

How do front gardens impact health and well-being?



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Hypotheses

A front garden horticultural intervention (introducing plants to paved front gardens) will:

1. Improve residents' subjective well-being and perceived stress levels
2. Improve stress regulation as measured by diurnal cortisol secretion
3. Provide other cultural ecosystem services

Outcome measures

- Shortened Warwick-Edinburgh Mental Well-Being Scale (7-35)
- Perceived Stress Scale (0-40)
- Diurnal patterns of salivary cortisol
 - Decline (12h - 3h) post-awakening
 - Daily average concentration
 - Daily total secretion - Area Under the Curve (ground)
- In-depth semi-structured interviews

Intervention schedule

42 participants

At each sampling point:

→ Semi-structured
interviews

→ Pen + paper
questionnaires

→ Salivary cortisol

Street A	Street B
Before	
Intervention	
After	Before
	Intervention
	After

Horticultural intervention





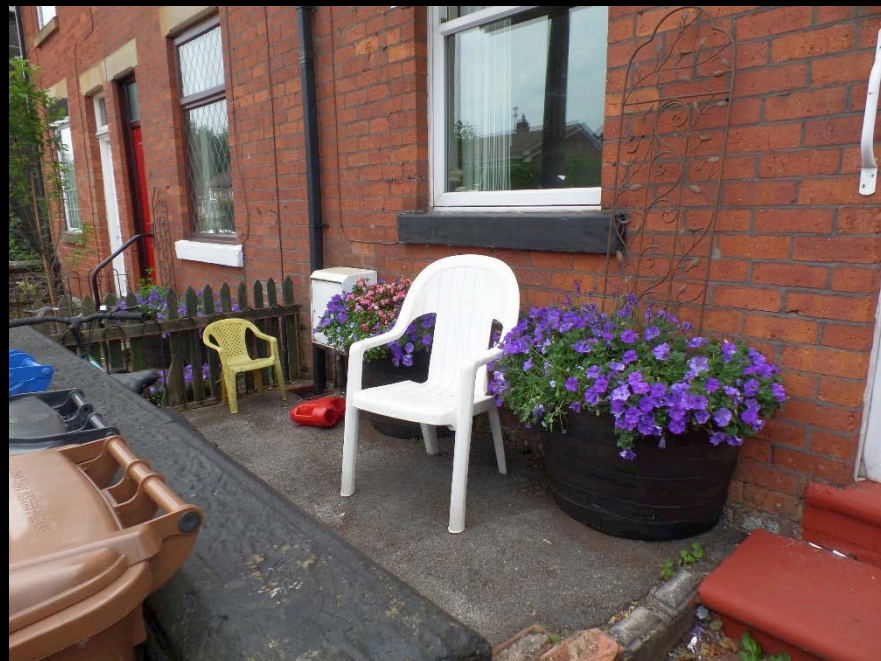
Before



After



Before



After



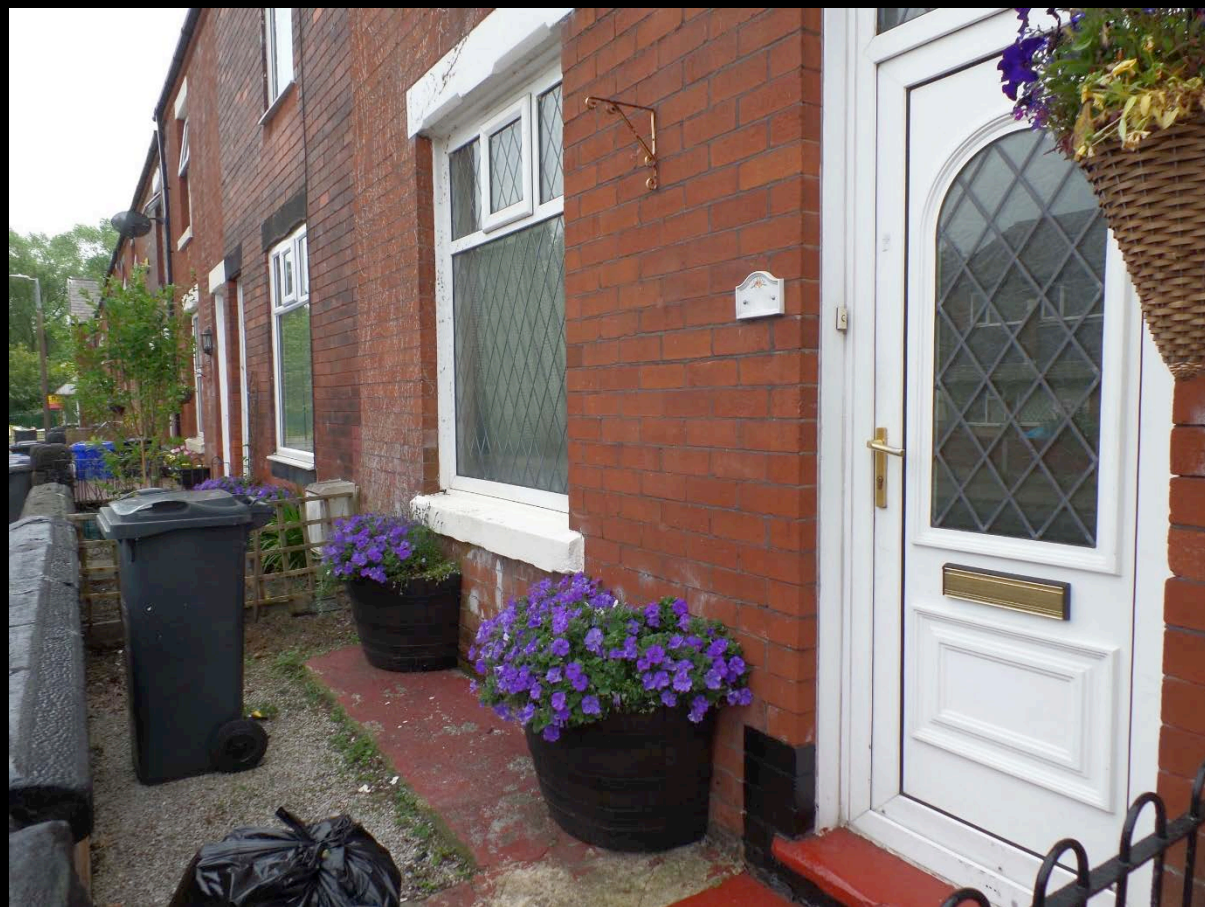
Before



After



Before



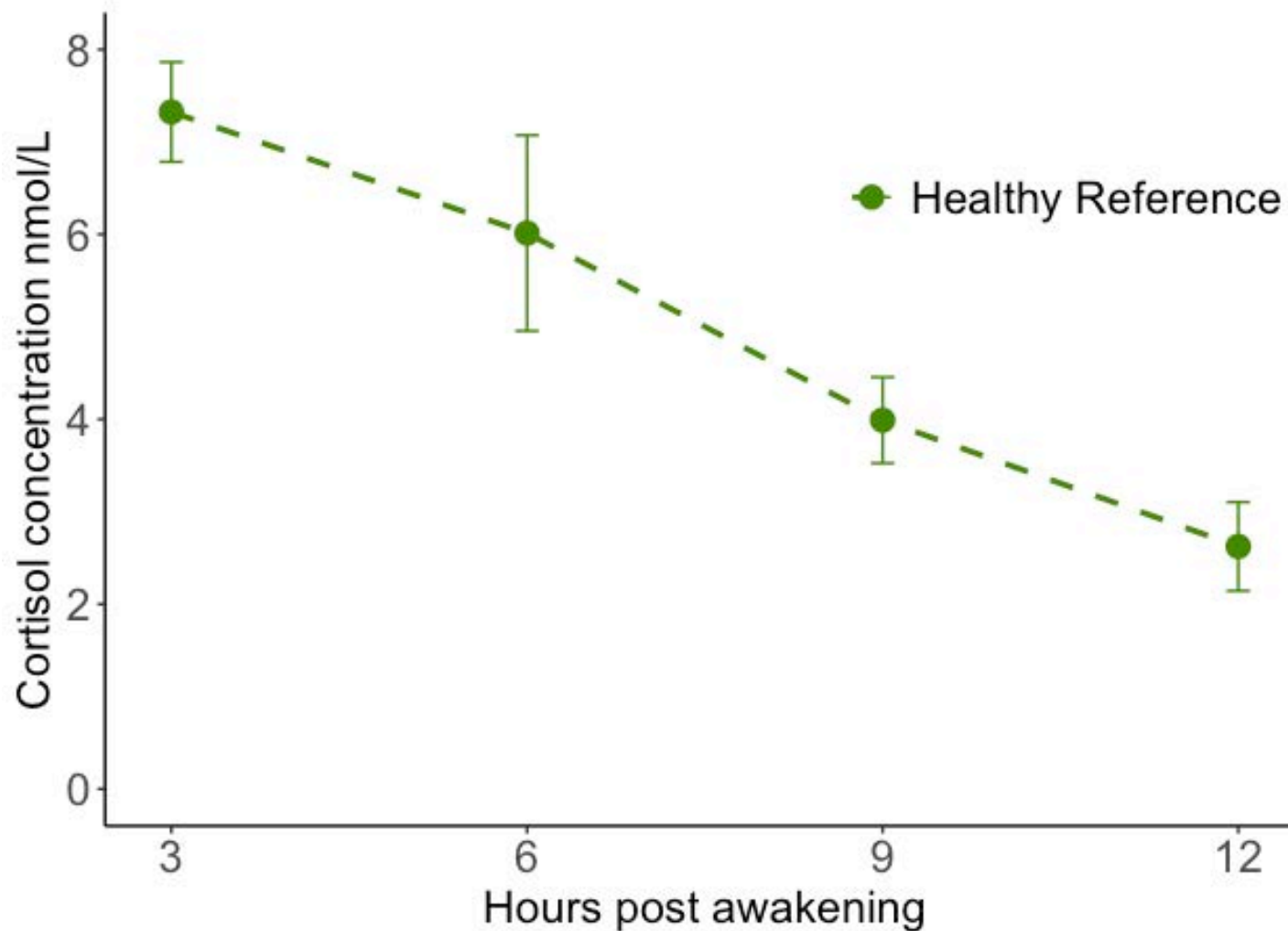
After



Before

After





Salivary cortisol concentrations (mean \pm standard error) pre- and post-intervention; $n = 12$. Laboratory reference data from comparable healthy participants included for illustrative purposes; $n=26$, 15 women and 11 men aged 48.6 ± 11.7 years; assayed by the University of Westminster Psychophysiology and Stress Research Group

A photograph of a brick wall with a window, a small tree, and two large planters with purple flowers. The text is overlaid on the image.

Motivation

Relaxing

Pride

Uplifting

**Potential for low-cost, small-scale,
urban green infrastructure to be
replicated elsewhere?**



Conclusions and implications

- Front gardens are important considerations
- Integrated thinking needed
- Limits to paving over front gardens
- Social case for more street-facing gardens and green spaces
- Equitable access to opportunity

Thank you

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