

Moving health upstream in urban development



## Info burst:

## **Accounting for health in urban development:**

## lessons from a 3 year research project

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db\_associates































# Bristol's new super-hospital

(reactive) treatment (pro-active) prevention ×









## 5 Year Forward View Getting serious about prevention



#### 5 Year Forward View 2014

"The future health of millions of children, the sustainability of the NHS, and the economic prosperity of Britain all now depend on a radical upgrade in prevention and public health"







Q1 = Free Market Eq. Q2 = Social Efficiency, www.Economichelp.org





## No charge?

Valuing the natural environment



www.naturalengland.org.uk



# Extreme weather events and property values

Assessing new investment frameworks for the decades ahead



Source: Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE - As at January 2013

# "Direct losses US\$150 billion per year."

## "Monetary losses have tripled globally

during the past decade."



# £47 billion per year





Black, D., Scally, G., Hunt, A., and Orme, J (2018) We must look further upstream to enable planetary healthliterate urban development. *The Lancet Planetary Health*. Vol 2, No.4, e145-e146, April2018. Elsevier. UPSTREAM



# OUR PLANET OUR HEALTH

ENVIRONMENTAL CHANGE URBANISATION

FOOD









## PHASE 1

## URBAN-HEALTH EVIDENCE

## Review of urban-health evidence



#### Findings: systematic review on the impacts of the built environment on health

Categories	Key themes	Outcomes
Neighbourhood Design	Increase neighbourhood	Reduced risk of hypertension (S)
	walkability	Reduced risk of diabetes and prediabetes (M)
		Improved mental health (M*)
	Increase access to	Increased physical activity levels (M),
	facilities and amenities	Improved mental health (S)
	Enhance neighbourhood	Reduced limitations in performing instrumental activities of daily living among men (M)
	connectivity	Reduced risk of obesity among women (W)
	Improve access to open	Improved mental health (S)
	green space	Reduced risk of non- accidental mortality (S)
		Increased physical activity levels (S*)
		Reduced cardiovascular risk factors (S)
		Reduced risk of asthma (M*),
		Reduced risk of diabetes and prediabetes (M)
Buildings	and ventilation	Improved general health and respiratory outcomes (S*)
		Reduced blood pressure (S*)
		Reduced cost associated with heating(S)
		Reduced level of NO2 in the living room (M)
		Reduced mould contamination (M)
		Improved school attendance among children (M)
		Reduced falls and fall related injuries among older adults (S)
	(health and safety)	Improved mental health (M)
	Inadequate quality of housing	Increased mortality from coronary heart diseases (M)
		Improved general health among previously homeless people (M)
	to affordable homes or	Improved mental health among adults and children (M)
	social housing	Improved educational achievement among young boys (M)

\* Refers to best available evidence and it applies when more than one study was identified as part of the review that reported the same 'outcome'. In such instances the study deemed to be of the best quality is presented



Weak

## Evidence Gap Analysis: Neighbourhood Design

ap Analysis: od Design	Physical activity	Asthma	Mental Wellbeing	Functional loss	Hypertension	Health and wellbeing	Neurodegenerati conditions	Obesity and overweight	pre-diabetes/ diabetes	Collisions and injury	Cardiovascular diseases	Mortality and premature death	Air pollution
Street lighting	٠			•									
Amenities, facilities and recreational areas (malls, etc.)	•		•					•	•				
Green space and public open space (parks etc.)		•	•			•			•		•	:	
Quality of the neighbourhood (trash, litter, graffiti etc.)	•		•	•		•							
Neighbourhood walkability	e		•		•			•	•				•
Neighbourhood safety	•					٠		•				•	
Neighbourhood deprivation and socio-economic status	•			•		•		•				•	
Transport infrastructure (side walks and public transport infrastructure)	•		•	•									
Street design and connectivity	•			•				•					
Air quality and Traffic- related air pollution				•				•					
Features of driveway										•			
Traffic and related noise				•		•							
Density			•					•					

TYPOLOGY CHARACTERISTICS	NO. STUDIES
Air quality	67
Walkability	21
Noise	18
Green space	17
Road safety	16
Housing Affordability	11
Cycling	10
Fast food outlets	9
Damp	9
Cold	8
Green space - quality	7
Supermarket	7
Fear of serious crime	7
Amenities within walking distance	6
Ventilation	6
Public transport links	5
Proximity to main road	5
Convenience stores/ small shops	5
% socio-econonomic status of area	5
Overheating	3
New or regeneration	2
Recreational space/ playgrounds	2
Sports provision	2
Falls intervention	2
Renewal of interiors	2

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Figure 3 (above): Number of studies with data points usable in economic valuation



## PHASE 2

## ECONOMIC VALUATION

## Using local test-case to develop method











#### **KEY FINDINGS**



For example, the evidence suggests that poor indoor air quality costs £250 per person per year mainly in terms of lost productivity (due to headaches), while lack of green space costs over £220 per person per year due to mental health problems alone.

Table 2: Potential interval value of impact per characteristic of housing design, including all components of SCOI





## BARRIERS + **OPPORTUNITIES**

#### CASE STUDY PARTNERS



#### ORGANISATION TYPES

- City Council
- District Council
- Volume House-Builder
- Development Corporation
- Real Estate Developer & Asset
   Manager
- New Investment Social Enterprise
- Regeneration Joint Venture (contractor-social housing provider)
- Combined Authority

#### Interviewees, Organisations and Positions

Sector	Organisation	Number of interviewees	Position within company
Private	<ul><li>Volume House-Builder</li><li>Developer/Asset manager</li></ul>	6	Senior Executives
	<ul> <li>Regeneration JV</li> <li>Investor Social Enterprise</li> </ul>	2	Sustainability / Health Specialist
Public	City Council     District Council	5	Senior Executives
	<ul> <li>District Council</li> <li>Development Corporation</li> </ul>	2	Sustainability / Health Specialist

#### Key areas explored / identified

- 1. Understanding of health
- 2. Valuation
- 3. Barriers and opportunities:
  - i. Land
  - ii. Finance
  - iii. Governance
  - iv. Politics
  - v. Public Realm
  - vi. Capacity
  - vii. Partnership
  - viii. Risk

#### PRACTITIONER RESPONSE TO ECONOMIC VALUATIONS

Interviewees were each presented with two graphs – see economic valuation above – that illustrated concisely the key findings from the economic valuation. They were then asked four questions – listed here below. The responses were developed into emergent themes.

Known urban-health links

#### BARRIERS AND OPPORTUNITIES: VIEWS OF INDUSTRY PRACTITIONERS

 Does this evidence influence your thinking?

30 hour-long interviews generated almost 500 pages of transcriptions, and provide a small, but rich and valuable health-focused insight in to the world of urban development decision-making. The following highlights key findings; full academic papers are scheduled for 2019.

A crucial finding is that there was clear consensus - from both public and private sector - that health is not adequately accounted for or adequately resourced in urban planning. However, there was also no clear route to doing so, particularly with regards to the question of who pays.

The role of investors was widely acknowledged

marginal engagement. Short-term horizons were

flagged by many as key issues, but it was also pointed out that short-term finance has a critical

role to play. Greater investment in the public

sector is seen widely as desirable, alongside

a need for "enlightened investors".

The question of who pays for public realm

(its long term maintenance, in particular) is

to high value (often city centre) locations.

recognised as a significant challenge. There are

some exemplars of high quality stewardship in

estate management, but these tend to be limited

Not so long ago there was a bit more

about maximising stakeholder value, but

it's definitely shareholder value today ...

PUBLIC REALM:

that makes a big impact ... 99

as critical, yet so far there is seen to be only

FINANCE:

#### SEARCH INTERVIEW METHOD I

- Two rounds of semi-structured, expert-led ('elite') interviews
- Sample of 15 interviewees; 13 from UK's mainstream development agencies (6 private; 7 public) operating primarily in England; 2 from new start-up
- 500 pages of transcripts
- 13 initial themes; 5 areas of deeper enquiry; 10 emergent themes
- Thematic analysis through integrated synthesis, coding and review

#### TOR / NO. POSITION

UHG.				
Private Developers,	6	Senior Executives Departmental Leads		
Asset Managers, Investors	2	Sustainability/ Health Leads		
Public	5	Senior Officers and		

 
 Public
 5
 Senior Officers and Cabinet Members

 District
 Councils
 2
 Sustainability/



Codd

est that most health outcomes opment agencies. (Note: The field notes and are used to illustrate y should not be viewed as a ent).

num this looks like a really t of things to think about from uality of life point of view... t actual costs against it per ect is less important to us...

g numbers! 🤧

NT

## **Headline findings**

## **UP**STREAM

#### **Exec awareness vs. health outcomes:**

- Decision-makers well aware of most health issues (air pollution, green space, active travel)...
- ...decision-makers recognise health not adequately factored in to urban development

#### Valuation:

- Clear support for increased use (detail/assumptions depending!)
- Potentially (highly?) impactful...but likely not as £s
- Multiple potential applications at multiple levels

#### Systemic challenge:

- Hundreds of potential barriers and solutions relating to land, finance, public realm, risk, etc..
- Individual disciplines largely well understood, but not integrated upstream



## OUTCOMES + **OUTPUTS**



#### UPSTREAM

This report summarises the rationale, methods, main findings and key insights from a three-year pilot, Moving Health Upstream In Urban Development [UPSTREAM].

#### ACKNOWLEDGEMENTS

#### FUNDER:

We thank Wellcome Trust for their generous support in funding this pilot research project under their ambitious Our Planet Our Health (OPOH) Programme. Wellcome Trust is a politically and financially independent global charitable foundation. It exists to improve health for everyone by helping great ideas to thrive-supporting scientists and researchers, taking on big problems, fuelling imaginations, and sparking debate. Our Planet, Our Health is Wellcome's initiative in Planetary Healthsupporting research, and propelling the translation of ideas into action, to advance our vision: a world in which the natural systems that support health are sustainable across generations, enabling health for all people.

#### CASE STUDY PARTNERS:

Special thanks also go to our case study partners and advisors, all of whom have given

objectives of this research pilot.

Cherwell

their time generously to further the aims and

CompendiumLiving





OBSERVER PARTNER:

#### ADVISORS:

Neil Smith, Founder, Rockwood Capital

Yolanda Barnes, Chair, Bartlett Real Estate Institute (formerly Global Head of Research Savills)

George Ferguson, Architect and former Mayor of Bristol

lan Cox, Chair of A2Dominion and Managing Partner of Cox Development Partners

Barra Mac Ruairi, Director of Estates and Bursar, University of Bristol (formerly Director

of Place at Bristol City Council)

2 | UPSTREAM | Project Report





Head: Our Planet, Our Health Wellcome Trust



## **UPSTREAM**

**Conference – Royal Society of Medicine** 

The Royal Society of Medicine

# Building health into the urban environment: Evidence and opportunities



#### Sir Malcolm Grant

Founding Chair, NHS England (2011-2018); Chancellor, University of York



#### Andy Burnham

Mayor of Manchester

#### Environmental Audit Committee – Planetary Health Inquiry



**Environmental Audit Committee** 





## MOVINGHEALTH

# **UPSTREAM**

## IN URBAN DEVELOPMENT DECISION MAKING

FIND OUT MORE

www.urban-health-upstream.info

ACADEMIC PAPERS	TITLE	
	We must look further upstream to enable planetary health-literate urban development	Lancet - Planetary Health
Why + how	Moving Health Upstream in Urban Development: Reflections on the Operationalisation of a Trans-disciplinary Case Study	Wiley - Global Challenges
	Buildings and health literature review	Journal of Public Health
Existing	Neighbourhood design and health	
Evidence	Transport and air quality	
	Gap analysis paper	
Economics	Economic analysis technical paper	
	Economic analysis findings paper	
Decision-	Elite interviewing paper	
making	The main barriers and opportunities to healthier urban development according to the UK's main delivery agencies	
Public Engagement	Public engagement paper	













#### TRU<sup>3</sup>D Tackling the Root causes Upstream of Unhealthy Urban Development



Pop: 2,794,000 (combined authority)





Pop: 449,300 (city)

## TRU<sup>3</sup>D Partners & Expert Advisors



















## MACFARLANES

## Health in Real Estate Development

### How do we ensure human & planetary health is embedded further upstream in real-estate development decision-making?

1/2 Day Afternoon Workshop | Macfarlanes 20 Cursitor St, Holborn, London EC4A 1LT| 9th July 2019

#### www.db-associates.co.uk



Daniel Black + Associates | db+a

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