

Written evidence submitted by Dr Kirsten McEwan (TPW0061)

Tree planting and woodlands evidence

5) In relation to increasing forestry coverage in England, what should the Government be trying to achieve? For example, how should the following policy objectives be prioritised?

- Mitigating or adapting to climate change;
- Promoting biodiversity and nature recovery;
- Increasing biosecurity and plant health;
- Improving human well-being and health;
- Protecting natural and cultural heritage;
- Food security;
- Creating commercial opportunities from forestry, tourism and recreation; and
- Any other priorities?

The Government's priority of promoting biodiversity and nature recovery seems highest (for the below reasons), and could have spill-over effects onto the other priorities listed e.g. mitigating climate change, improving human wellbeing and health.

I have been conducting a programme of research into how green features of urban environments can benefit human health and wellbeing (Cameron et al., 2020; McEwan et al., 2019ab). Quantitative data from this research indicates that when residents are prompted to notice the good things about urban green spaces, this can produce a statistically and clinically significant improvement in health, wellbeing and nature connection during a one-week intervention. The intervention was trailed amongst the general public and a social prescribing group of patients who had approached their GP with a common mental health difficulty, and revealed wellbeing benefits in both groups. Consistent with previous studies (Wood et al., 2018), the research also found that greater actual and resident-perceived biodiversity was associated with greater improvements in wellbeing and place preference (Cameron et al., 2020). Qualitative data revealed that residents especially valued urban green and blue spaces, in particular trees and street trees.

In more recent research collaborating with The Forest Bathing Institute (Surrey), our research (McEwan et al., submitted) found that just 2 hours of Forest Bathing in semi-ancient woodland significantly improved self-reported wellbeing and physiological indicators of wellbeing (heart rate variability). This is consistent with a rapidly growing body of research which has shown the benefits of engaging with woodland on a range of health and wellbeing indicators (e.g. improved cardiovascular regulation-Kobayashi et al., 2018, blood pressure regulation-Ideno et al., 2017, immune system functioning and inflammation-Kobayashi et al., 2019; Li, 2010). The results were persuasive enough for Forest Bathing to be made available on social prescription by Guildford Council (who are now looking to extend this across Surrey).

Having access to and engaging with green spaces has been shown to reduce all-cause mortality (Villeneuve et al 2012) and reduce health inequalities (Hartig, 2008; Sugiyama et al., 2016). However,

to create maximum human and environmental benefit, and environmental resilience, these green spaces need to be biodiverse and relatively unmanaged. Based on the research findings of Simard (e.g. Ibarra et al., 2020; Beiler et al., 2010; Simard et al., 2004, 1997), natural processes such as self-setting and succession needs to be permitted for woodlands to reach semi-ancient status with healthy root and fungal networks in place and supporting mosses and lichens. Such semi-ancient natural woodland is currently lacking in the UK at around 2.4% (Woodland Trust, 2019). Research in Japan and Korea where Forest Bathing is part of widespread Government supported social prescribing, has shown that semi-ancient woodland which supports a wide range of biodiversity has the maximum benefits to human health and wellbeing (Li et al., 2010). Hence any intention to extend UK Forest cover is an extremely valuable endeavour, but needs to be conducted in such a way that a mix of tree species are present, and woodland is protected and allowed to reach older age with minimum management to maximise biodiversity, climate resilience and human wellbeing outcomes.

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