## A systematic review of older people's sensory engagement with the natural world

## Background

Being in the outdoor environment experiencing nature, plants and wildlife are said to have various physical, mental and social benefits for older people (Clark et al, 2013; Newton, 2007).

There is evidence that older people benefit from the restorative effects of nature (Ottosson & Grahn, 2005; Tang & Brown, 2005) and from the therapeutic effects of participating in nature-based interventions such as horticultural therapy and green care farms (Bragg et al, 2014; de Bruin et al, 2010; Milligan et al, 2004).

Through 'body work' (Gatrell, 2013), such interventions can produce health and wellbeing benefits which, as argued by Gatrell (2013), are not simply about the benefits of physical exercise but also about what is sensed (heard, seen, smelt, touched) when the body actively engages with the natural environment.

Since the older population is not homogeneous (Clark et al, 2013; Sugiyama & Ward Thompson, 2007), it seems likely that different groups within the older population will experience quite differently the 'bodily opportunities' and 'bodily constraints' (Macnaghten & Urry, 2000) that the natural environment provides. Different groups within the older population include those who live within the community and those who live in residential/nursing care; and older people who live with dementia, who can be still living independently with or without a formal diagnosis and those who need to have residential or specialist residential dementia care (Clark et al. 2013). Living well with dementia is a recent government priority (Banerjee, 2010) and arguably, being able to access and enjoy the outdoor natural environment should be part of what the 'good life' with dementia looks like (Rowe et al, 2015). There is emerging evidence that the natural environment contributes to stimulating the senses of older people with dementia (Whear et al, 2014) and increasing recognition of the importance of holistic engagement of the senses in garden design, horticultural therapies and green care farms for people living with dementia (de Bruin, 2010; Diaz Moore, 2007).

It is timely, therefore, to conduct a rigorous systematic review of the evidence about older people's descriptions and experiences of sensory engagement with the natural environment. Qualitative research will be used to capture the holistic sensory engagement with the natural environment as experienced by older people.