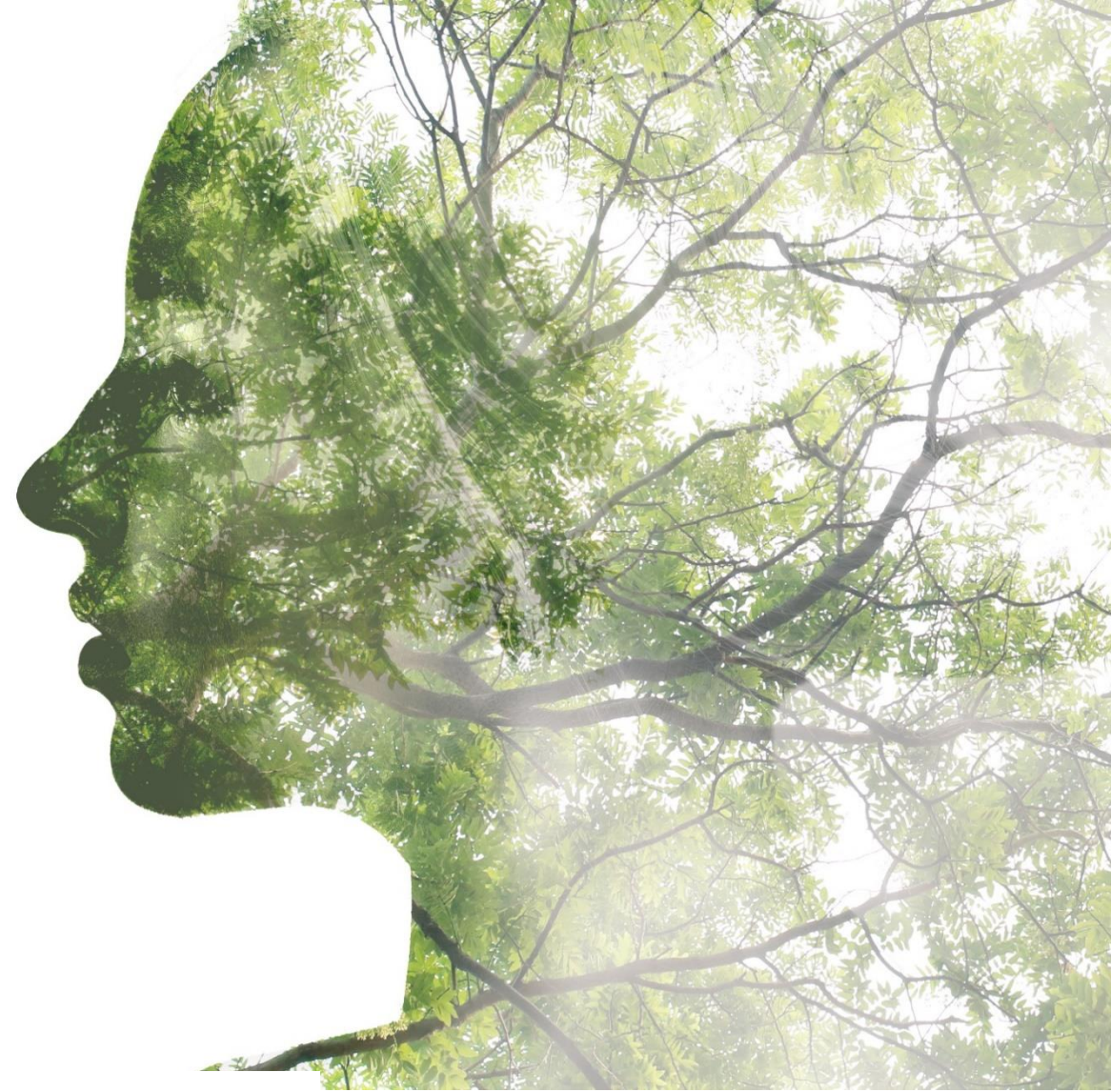


**Making space for young people: does ecosystem quality affect nature connectedness and health in a disadvantaged area?**



# Introduction/Recap

## Why?

- Benefits of greenspace exposure, including increased physical activity, less sedentary behaviour, reduced blood pressure, cortisol, and heart rate
- Spaces need to be improved in terms of accessibility, quality, and availability
- Nature-connectedness suffers a decline in adolescence, partially recovers in early adulthood
- Relationships are often assessed in relation to green space quantity, not quality
- Satisfaction of the perceived qualities of urban greenspace may be a more important predictor of wellbeing in youth than quantity

## How?

- Objective measurement of ecosystem quality of target spaces and categorise into 'high' and 'low' ecosystem quality
- Opportunity sample of 128 local young people (aged 16-17 years) allocated to either a high- or a low-quality environment
- Qualitative: photovoice to explore young people's views of identified high- and low-quality spaces and to identify areas or features liked/disliked by young people; sub-sample focus groups to explore photograph choices in more detail
- Quantitative: Pre- and post-participation survey capturing self-reported health, wellbeing, and nature connectedness; consenting participants will wear accelerometers for two consecutive days



## Ecosystem quality assessment (Katherine Hand et al. 2016)





# Delivery Overview

Active participation in nature based activity to better understand the impact ecosystem quality has on nature connectedness and health

- Pre-engagement health survey
- Accelerometer data
- Photo voice task
- Post engagement health survey
- Focus group

Activities on the day were consistent with the only manageable variable the being eco system quality. Week 1 and 2 high quality environments, week 3 and 4 low quality environments

## Activity

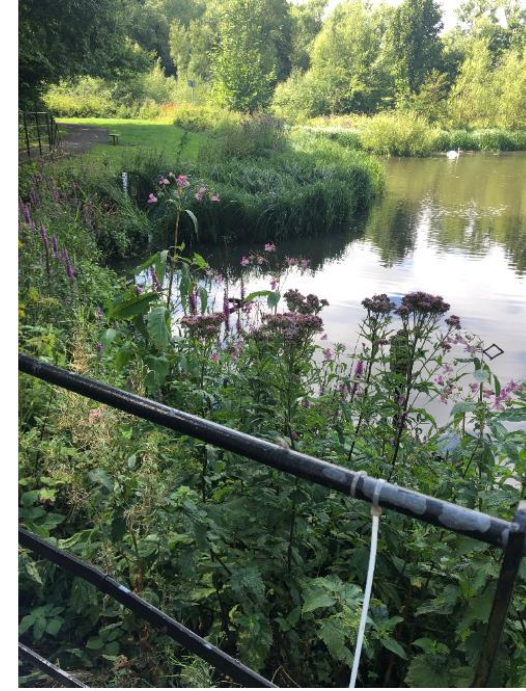
- Biodiversity sampling – kick sampling and species identification
- Mindfulness in nature session
- Photography task

**Key learning point – a difficult age to engage with**



Relaxed

A photo of a green/blue place on the Sankey Valley  
Corridor route that makes you feel relaxed



Qualitative  
Data  
Collection  
Photo Voice



Tense

A photo of a green/blue place on the Sankey Valley  
Corridor route that makes you feel tense



Qualitative  
Data  
Collection  
Photo Voice

Happy

A photo of a green/blue place on the Sankey Valley  
Corridor route that makes you feel happy



Qualitative  
Data  
Collection  
Photo Voice



Unhappy

A photo of a green/blue place on the Sankey Valley  
Corridor route that makes you feel unhappy

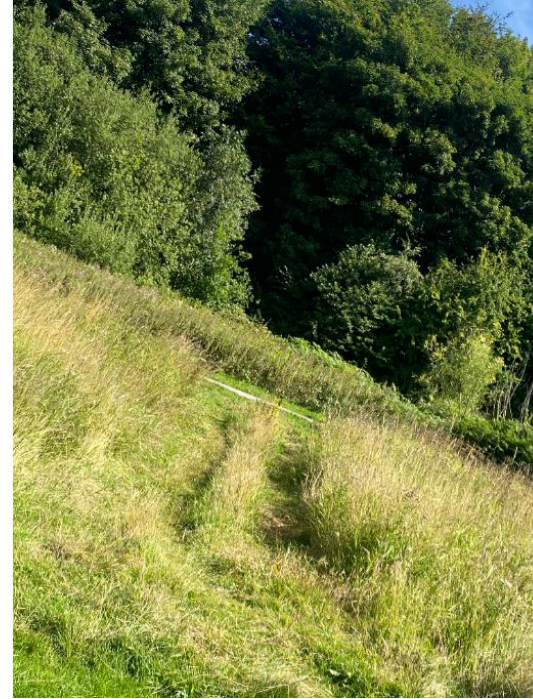


Qualitative  
Data  
Collection  
Photo Voice



Connected  
to nature

A photo of a green/blue place on the Sankey Valley  
Corridor route that makes you feel connected to nature



Qualitative  
Data  
Collection  
Photo Voice

Dis-  
Connected  
from  
nature

A photo of a green/blue place on the Sankey Valley  
Corridor that makes you feel disconnected from nature



Qualitative  
Data  
Collection  
Photo Voice

# Quantitative data analysis

- Cronbach's alpha showed internal consistency of scales to range from acceptable to good:
  - Depression ( $\alpha = .88$ )
  - Anxiety ( $\alpha = .76$ )
  - Stress ( $\alpha = .79$ )
  - Wellbeing ( $\alpha = .73$ )
- Pre-intervention data revealed expected correlations between measures of mental health ( $n=64$ , see table)
- Repeated measures analysis ( $n=13$ ) revealed no significant effects for:
  - Inclusion of nature in self ( $z = .00, p > .05$ )
  - Depression ( $z = 10.00, p > .05$ )
  - Anxiety ( $z = 33.50, p > .05$ )
  - Stress ( $z = 49.00, p > .05$ )
  - Wellbeing ( $z = 36.50, p > .05$ )
- Accelerometry:
  - Comparator day analysis
  - MVPA profile in natural settings
  - Contribution to daily (MV)PA

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Inclusion of nature in self	4.00	1.38				
2. Depression	10.88	10.51	.045			
3. Anxiety	12.09	8.87	-.07	.518**		
4. Stress	14.59	8.85	.025	.666**	.762**	
5. Wellbeing	14.31	4.39	-.033	-.621**	-.445**	-.450**

Note. \*\* Correlation is significant at the .01 level (two-tailed), \*Correlation is significant at the .05 level (two-tailed)



# Conclusions and Directions

- The data gathering and analysis protocol is fit-for-purpose
  - Small sample sizes and lack of unsupervised engagement can be addressed
- This demographic is under-represented in the research literature, but is also difficult to reach and requires significant resource
  - Data gathering needs to be hard-wired into activities
  - Researchers (and incentives) should present in-person for data collection
- Project data will be included in a Heritage Lottery Fund application by Groundwork for nature-based improvement projects across the Sankey Valley corridor
- Potential to scale-up data collection across multiple projects/times for a full implementation of this research project