



Natural  
Environment  
Research Council



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# Why do we dig gardens?

*Dr Michelle Tester-Jones*

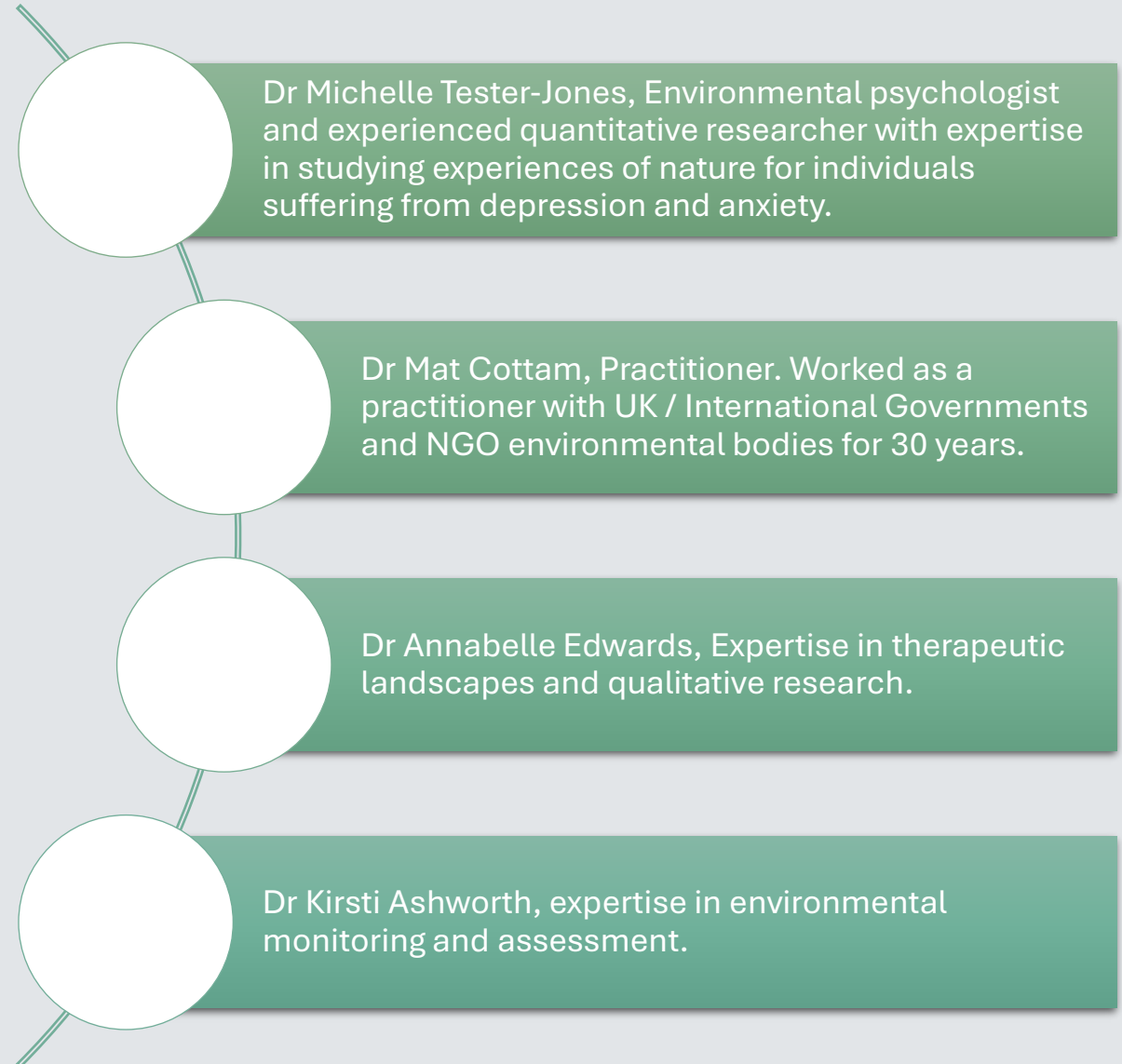
*Dr Mat Cottam*

*Dr Annabelle Edwards*

*Dr Kirsti Ashworth*

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# An interdisciplinary project team





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# Introduction

There is growing evidence of small-scale nature-based interventions for improving health outcomes

But **how** do nature-based activities impact management and outcomes of common mental health disorders, **and what affects their relative success and failure?**

There is no research exploring how the effectiveness of Green/nature programmes and interventions for mental health vary with environmental quality, and how this in turn affects nature connectedness and any subsequent improvements in mental health outcomes.

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# Exploring the sensory quality of the intervention environment

Our environment inevitably affects the way we feel and behave and holds the potential to facilitate psychological and physical interaction.

Some settings could be more conducive to facilitating symptom improvement compared to others (e.g. sites near busy roads or exposed to other urban noise vs more rural ones, or ones with a specific colour palette or optimum temperature?)

Could these qualities facilitate greater connection to nature and subsequently more positive emotions, thoughts and actions?

## Green Gym improves physical wellbeing

On average, volunteers said they spent 50% more time engaged in vigorous and moderate activities by the end of the 3 month study period. Volunteers were walking more too. Nine out of ten attributed their higher physical activity to participation in Green Gym.

Volunteers increase the amount of time spent in vigorous and moderate activities

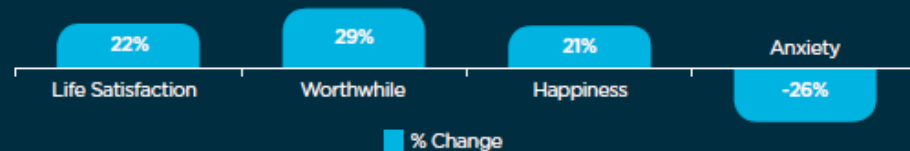


n=92 (baseline)  
n=79 (2nd follow-up)

## Green Gym improves mental wellbeing

Mental wellbeing scores improved over 3 months with a quarter of volunteers reporting a decrease in anxiety.<sup>1</sup>

Wellbeing Improves; anxiety reduces

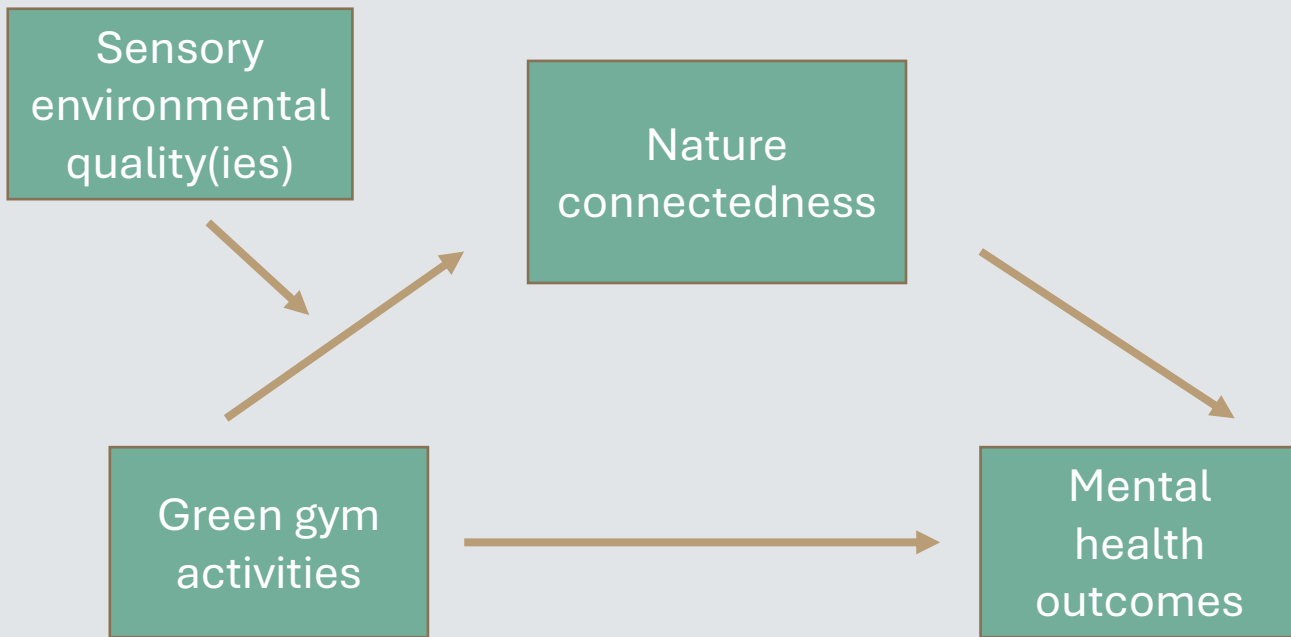


n=92 (baseline)  
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TCV's national network of Green Gyms are providing our study sites. Green Gyms are individually tailored challenging physical work outdoors, in a social setting. Activities range from veg gardening to parks and countryside management. Green Gyms start with a warm-up, end with a cool-down, and have a chat and tea and biscuits in the middle.

# Research questions



1. Does engaging in and with the Green Gym on a regular basis for 8 weeks improve general wellbeing and depression scores?
2. Does connectedness with nature mediate this relationship?
3. Does sensory environmental quality moderate the relationship between Green Gym activities and nature connectedness, which in turn leads to improved wellbeing outcomes (moderated mediation) and if so, are some qualities more important than others in predicting positive outcomes?
4. What is the role of perceived safety as a subjective aspect of environmental quality, in the relationship between participating in the green gym and wellbeing outcomes?

## Design

- Mixed-methods retrospective quasi experimental design with repeated measures at baseline and after attending 8 Green Gym sessions

## Participants

- Volunteers at 3 Green Gym sites, attended at least 8 sessions, experienced low wellbeing/mood on joining
- ~30% of participants in the Green gym report lower wellbeing and/or symptoms of depression and anxiety

## Intervention

- Green gym participation
- A weekly 3-4-hour raised bed gardening session (or similar), and social 'tea and biscuits'

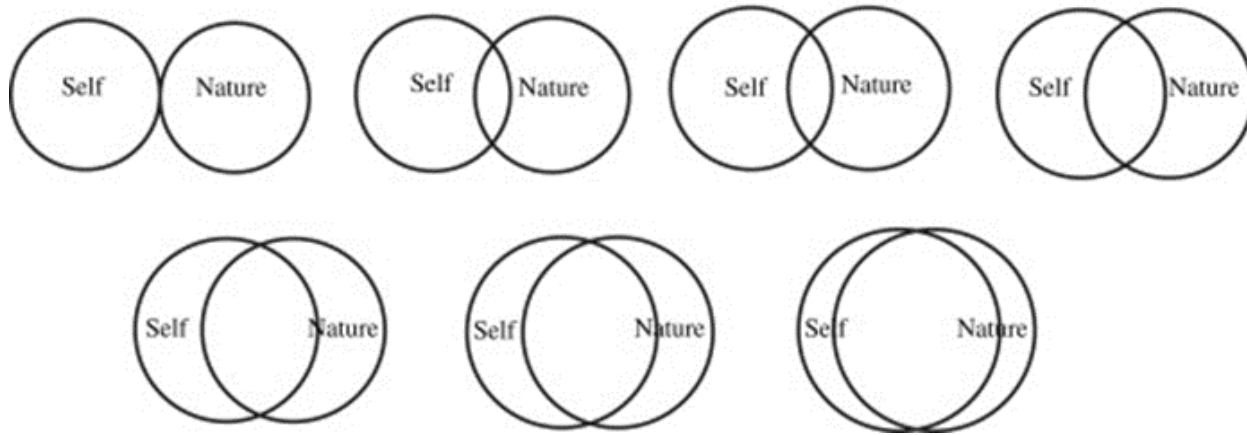
## Outcomes

- **General wellbeing:** The Warwick-Edinburgh Mental Wellbeing Scales **Nature Connectedness:** Inclusion of nature in self scale, MENE nature connectedness items. **Qualitative data** on researcher and participant experiences

## Environmental quality

- Sites assessments at baseline, mid-point and end for sensory environmental quality. Soundscapes , air samples, temperature and visual qualities such as colour, sightlines, canopy density

Please circle the picture below that best describes your relationship with the environment (nature) (self = you; nature = the environment):



Statements	1 = Strongly disagree	2	3	4	5	6	7 = Strongly agree
I always find beauty in nature							
I always treat nature with respect							
Being in nature makes me very happy							
Spending time in nature is very important to me							
I find being in nature is really amazing							
I feel part of nature							



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# Project progress

- ✓ Budget finalised
- ✓ Study protocol and materials finalised
- ✓ Ethics application submitted and response to committee currently being reviewed
- ✓ RA recruited, DBS check and final HR go ahead awaited
- ✓ Equipment for environmental assessment being purchased

Data collection expected to start on schedule at the beginning of July!