MEASURING HEALTH AND WELLBEING FOR AN URBAN GREEN SPACE VALUATION TOOLKIT

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Innovate UK

GREENKEEPER
ENHANCING URBAN GREEN SPACE

THE CONTEXT

Planning permission has been granted for new homes to be built on this park in Bexley

Tom Bull
Trainee Reporter

There has been campaign agains the proposals

14 comments

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Outline planning permission has been granted for the development of hous 3.5 hectares of green open space in Sidcup.

Bexley Planning Committee voted through plans for 30 houses and 30 flats Farm Park, despite a residents' campaign against it.

According to the planning application, 122 car spaces will be provided for 60 homes.

The scheme has outlined 35 per cent of homes to be built as affordable hou

The council received 28 letters and emails objecting to the proposals for rea such as loss of wildlife and traffic issues.

Malcolm Right, a resident of Old Farm Avenue and member of campaign gro Save Old Farm Park, said at the meeting: "We fundamentally object to the sa the development of any part of the site.

Most popular / **Most commented**

1. Residents have started an action group against major redevelopment plans in Bexley
2. These 52 places to eat have the lowest food hygiene ratings in Greenwich
3. Far right group used Erith Leisure Centre for 'security training' including knife defence
4. Police are investigating a sexual assault in Dartford
5. These are where you can get bottled water after the burst

The end of parklife as we know it? The battle for Britain's green spaces

Britain's parks are in crisis. With councils such as Bristol cutting spending to zero, and land being lost to developers, what's happening to our public gardens?

BBC NEWS

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Knowsley Council to sell off 10% of park for development

29 November 2017

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Knowsley Council plans to sell off 10% of parks dropped

11 June 2018

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One of Stockport's most controversial developments starts in Reddish Vale

Builders are creating 70 homes in the country park as part of the Brinnington Masterplan

SHARE   BY ALEX SCAPENS   14:43, 10 NOV 2016   **NEWS**

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RECOMMENDED

A man with Down's syndrome thought his 40th birthday party was ruined when Elvis cancelled on him...then a celebrity saved the day

Why Gary Neville is buying property in Manchester under other names

The battle for Manchester city centre

Meet Blessing Burgess - the mum-of-three who took on a parking company in court - and won

Police called to street in Shaw amid reports of a man wielding a knife

A man has had a £20,000 Audemars Piguet watch snatched from his wrist in the city centre

Protesters including Pat Ruaune outside Fred Perry House, Stockport.

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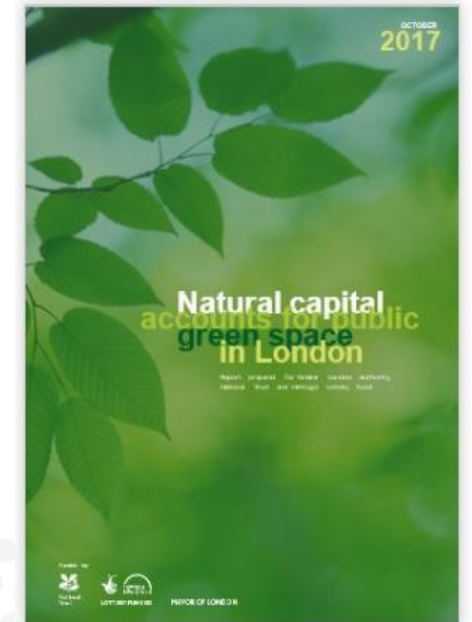Enter your email   + Subscribe

THE AIM

- A tool to empower cities and developers to accurately assess the multiple benefits of green infrastructure

- Supporting informed policy and business decisions

- Making the case for investment

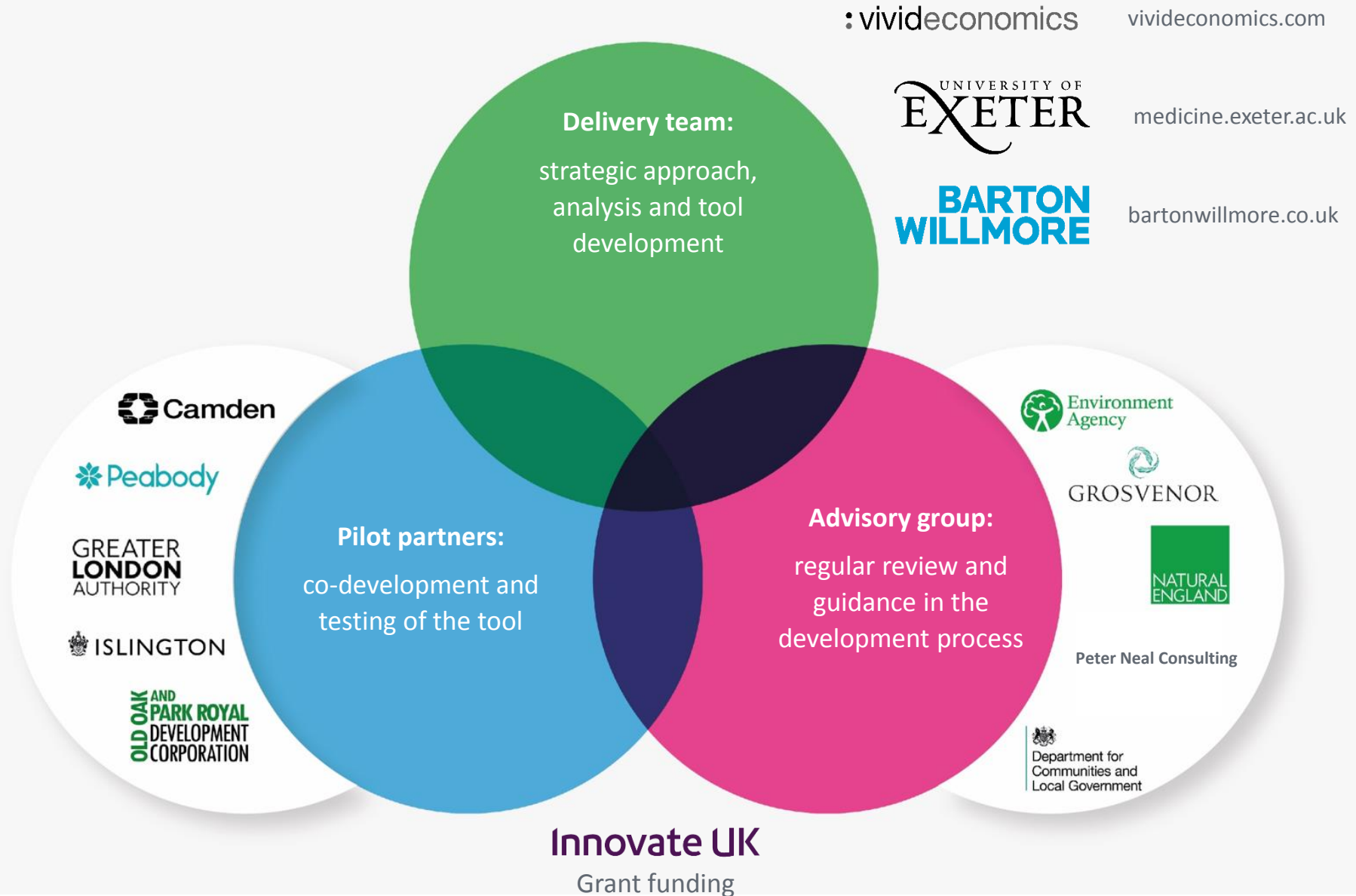- Supported by Innovate UK – aim to develop a commercial product

BUILDING ON PREVIOUS WORK

- Studies such as Vivid Economics for GLA – valued London's public green spaces at >£5bn/year

- Evidence on a range of benefits – monetary and non-monetary values

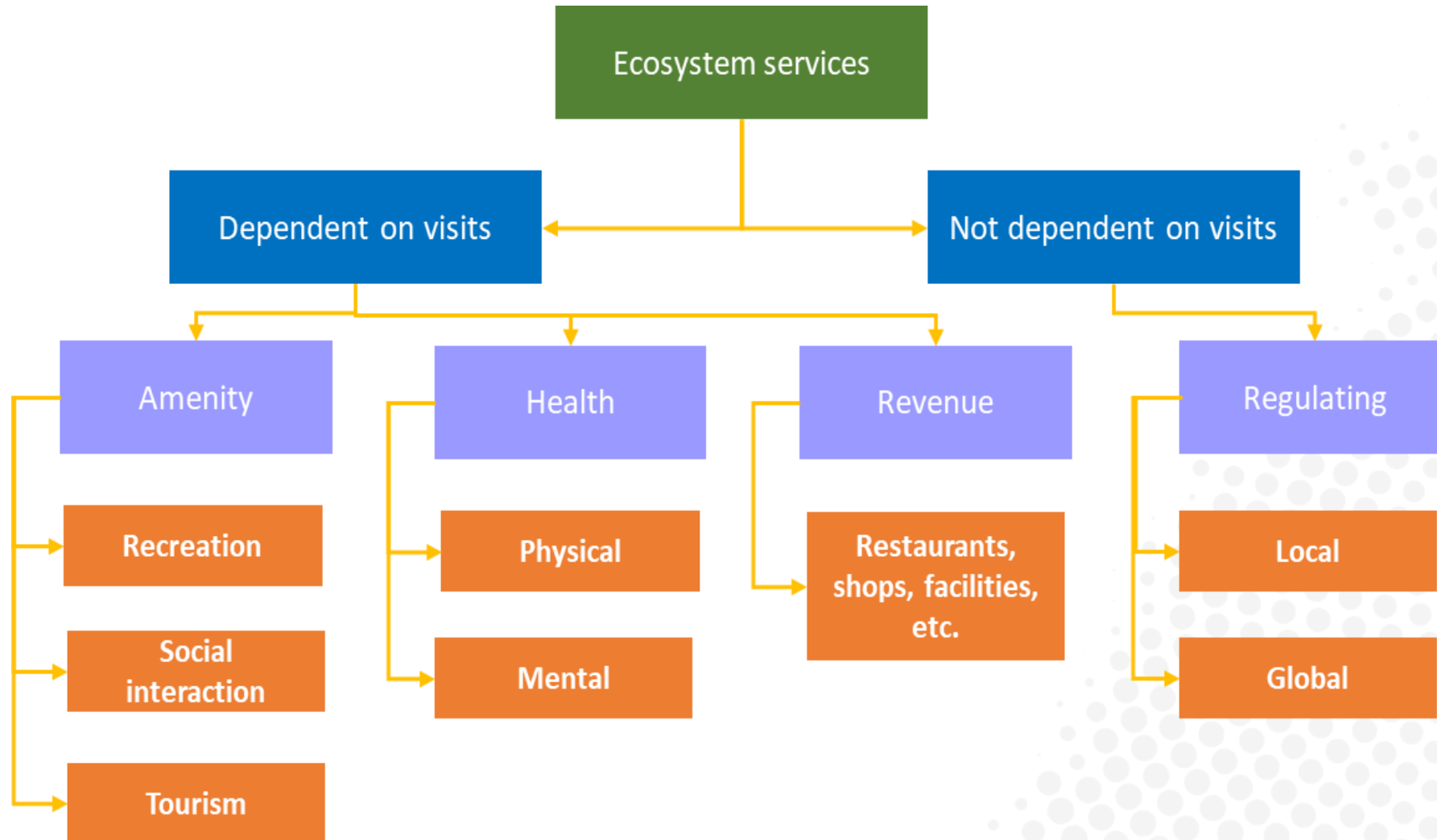- Various existing valuation tools (range of approaches, metrics and focus)
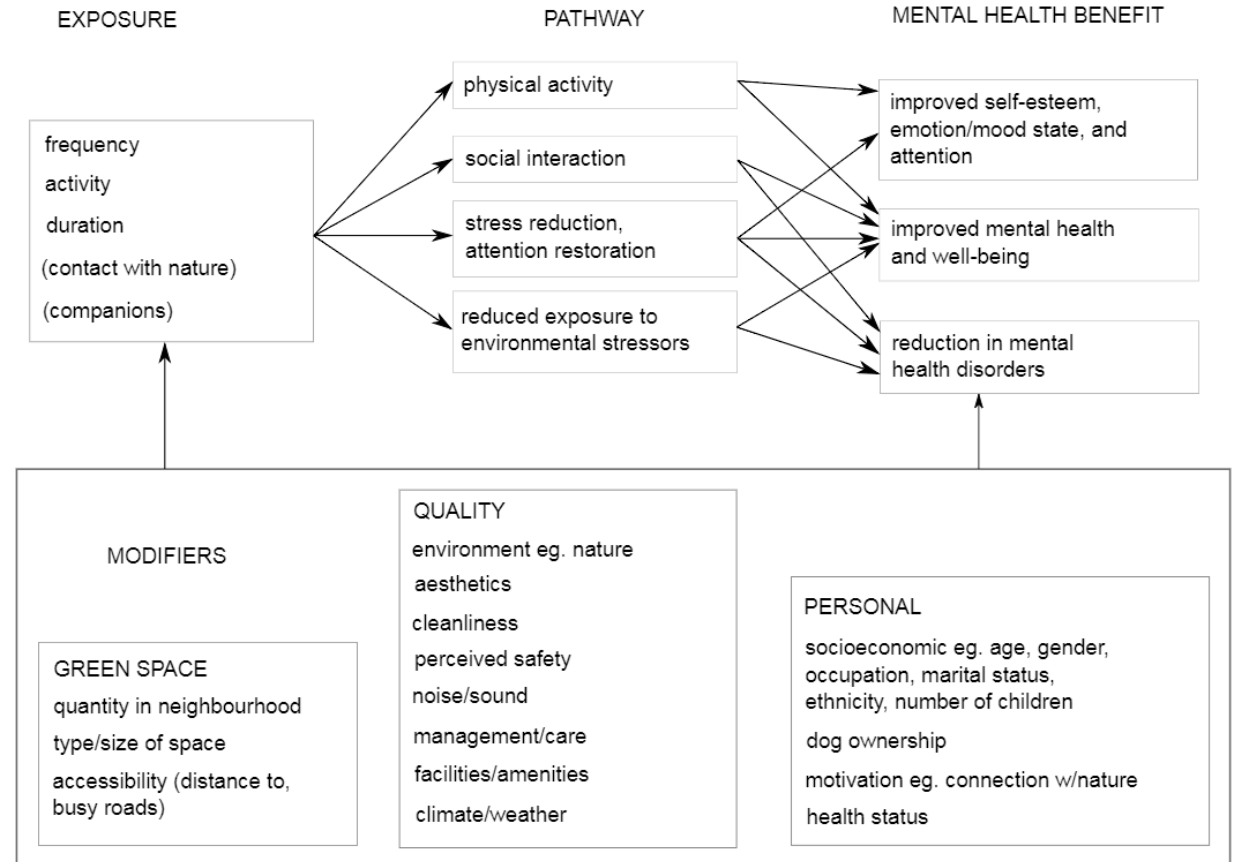
WHO IS DEVELOPING THE TOOL?

:vivideconomics — vivideconomics.com

UNIVERSITY OF EXETER — medicine.exeter.ac.uk

BARTON WILLMORE — bartonwillmore.co.uk

Delivery team:
strategic approach, analysis and tool development

Pilot partners:
co-development and testing of the tool

Advisory group:
regular review and guidance in the development process

Camden
Peabody
GREATER LONDON AUTHORITY
ISLINGTON
OLD OAK AND PARK ROYAL DEVELOPMENT CORPORATION

Environment Agency
GROSVENOR
NATURAL ENGLAND
Peter Neal Consulting
Department for Communities and Local Government

Innovate UK
Grant funding

VALUES FRAMEWORK

SERVICES MEASURED

SERVICE	PHYSICAL EFFECT	PHYSICAL METRIC
Physical health	Reduction in risk of physical ill health due to active visit	QALYs
Mental health	Reduction in risk of mental ill health	GHQ score
Recreation	Number of recreational visits	Visits (by origin, socioeconomic group)
Amenity (house prices)	Influence of local green or blue space on value	House price
Carbon sequestration	Tonnes CO_2	Value of non-traded carbon
Noise	Level of noise in parks	Decibels
Air quality	Concentration of SO_2, $PM_{2.5}$, PM_{10}, NO_2, O_3	Avoided health costs of pollutant exposure
Relative abundance of biodiversity and ecological quality	Habitat/ecological diversity	Units of habitat that support species diversity and/or measure of habitat dissimilarity
Revenues/rents	Visits to revenue earning facilities	Number of visits

HEALTH VALUES

- Based on conceptual frameworks for health outcomes
- Using existing evidence, plus some novel analyses

PARK-SPECIFIC HEALTH BENEFITS (FROM VISITS/GREENSPACE USE)

- Existing analyses of MENE data*: visit characteristics ->
  - Stress reduction
  - Wellbeing (ONS)
  - Physical activity (activity x duration = MET Minutes)
- Calculating park-specific health benefits by combining:
  - health data from MENE
  - data on park visitor numbers (estimated from survey, model and mobile app data sources)
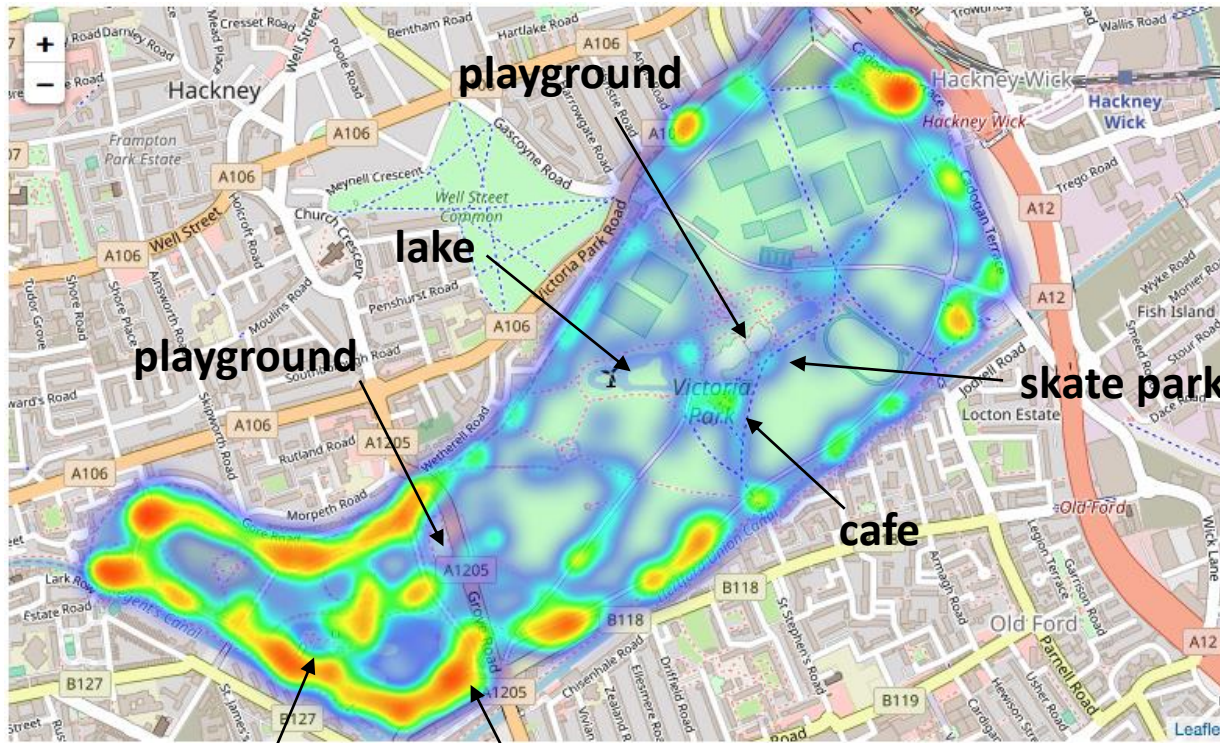- Produce total benefit value and separate values by SES

* e.g.
White, M.P. Pahl, S., Ashbullby, K., Herbert, S., Depledge, M.H., 2013**. Feelings of restoration from recent nature visits**. Journal of Environmental Psychology 35, 40-51.
White, M.P., Pahl, S., Wheeler, B.W., Depledge, M.H., Fleming, L.E., 2017. **Natural environments and subjective wellbeing: Different types of exposure are associated with different aspects of wellbeing.** Health and Place 45, 77-84.
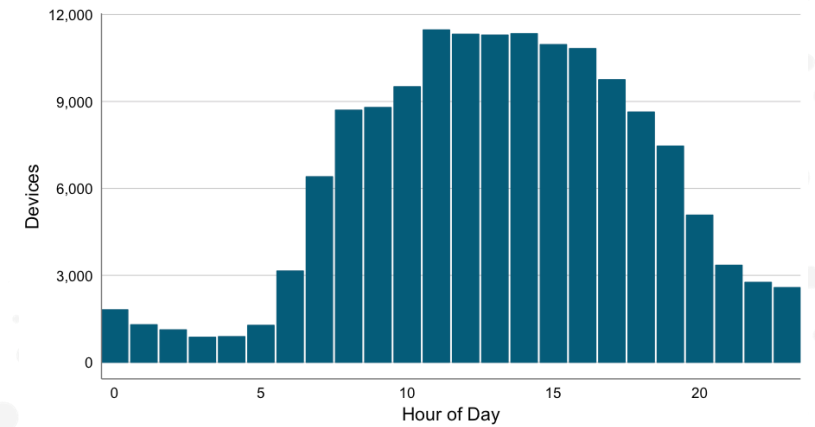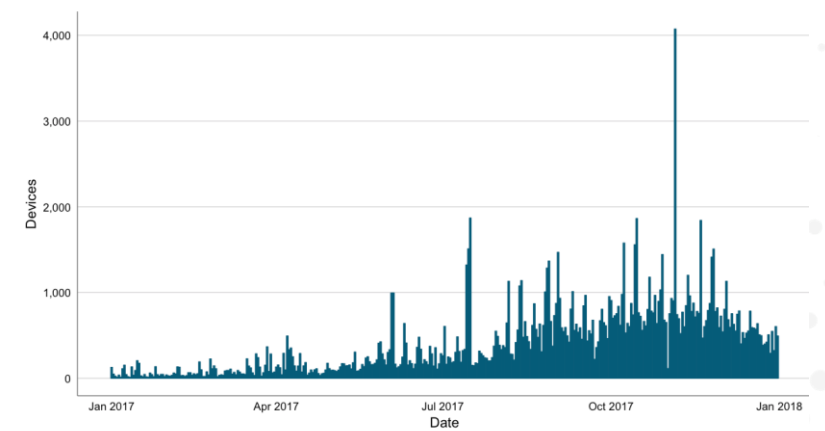
USE DATA – MOBILE APP DERIVED DATA (ANONYMISED BULK DATA)

HEALTH BENEFITS (NEIGHBOURHOOD)

- Existing analyses: neighbourhood nature -> longer term health outcomes*

- Not all explained by visits:

  - Some captured in valuing environmental regulation (e.g. avoided flooding) – assessed separately

  - Some associated with 'passive exposure' (e.g. visual). Include values of:

    - Gardens?

    - Green walls/roofs?

    - Street trees?

*e.g.
White, M.P., Alcock, I., Wheeler, B.W., Depledge, M.H., 2013. **Would you be happier living in a greener urban area? A fixed-effects analysis of panel data**. Psychological Science 24, 920-928.
Gascon, M., Triguero-Mas, M., Martinez, D., Dadvand, P., Forns, J., Plasencia, A., Nieuwenhuijsen, M.J., 2015. **Mental health benefits of long-term exposure to residential green and blue spaces: a systematic review.** International Journal of Environmental Research and Public Health 12, 4354-4379.

ANALYSIS FRAMEWORK - NEIGHBOURHOOD

Health impact of home/ neighbourhood **=** f(Home env characteristics): **+** f (Individual characteristics): **+** f(Neighbourhood characteristics):
- Gardens
  - Age
  - Sex
  - SES
- Deprivation
- Greenness
- Walkability
- Transport links

Remote sensing, greenspace map

MENE

Census, TfL, greenspace map etc.

TOOLKIT PRODUCTION

- Evidence based
- Developed with user involvement throughout
- Appropriate to needs
- Commercial product, priced appropriately for different functions/markets (e.g. planning authorities, developers)

2018									2019								
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inception				Method		Analysis			Building			Testing			Final tool		

'An embarrassment to the city': what went wrong with the £725m gateway to Cambridge?

Initially planned by Richard Rogers, CB1 was to be a world-class arrival point, with park, piazza, heritage centre and affordable homes. Instead, it's 'a future slum' plagued by antisocial behaviour and sex-trafficking

ⓘ Fenced off for two years ... Mill Park, part of the CB1 development, is the only green space for 1,000 student flats and 350 homes. Photograph: Oliver Wainwright for the Guardian

⌂ › Money › Property › Buy

Urban oasis: lakeside sites are the latest must-have for city developers

f share   🐦   in   ✉

Woodberry Down, Berkeley's new development in Hackney, sits beside two former reservoirs totalling 27 acres of open water

www.greentoolkit.net

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