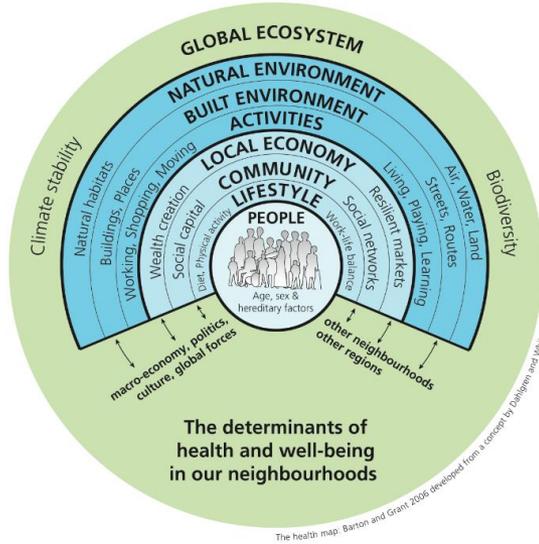
1

2

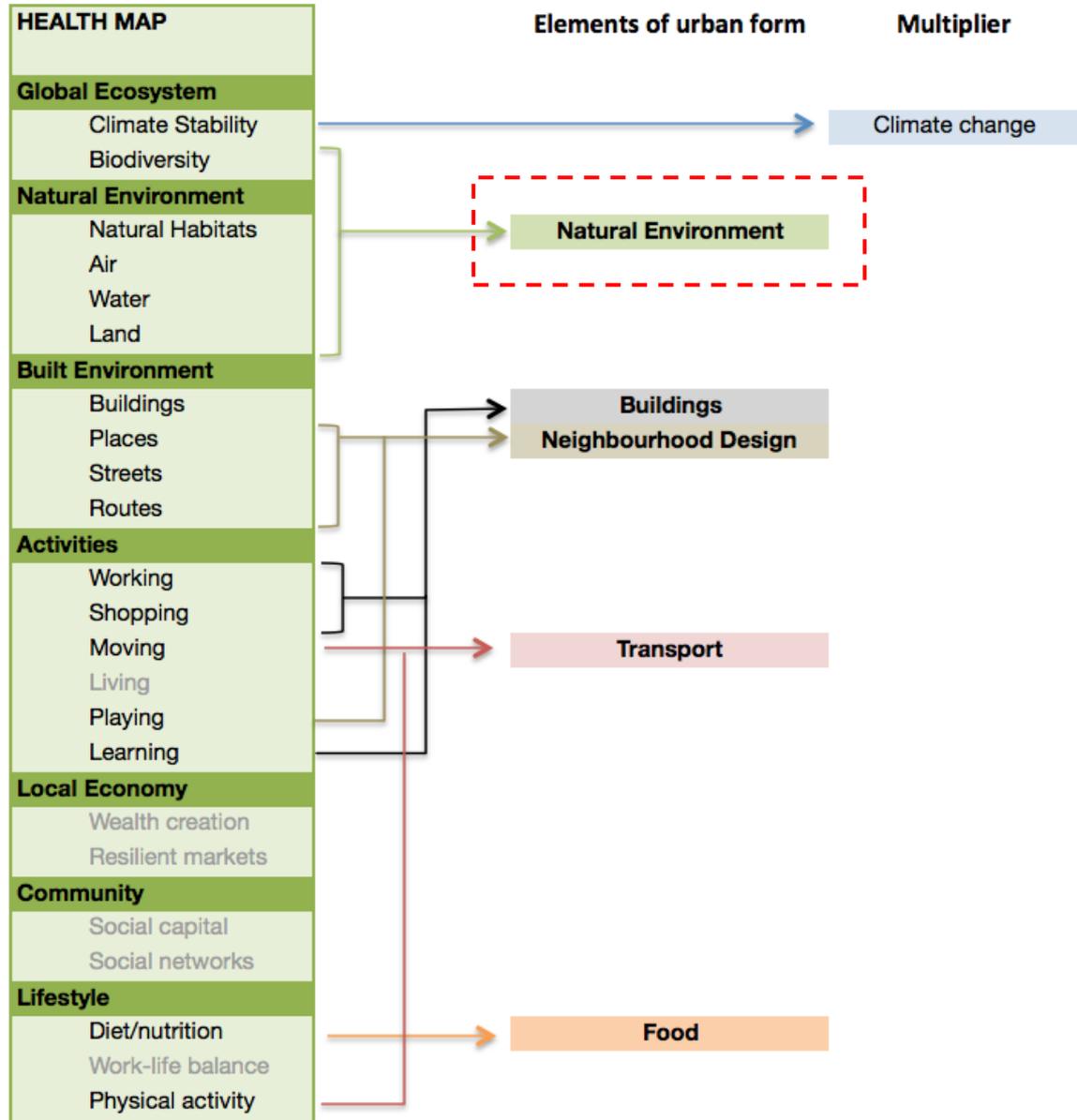
3

4





- + PHE topic list
- + Vancouver Healthy Toolkit
- + BREEAM Communities
- + HUDU Rapid HIA
- + Egan Review



FINDINGS SO FAR: **TRANSPORT**

Variable	Health Outcome	Strength of evidence
Transportation noise	Poor academic performance among children	MODERATE
	Health-related quality of life	STRONG
	Heart diseases	STRONG
	Type II diabetes	STRONG
Living near major roads	Dementia	MODERATE
Traffic-related air pollutants (NO ₂ exposure)	General ill-health	STRONG
	Pre/post-menopausal breast cancer	STRONG
	Leukaemia	WEAK
	Dementia	MODERATE
Infrastructure for walking, cycling and public transport	Increased walking, cycling and bus travel	MODERATE
Road safety- speed cameras, speed humps, tram priority, signal priority	Reduced road traffic collisions	MODERATE
Guided bus way + light rail	Reduced BMI + obesity	MODERATE

ADVISORS + DEVELOPING METHODOLOGY



GLOBAL HEAD OF RESEARCH, SAVILLS



FORMER MAYOR OF BRISTOL



FORMER CHIEF PLANNER, FREIBURG

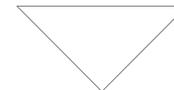


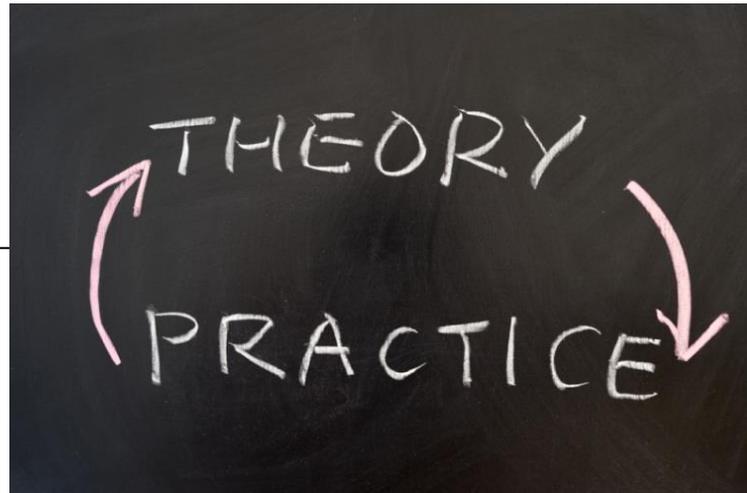
FOUNDER OF ROCKWOOD CAPITAL



FORMER HEAD OF BELLWAY REGENERATION

First Name	Surname	Organisation
Hugh	Barton	UWE (retired)
Graham	Parkhurst	UWE
Bill	Gething	UWE
Kathy	Pain	UoReading
Sue	Grimond	UoReading
John	Murlis	Env Protection UK
Kevin	Morgan	UoCardiff
Simon	Joss	UoWestminster
Phillip	Rode	LSE
Phillip	Jones	Cardiff Uni
Matthew	Carmona	UCL, Bartlett
Nick	Falk	URBED
David	Burney	Pratt institute





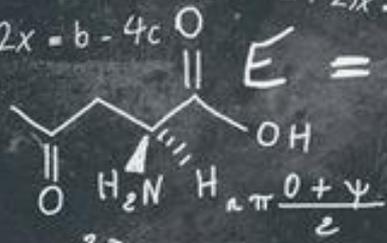
$$E = K + V$$

$$\Delta X = X_f - X_i$$

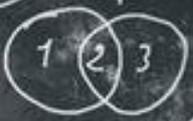
$$D^2 = \frac{1}{P^2} \frac{P-P}{P} \sim \frac{1}{P^2}$$

$$(a+2)x - b - 4c$$

$$\Delta V = V_f - V_i$$



$$E = mc^2$$



$$\sin\left(\frac{a}{2}\right) = \pm \sqrt{\frac{1 + \cos a}{2}}$$

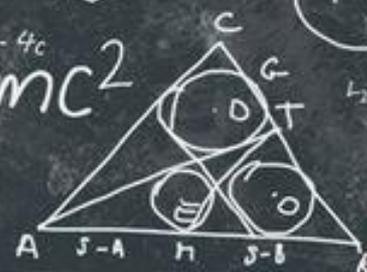
$$L_2 = 10 \log \left(\frac{1}{N} \sum_{i=1}^N 10^{\frac{L_i}{10}} \right)$$

$$V = \sqrt{\frac{T}{P}} \quad \alpha = \frac{V^2}{R}$$

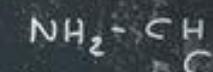
$$y = x^2 - 4x + 5$$

$$\frac{-(-4) \pm \sqrt{(-4)^2 - 4(1)(5)}}{2(1)}$$

$$z = \frac{(0+\psi)^2 + \left(\frac{1}{2} \log \left| \frac{8}{A} \right| \right)^2}{\int x^{\frac{1}{2}} A(x) dx}$$



$$\frac{V}{I} = R$$



$$\frac{4 \pm \sqrt{16-20}}{2}$$

$$\frac{4 \pm \sqrt{-4}}{2}$$

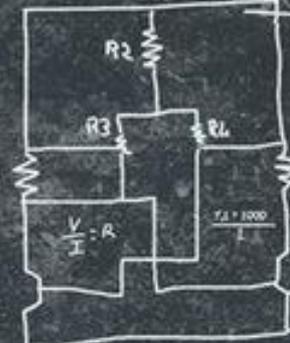
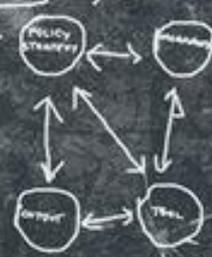


$$\pi = 3.14159265$$

$$\frac{4+2i}{2} \rightarrow 2+i$$

$$\frac{4-2i}{2} \rightarrow 2-i$$

$$5(3x-1) - 7(2x-4) = 35$$



$$15x - 5 - 14x$$

$$\sin\left(\frac{a}{2}\right) = \pm \sqrt{\frac{1 + \cos a}{2}}$$

$$7100 \Omega \cos\left(\frac{a}{2}\right) = \pm \sqrt{\frac{1 - \cos a}{2}}$$

$$\tan\left(\frac{a}{2}\right) = \frac{1 - \cos a}{2} = \frac{\sin a}{1 + \cos a}$$





Thank you for your time

Daniel Black

Founder / Director
db+a



Director

CLIPPER ESTATES

Visiting Research Fellow
**WHO Centre for Healthy
Urban Environments**



Visiting Research Fellow
Henley Business School
(Real Estate and Planning)



Janet Ige

Research Associate
Public Health & Wellbeing



Faculty of Health and Applied Sciences

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