

# **APPG for Nature**

Re-launch Event, 24 February 2020, London

**#APPGnature**

# Welcome

- Barry Gardiner MP, host
- Jason Reeves, CIEEM

**#APPGnature**

# Election of Officers

- Barry Gardiner MP (Chair)
- Steve Double MP
- Caroline Lucas MP
- Kerry McCarthy MP
- Baroness Barbara Young of Old Scone

**#APPGnature**

# Nature and Mental Health

- Becky Fisher and Dom Higgins
- Dr Miles Richardson
- Dr Birgitta Gatersleben

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# Naturally Healthy Lives – implications for future provision

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Becky Fisher – Hampshire and Isle of Wight Wildlife Trust

Dom Higgins - The Wildlife Trusts



# Who are the Wildlife Trusts?



A grassroots movement working for nature's recovery and to bring people closer to nature.





## Why we're here

We  
believe  
that:

everyone  
deserves to live  
in a wildlife rich  
natural world

everyone  
should have the  
opportunity to  
experience the  
joy of wildlife in  
their daily lives

people are part  
of nature,  
everything we  
value ultimately  
comes from it  
and everything  
we do has an  
impact on it



Our factory setting is to be in a social group, an active environment and have a purpose



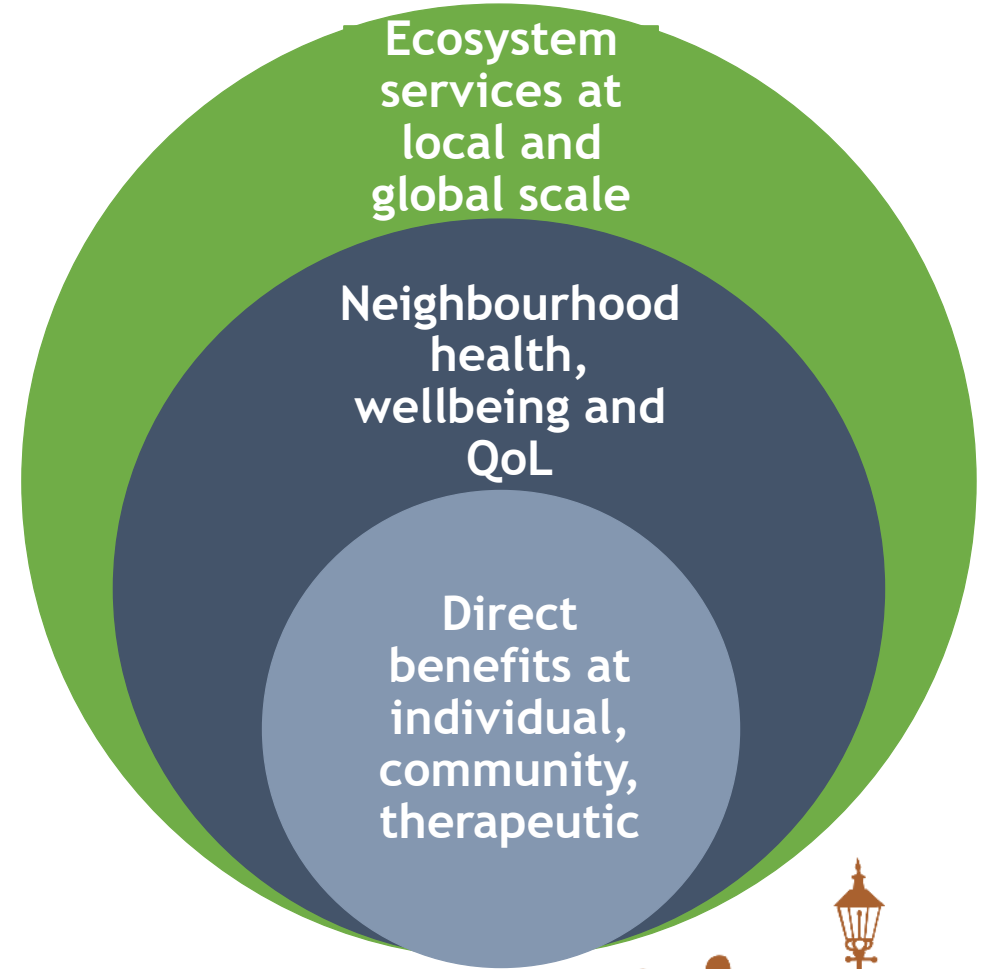
Some where, something went terribly wrong



# The Reason Why

## Nested impacts of conservation activities for health

Dr Becca Lovell





# The Nature Memories Café

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- A weekly café for people living with dementia and their carers
- Hosted in a room with a view of the nature reserve
- Key elements: nature based craft activities, tea, coffee, cake and company



# What impact does it have?

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## Why does it work?

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- Approximately two thirds of people living with dementia currently live in their own home and are at the earlier stages of dementia- projects like this provide access to nature for those people. As recommended by Greening Dementia report.
- Benefits are far reaching and include- improvements to emotional state, physical health, verbal expression, memory, and self esteem
- Nature based experiences are therapeutic- they contribute to emotional, psychological and spiritual wellbeing





## Other examples

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## What did we learn?

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1. **Any access to nature is good.** Traditional urban greenspace or nature reserves aren't accessible by all. We need to develop a whole range of ways to access nature, whoever you are and wherever you live.
2. **The intervention will have a knock on impact on others.** The Nature Memories Café was designed to be beneficial for people living with dementia. We hadn't anticipated the huge impact it would have on their carers.
3. **Interventions like this need to be properly resourced.** Stopping a programme can reverse the positive impact you had.
4. **Partnerships make a big difference.** The local authority and local health services were key to making this work.





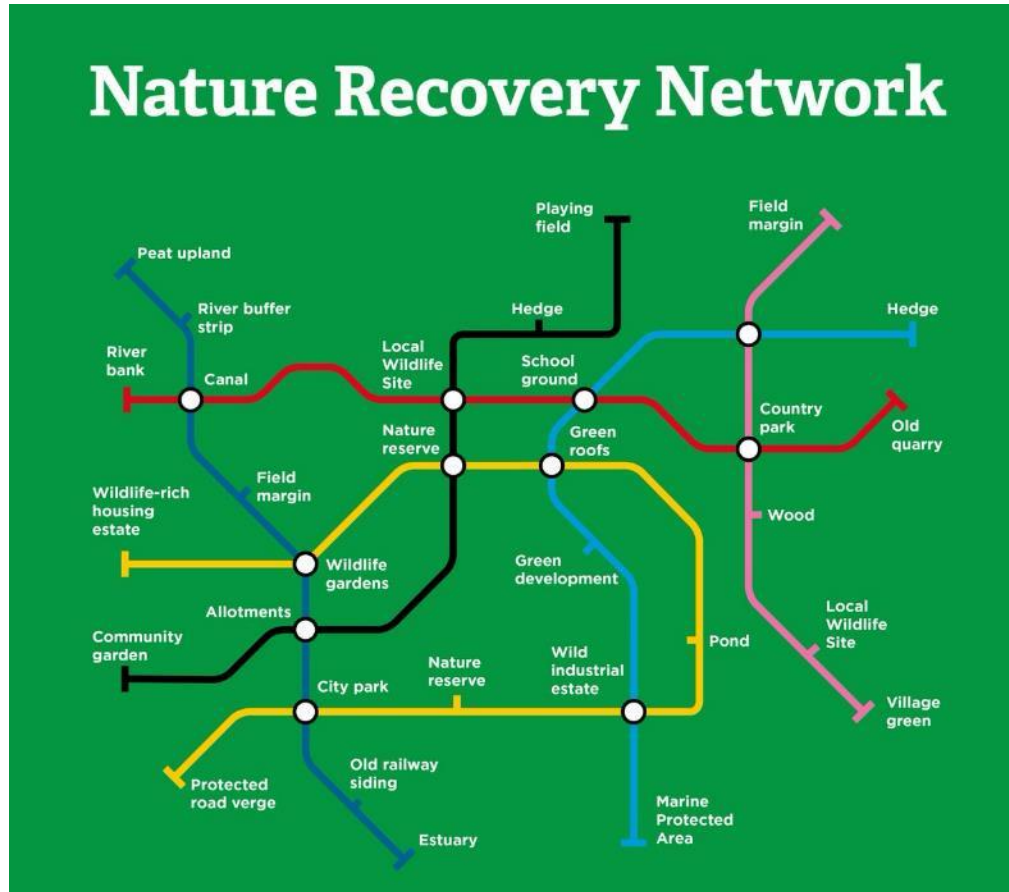


# The key driver: putting nature into recovery





# Everyone will benefit and everyone can play a part in making it happen





# Public Money for Public Goods





# Fair Society, Healthy Lives – 10 years on tomorrow!

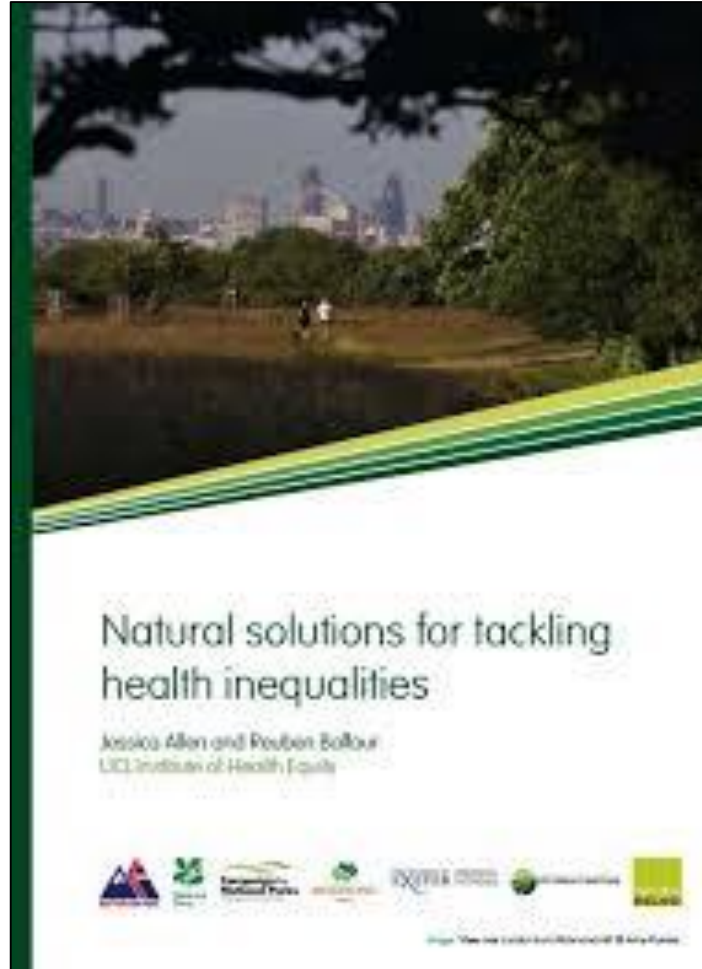


UCL Institute of Health Equity

**Fair Society, Healthy Lives:  
6 Policy Objectives**

- A. Give every child the best start in life
- B. Enable all children, young people and adults to maximise their capabilities and have control over their lives
- C. Create fair employment and good work for all
- D. Ensure healthy standard of living for all
- E. Create and develop healthy and sustainable places and communities
- F. Strengthen the role and impact of ill health prevention

UCL Institute of Health Equity



**Natural solutions for tackling  
health inequalities**

Jessica Allen and Poulsen Ballour  
UCL Institute of Health Equity

UCL Institute of Health Equity



**Fair Society,  
Healthy Lives**

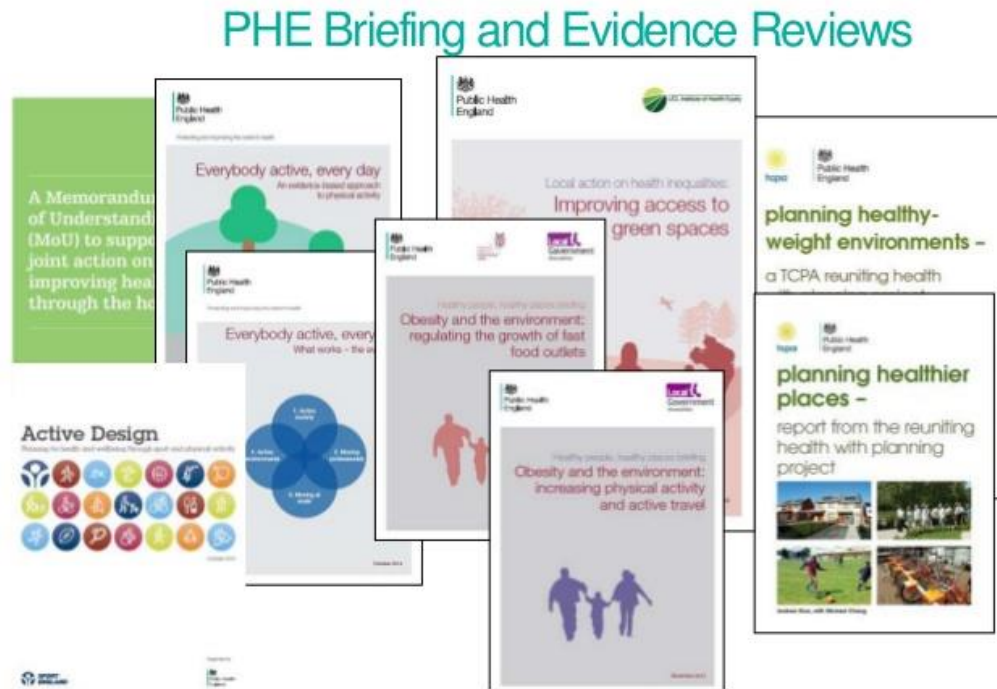
The Marmot Review

Professor Michael Marmot  
Chair of the Marmot Review



‘There is a very significant and strong body of evidence linking contact and exposure to the natural environment with improved health and wellbeing.’

PHE, 2017



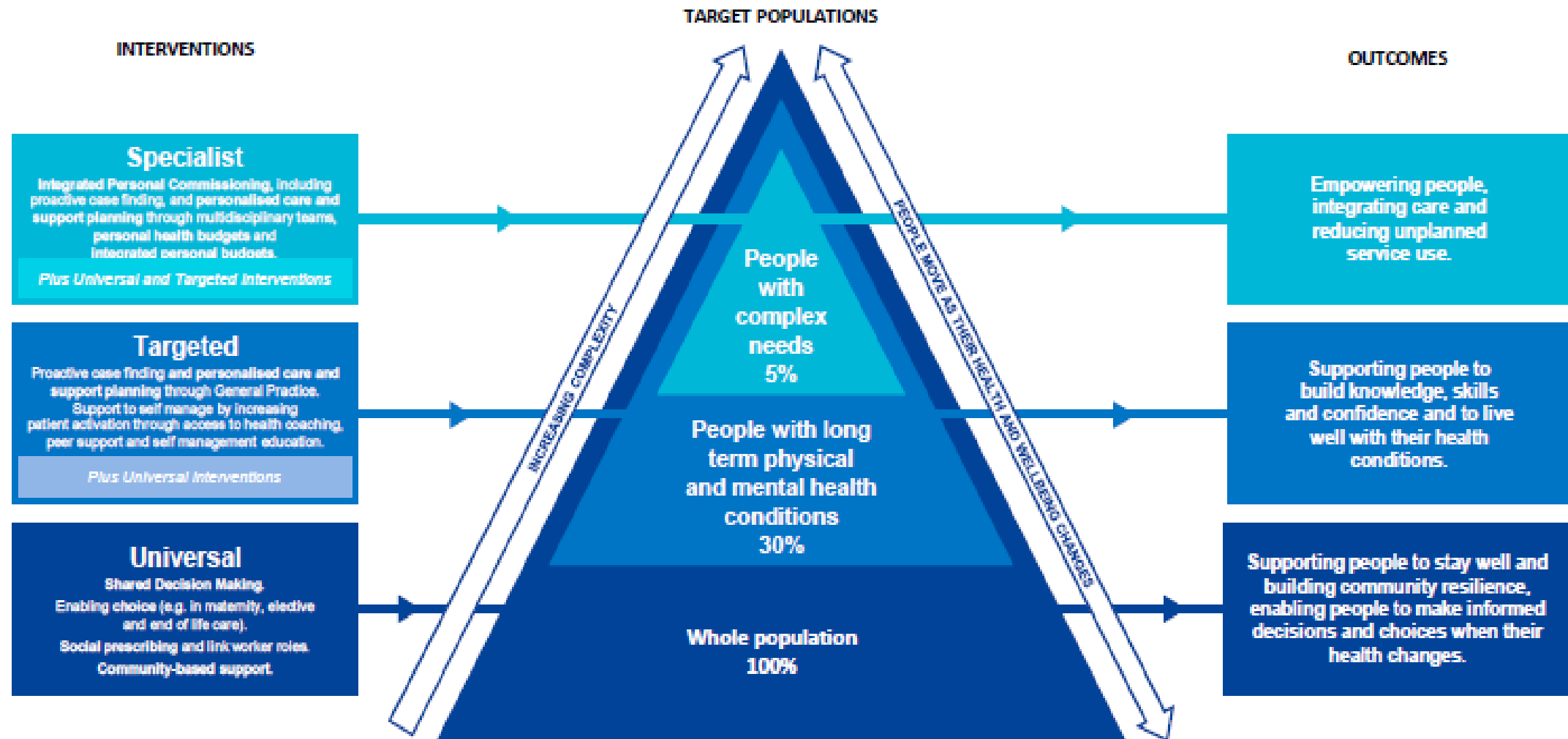
Public Health  
England

Protecting and improving the nation's health

**Spatial Planning for Health**  
An evidence resource for planning  
and designing healthier places

# Comprehensive Model for Personalised Care

All age, whole population approach to Personalised Care



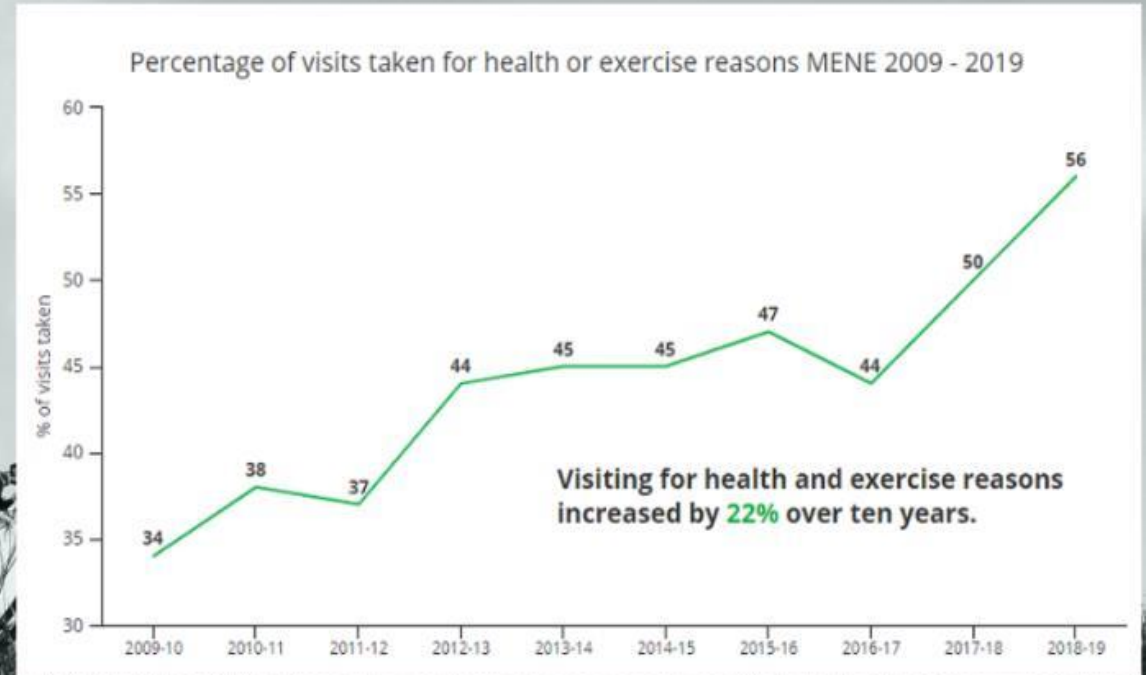


# Motivations - trend

Over the last 10 years, health and exercise has become the main reason for spending time in the natural environment.

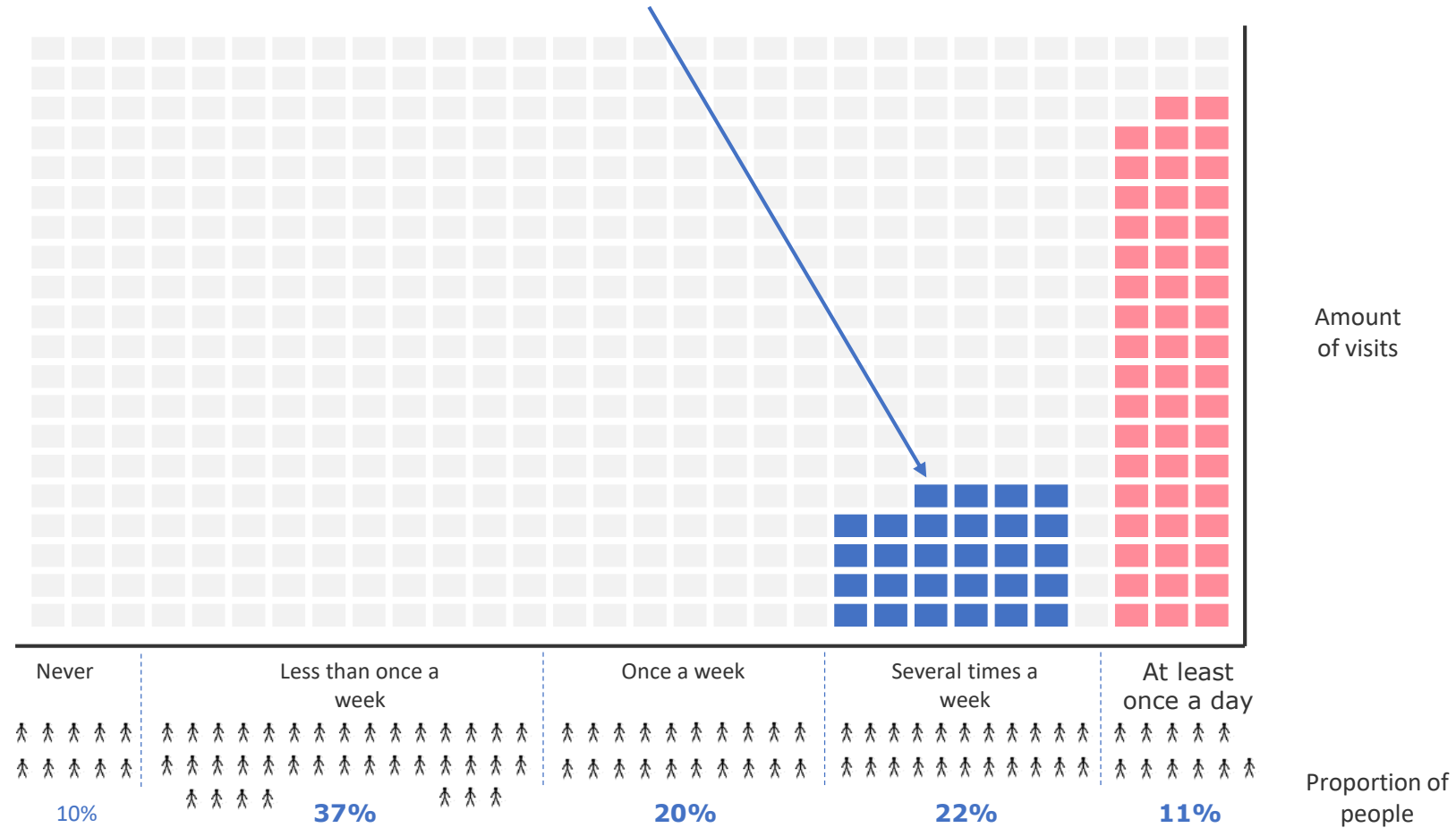
Older people (65+) reported that 64% of their visits were for health and exercise; a rise of 21% over 10 years.

Among the lowest income areas of England, health and exercise as a reason for visiting increased from 23% to 52% over the last 10 years.



# Challenge 1. Visit behaviour is highly skewed

A third of the English population account for more than 80% of all visits to the natural environment.



# What changes should we be working towards?

1. **Every day access to nature.** Everyone must have easy access to high quality natural places near to where they live, grow, work, play and age.
2. **Natural Health Promotion.** Investment in and better join up with, health services on preventative approaches to benefit both participant and resident.
3. **Nature-connected children.** Embed nature-based play and learning in our education system
4. **Nature on Prescription.** Structured nature-related activity to be available to everyone who would benefit from its therapeutic qualities.



# Strengthening the evidence base



**A Natural Health Service**  
Prescribing nature works - and is excellent value for money  
A summary of research carried out by University of Essex and Leeds Beckett University for The Wildlife Trusts

**“**  
It has stopped me living under a duvet all day  
**”**  
Wildlife Trust participant

For every **£1** invested in Wildlife Trusts' volunteering programmes, there is a **£8.50 social return.**  
Leeds Beckett University

**“**  
It has helped my depression and agitation and helped me to wind down and make decisions about my life  
**”**  
Wildlife Trust participant

**“**  
I come every week and I don't like missing it for any reason... getting out in nature makes me feel like I've been born again  
**”**  
Wildlife Trust volunteer

**“**  
Since coming here I've managed to give up smoking - I was depressed... but now I really look forward to coming here  
**”**  
Wildlife Trust participant



Social Return on Investment  
analysis of the health and wellbeing  
impacts of **Wildlife Trust** programmes

Protecting **Wildlife** for the Future







# Thank you

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# Improving Wellbeing through Nature Connectedness

Prof. Miles Richardson



Twitter: [@findingnature](https://twitter.com/findingnature)  
Blog: [findingnature.org.uk](http://findingnature.org.uk)  
Web: [derby.ac.uk/NCxRG](http://derby.ac.uk/NCxRG)







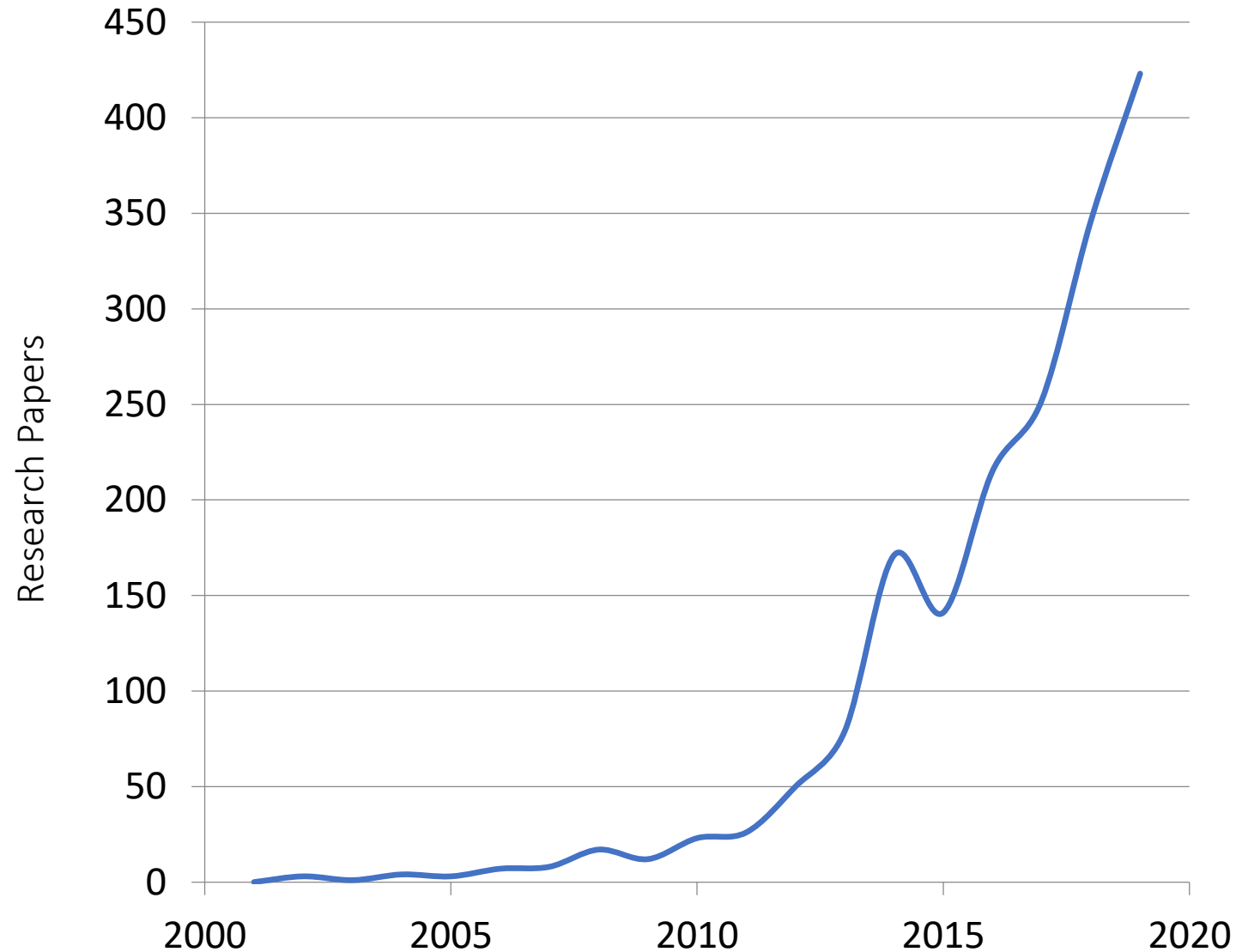
# What is Nature Connectedness?

- Different to contact and exposure to nature.
- An internationally recognised psychological construct.
- A person's sense of their relationship with nature.
- Measurable & malleable





# Growth of Nature Connectedness Research



# Why Nature Connectedness Matters

- Systematic review of 50 studies shows nature connection related to feeling good & functioning well.

Vitality

Meaning &  
Purpose

Life  
Satisfaction

Happiness

Personal  
Growth

Lower  
Anxiety

Body  
Image

Pro-social  
Behaviour



# Why Nature Connectedness Matters More



“strong & robust association between nature connection & PEB, as well as evidence that nature connection causes PEB”

Mackay, C.M.L., Schmitt, M.T., (2019).



## A different approach

Study of children's environmental education found that *environmental knowledge* explained **2%** of ecological behaviour.



*Nature connectedness* explained **69%**

*Otto & Picini, 2017*

# Nature Connection Index Project

5 year Natural England Strategic Research Network project to measure NC at the population level to complement the data on contact.



Historic England



THE UNIVERSITY  
of EDINBURGH



derby.ac.uk



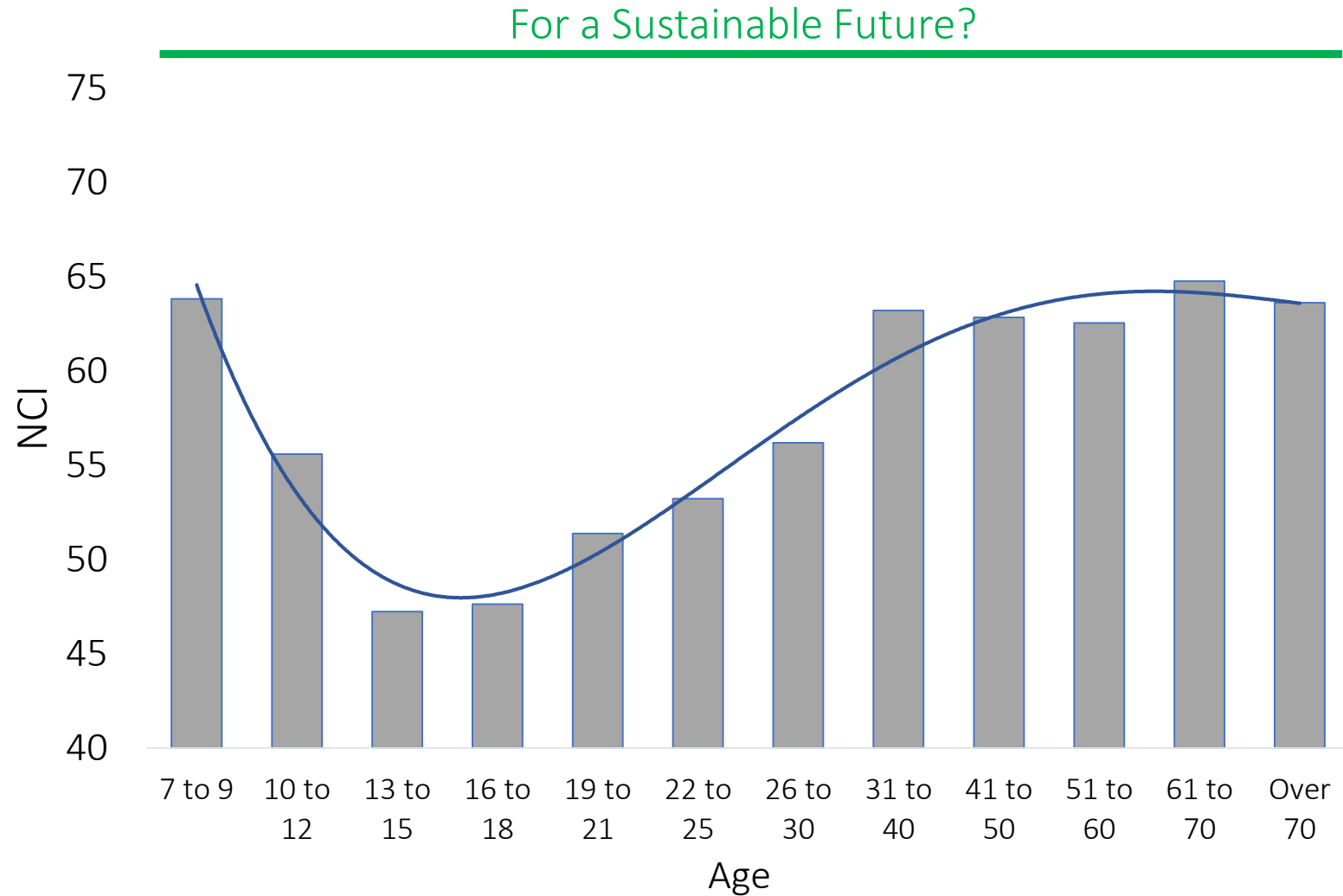


# NC & Pro-nature behaviours: Population Survey



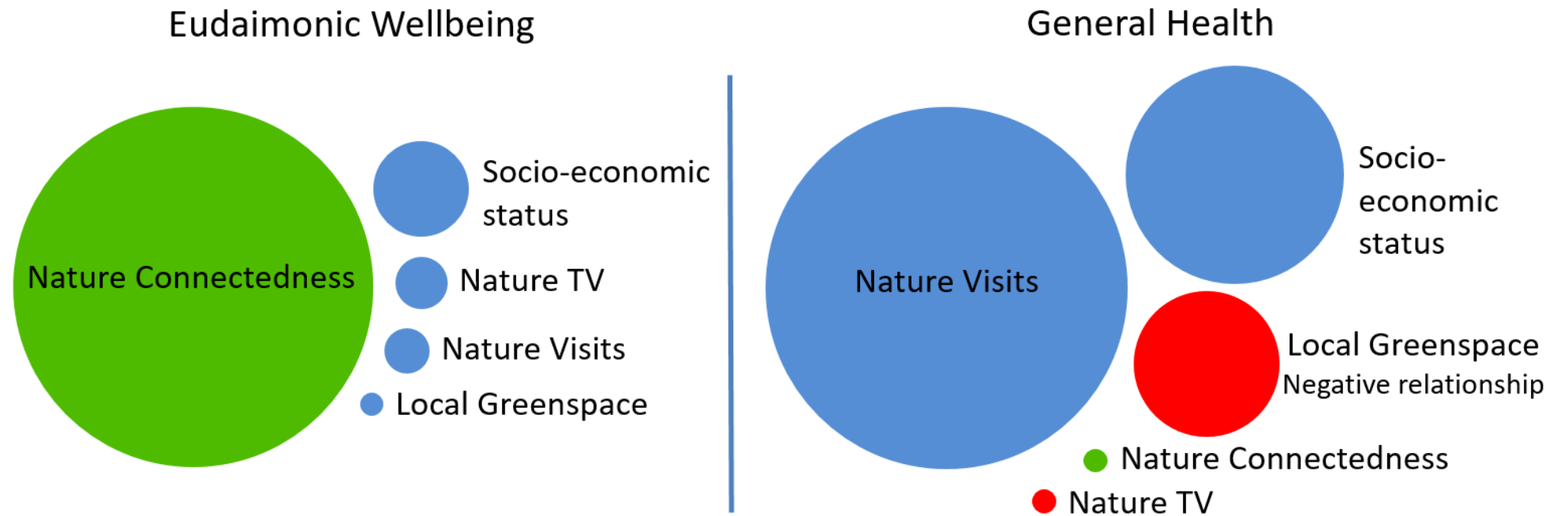


# Nature Connection Across the Lifespan



## Comparing Visits and Connection

- Theory and research has focussed on time, type & frequency and largely overlooked the person specific factors in human-nature interactions.
- Survey of 4,960 adults in England. UK official statistics = representative sampling.
- Meaningful as greater in magnitude to benchmark socio-demographic factors.



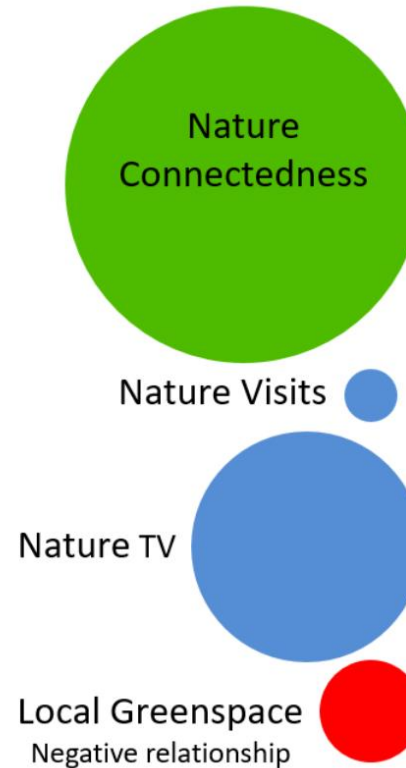
Relative percentage difference in wellbeing and health as a function of nature contact, nature connectedness and socio-demographic comparators.

## Key findings

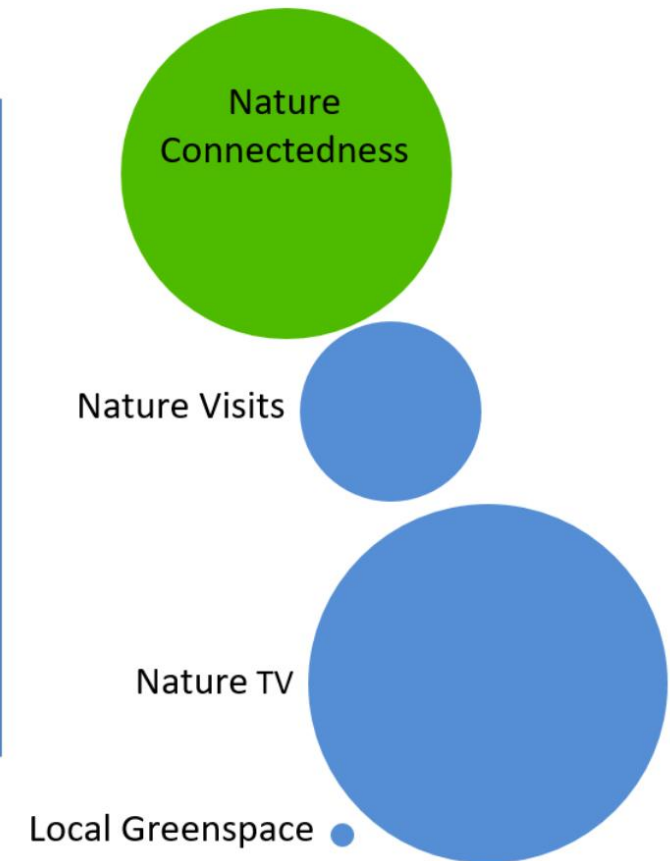
- Nature connectedness important over and above nature contact for worthwhile life and pro-nature behaviours.
- Nature connectedness is a key target to foster a worthwhile and sustainable life – a 'good life'.
- The 2019 IPBES report on the decline in wildlife stated that to save nature we need to re-evaluate what we mean by a "good life".

Martin, L., White, M. P., Hunt, A., Richardson, M., Pahl, S., & Burt, J. (2020). Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of Environmental Psychology*, 101389.

### Pro-nature Conservation Behaviours



### Pro-environmental Behaviours



Relative relationship size between nature connection and nature contact on pro-nature behaviours after controlling for individual, area-level and related outcome covariates.



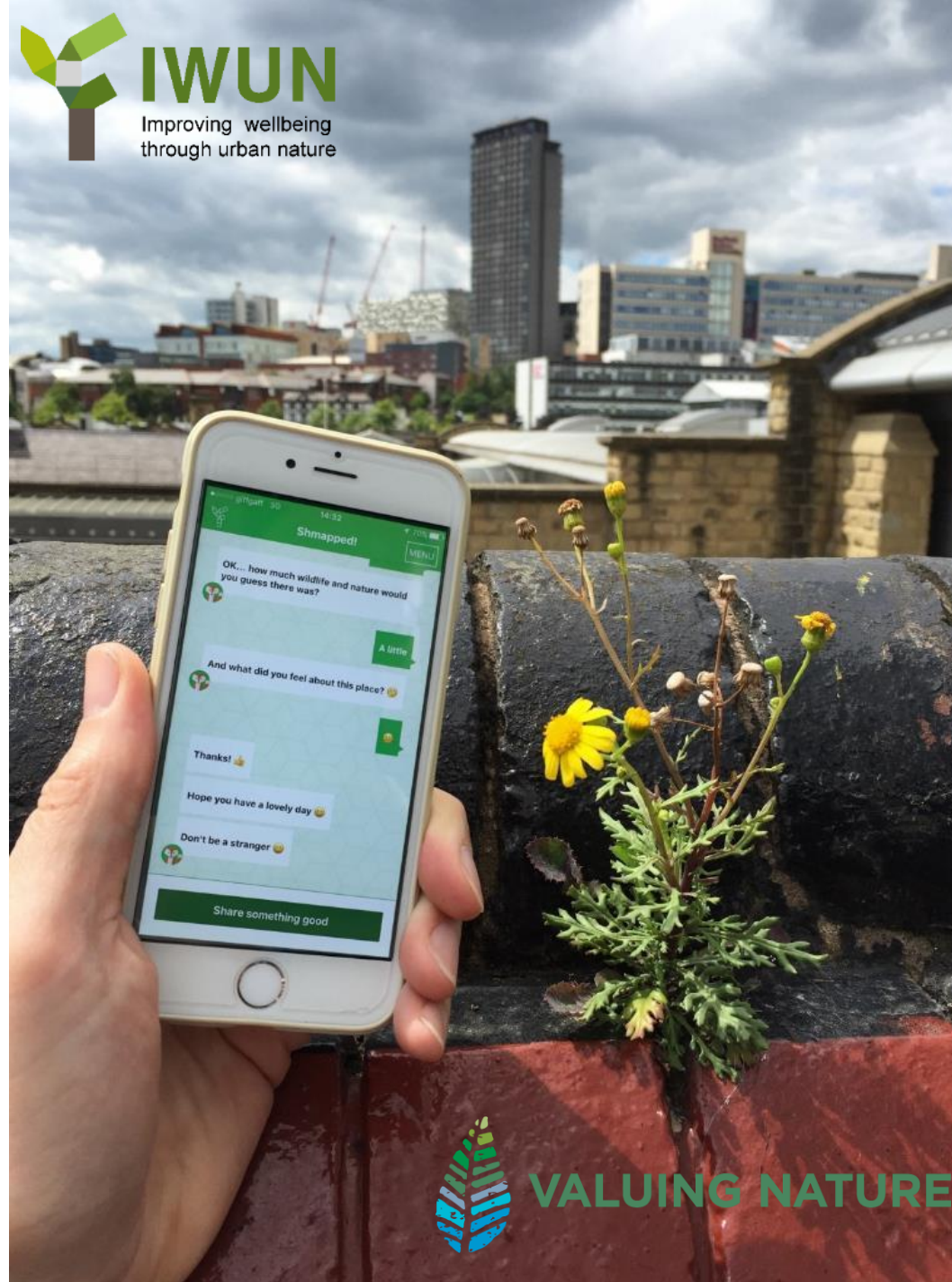
# Improving Nature Connectedness

- Developing interventions to improve nature connectedness since 2013.
- Design framework – the pathways to nature connectedness.
- Noticing the good things in nature - IWUN

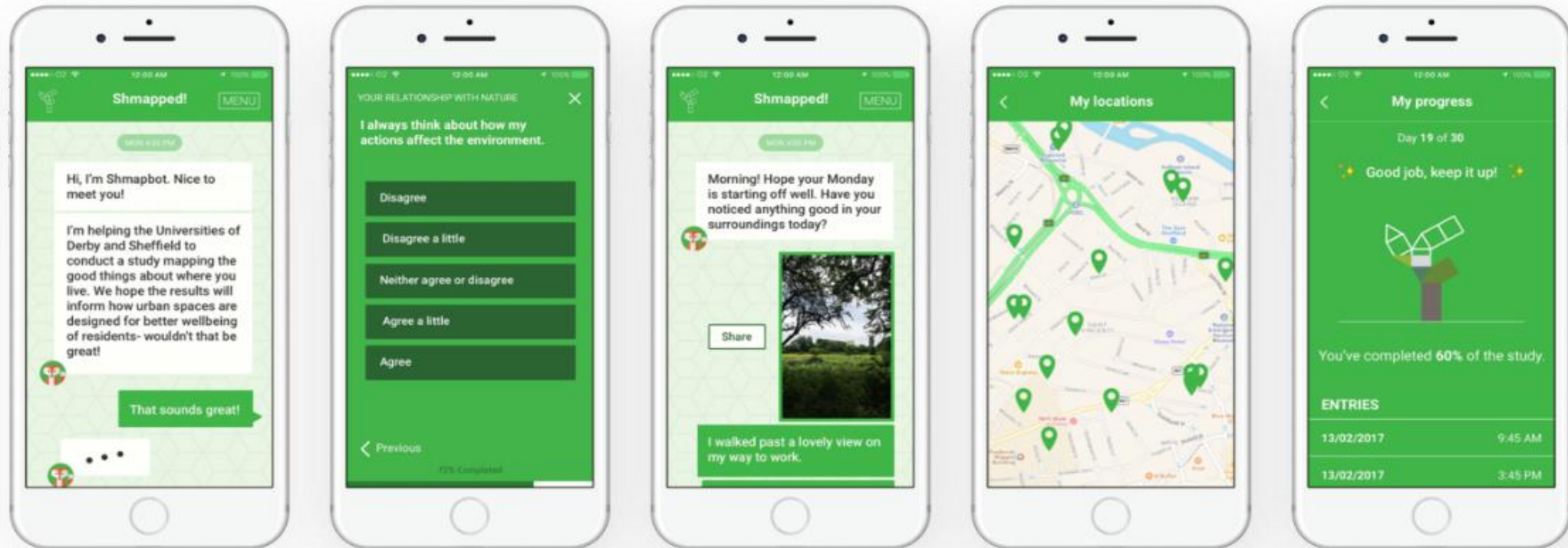


## IWUN App

- Prompts to notice the good things in nature (intervention condition) or built spaces (control) each day for a week.
- Randomised controlled trial, 582 adults, including those with a common mental health problem ( $n=148$ ).
- Measures wellbeing and nature connection at baseline, post and follow-up.
- Tracked use of greenspaces.



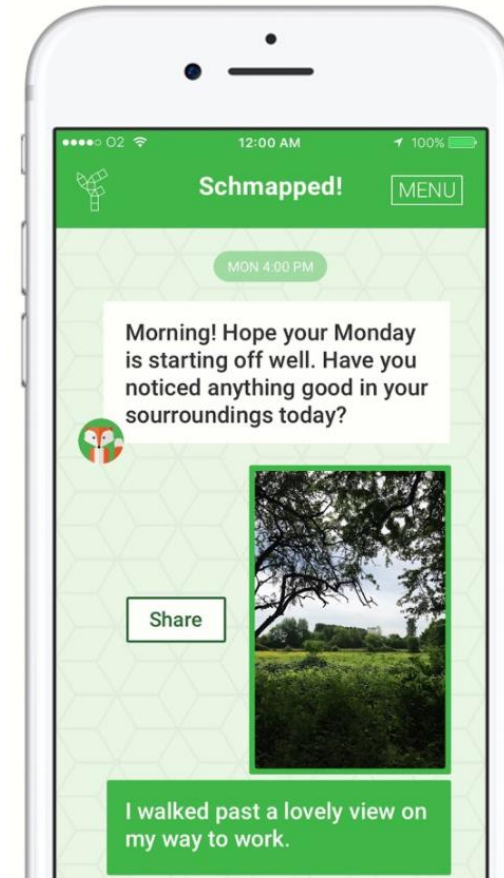
# Shmapped Screens





# Results

- Significant increases in mental health & nature connectedness - sustained at 1 month.
- Improvement in quality of life reached clinical significance in adults with a mental health difficulty (n=148).
- Wellbeing improvement explained by increase in nature connectedness and positive emotions
- First experimental evidence of strong clinical potential as a wellbeing intervention.
- People who gained most were those who had spent less time outdoors and were less connected to nature.
- Evidence of causality.



## What are the good things in urban nature?

- Wonder at encountering wildlife – birds & birdsong, squirrels and foxes.
- Trees, views & the passing seasons.
- Dramatic skies.
- Simple everyday things.

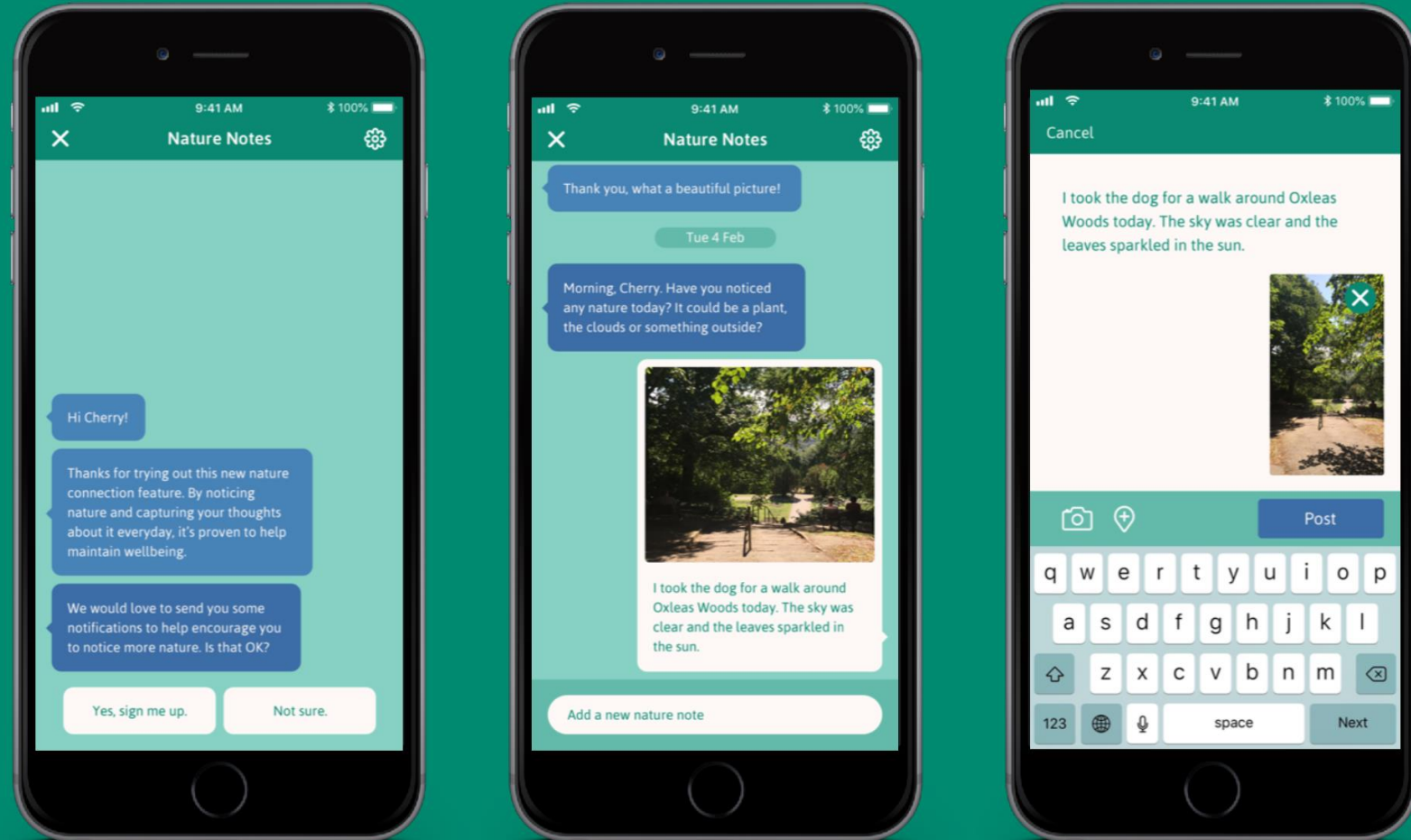
### Urban Biodiversity Matters - *the good things in nature matter*

- A strong relationship between perceived and actual biodiversity.
- More biodiversity linked to more positive emotions.
- When prompted, people are good at noticing a variety of nature – and it matters for their mental wellbeing.

McEwan, K., Ferguson, F. J., Richardson, M., & Cameron, R. (2020). The good things in urban nature: A thematic framework for optimising urban planning for nature connectedness. *Landscape and Urban Planning*, 194, 103687.

Cameron, R.W.F., Brindley, P., Mears, M. *et al.* Where the wild things are! Do urban green spaces with greater avian biodiversity promote more positive emotions in humans?. *Urban Ecosyst* (2020). <https://doi.org/10.1007/s11252-020-00929-z>

# Incorporating into Go Jauntly for 2020 release



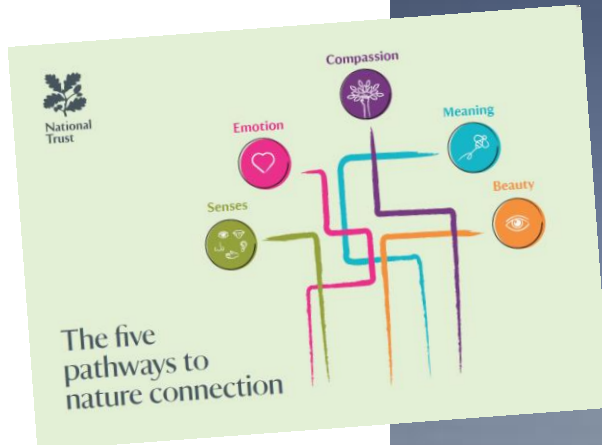
**Nature Notes**

**+115k**  
app downloads

**+11k**  
monthly active users



## Pathways to Nature Connectedness



Senses



Emotion



Beauty



Meaning



Compassion

# 30 Days Wild

- Activities informed by pathways
- 250,000+ participants of 5 years
- Tracked 1105 participants
- Improvements across all measures
- Improvements sustained for 2 months
- Those who have lower NC show greater improvement
- Attracts those with high nature connection



	Pre-participation		Post-participation		Pre-to-post	Follow up		Pre-to-follow up
	Mean	SD	Mean	SD	% change	Mean	SD	% change
NC	57.59	24.19	66.53	21.68	+15.52	67.11	22.35	+17.68
Health	3.54	0.95	4.66	2.06	+31.64	4.55	1.88	+28.53
Happiness	7.33	1.69	7.79	1.56	+6.28	7.91	1.49	+7.91
Conservation	3.08	1.04	3.29	.96	+6.82	3.3	.98	+7.14

NC – Nature Connectedness



# For a New Relationship with Nature

- Nature connectedness is important in its own right for wellbeing and pro-nature behaviours.
- Provide 'Habitats for Connection,' everyday opportunities and prompts to notice the good things in nature.
- Ensure a variety of plants and wildlife in green spaces.
- Use green 'connection' prescriptions.
- Apply the pathways to nature connection at deep leverage points.
- A connected life is a worthwhile life, a sustainable life - a good life.

*let nature be your story*





# Short school breaks in nature

Dr Birgitta Gatersleben

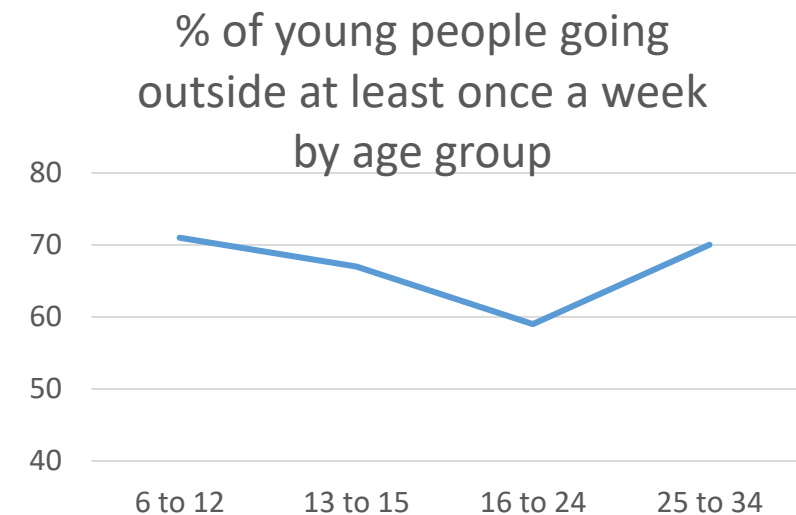
Environmental Psychology Research Group



UNIVERSITY OF  
SURREY

# Benefits of short school breaks in nature

- Exposure to- engagement with green space benefits cognitive, physical and mental wellbeing
- But young people spent little time outdoors (ONS, 2014)
  - Aged < 14: 18 mins/day
  - Aged 14-15: 10 mins/day
- Schools can have important role to play
- Existing school grounds often not green
  - Maintenance, safety concerns, ...





# Benefits of short school breaks in nature

- This talk
  - Three examples of research evidence
    - Nursery schools
    - Junior schools
    - College
  - What is short?
  - Conclusions and recommendations



# Nursery schools

- Series of studies in Sweden
  - Sample
    - Selected nursery schools (9 to 11), +/- 200 children
  - Measures
    - Playground quality
      - Amount of playspace
      - Amount of green
      - Integration of green in playspace
    - Tests and surveys with children, parents and teachers



# Nursery schools

- Physical activity (Boldemann et al., 2006)
  - Children carried pedometer for 12 school days
  - Children with “green” playgrounds took 20% more steps
- Attention (Martesson et al., 2009)
  - Teachers rated children’s behaviour using standardised attention deficit tools
  - Children with “green” playgrounds showed less signs of inattentive, hyperactive and impulsive behaviours
- Physical health (Söderström et al., 2013)
  - Parents kept 7 day health diary of child, researchers measured children’s BMI and weight
  - Children with “green” playgrounds had leaner bodies and more night sleep





# Junior schools

- Study in Netherlands examining effect of playground greening on wellbeing (V. Wesselius et al., 2018)

- Method

- Sample
  - 9 schools, 700 children
- Design
  - 5 “greened” playgrounds, measurements taken at 3 timepoints over 3 years
- Measures included
  - information processing (DLST-digital letter substitution task)
    - Quickly match numbers to symbols using key
  - attention (SST – Sky Search Task)
    - Quickly identify pairs of matching space crafts
  - decisions to share
  - accelerometer

## Control group



School A



School B

## Greened playgrounds



School E: Baseline



School E: After greening



School I: Baseline

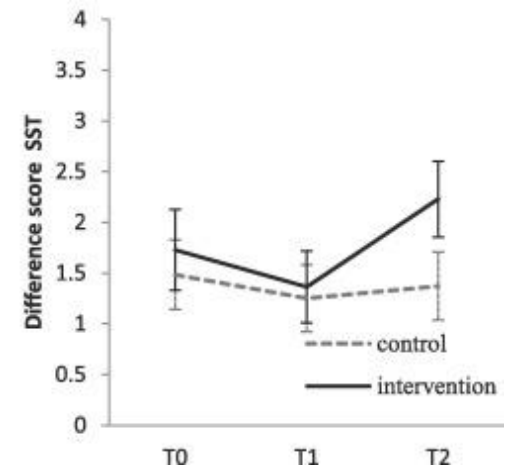
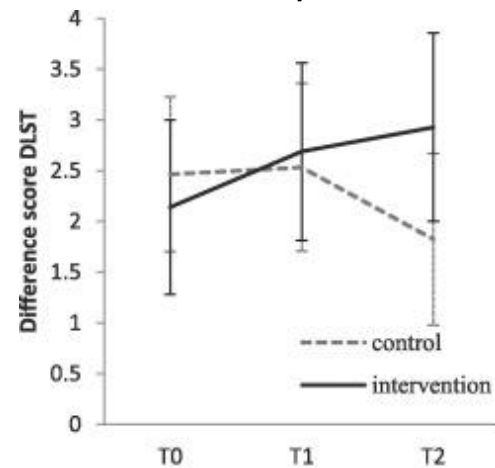


School I: After greening



# Junior schools

- Results
  - Playground greening improved
    - preference, social wellbeing, physical activity of girls and attention restoration
  - Attention restoration after school break
  - At follow up children with “greened” playground showed better
    - information processing (DLST-digital letter substitution task)
    - attention (SST – Sky Search Task)



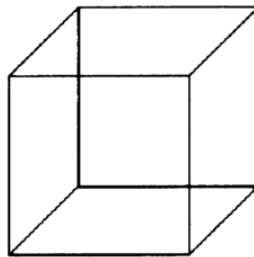
# College

- Focus groups with 22 teenagers (16-18)
  - *The most important thing about being a teenager is socializing!*
  - *I think the company is what makes the environment*
  - *If you don't have a motive, if you don't have anything to do, it's like going on walks where you don't go anywhere, I hate that*



# College

- UK study examining effect of rest after stress indoors/outdoors, alone, with friend or with phone (Greenwood & Gatersleben, 2016)
- Sample
  - 120 teenagers completed stressor tasks
- Design
  - then spent 20 minutes in school room or garden alone, with a phone or with a friend
- Measures
  - Attention: NCPCT
    - Seeing pattern “flip”
  - Self reported mood
  - Heart rate

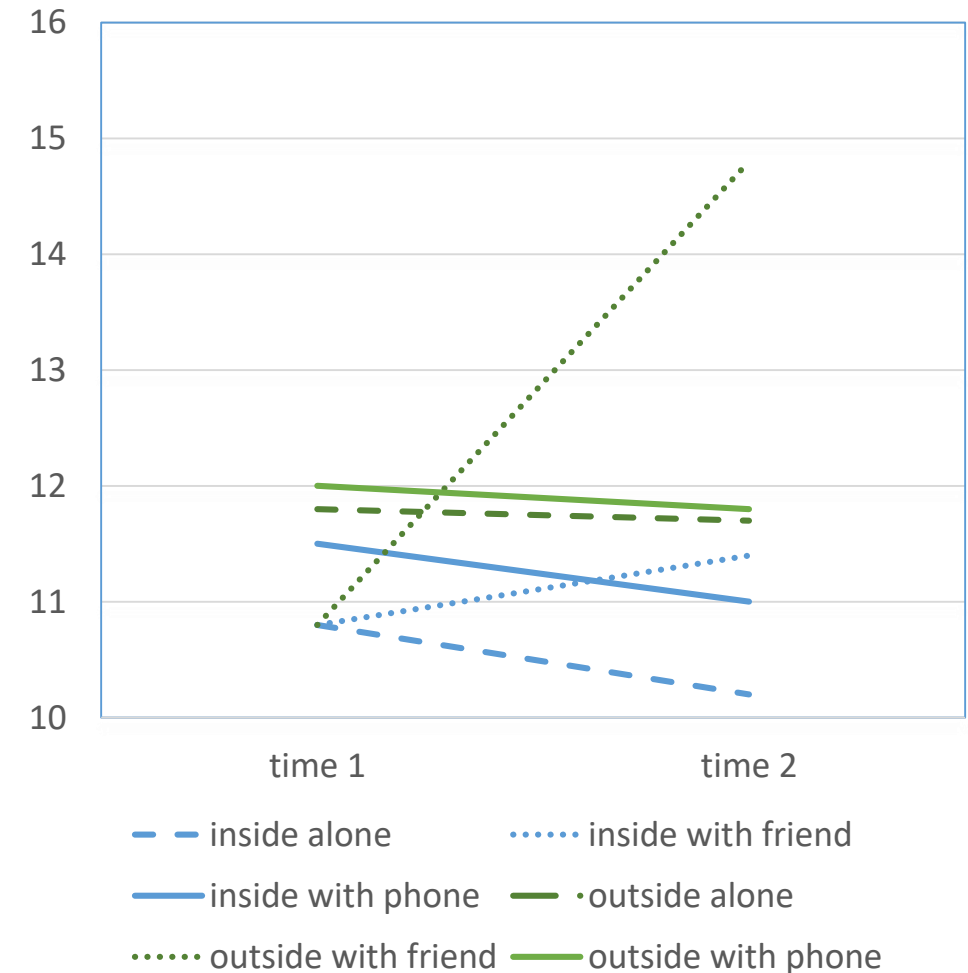




# College

- **Results**
- Cognition
  - Attention scores on NCPCT improved more outdoors
  - not affected by context
- Mood
  - Positive mood increases most outdoors with a friend
- Physiological
  - Heart rate lower in all conditions except when outdoors with friend (less boring?)

Positive affect before and after rest period



# How short?

- Lab-based study with University students (Lee et al., 2015)
- Method
  - Sample
    - 150 students (Age: M = 20).
  - Design
    - 5.5 min attention task - 40 second roof image - 5.5 min task
  - Measures
    - SART (sustained attention to respond task)
- Results
  - Seeing a green roof **for 40 seconds** resulted in less attention fatigue: less omission errors and more consistent responding





# Conclusion and recommendations

- Short breaks in nature in school benefits
  - Cognitive functioning, attention, mood, social behaviour and physical activity
- Even very short passive engagement has benefits
- Benefits vary with type of engagement
- Recommendations
  - Create more integrated green spaces
  - Provide visual and physical access to those spaces
  - Encourage use of those spaces



Thank you



# Thank You & Questions

Visit [www.cieem.net/appg-for-nature](http://www.cieem.net/appg-for-nature)  
for more information and to sign up for  
news about the group.

**#APPGnature**