

Easing into nature with sight impairment

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A booklet for anyone whose
lives have been touched or
shaped by sight impairment
in some way, including
people with an eye condition,
close friends or family, and
anyone keen to consider sight
impairment within wider efforts
to promote more inclusive
nature experiences.



**SENSING
NATURE**
Visual impairment and the
natural environment

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Introduction

There is growing awareness across research, policy and practice that time spent with nature has the potential to promote varied aspects of health and wellbeing. For example, an appealing setting might invite physical activity and social interaction, or opportunities to experience a sense of peace, perspective and relief from everyday demands.

What 'nature' is and what it means to different people can vary according to the environments we grow up in, those we experience over time, and with the many stories that circulate about nature within different societies and across generations.

Nature can be experienced at many different levels; from a plant pot in the home, to feeling the elements outside, the plants, birdlife and other creatures in the garden, or venturing further afield to parks, woodlands, the coast, countryside and mountains.

While many of these encounters can be positive, nature also includes the overgrown hedgerows lining the pavements in summer, the slippery leaf fall in autumn, and the heavy snowfall or strong winds that disorientate through much of winter.

In this way, nature shifts and changes with the weather and seasons in ways that can be challenging for people who rely on detailed mental maps and predictable tactile or auditory way-marking cues to navigate.

Recognising these challenges, this booklet aims to highlight opportunities to unlock the wellbeing potential of nature amongst people living with sight impairment.

Such opportunities are increasingly important given our ageing populations, and the growing prevalence of underlying causes of sight loss, including diabetes. In the UK alone, the numbers of people with sight impairment are predicted to double to nearly four million by 2050.

This booklet is intended for anyone whose lives have been touched or shaped by sight impairment in some way, including people with an eye condition, close friends or family, and anyone keen to consider sight impairment within wider efforts to promote more inclusive nature experiences.

It draws on the findings of a two-year research project, "Sensing Nature", which has examined how people with varying forms and severities of sight impairment describe and experience a sense of wellbeing (or otherwise) with diverse types of nature during their lives.

Funded by the Economic and Social Research Council, the overall aim of Sensing Nature has been to improve the way we understand and enable more positive, inclusive multisensory nature experiences amongst people living with sight impairment, regardless of their life stage.



Plural lives with sight impairment

Life with sight impairment is far from homogenous. How people experience the world can vary with different eye conditions, circumstances of onset and all the other necessities of daily life.

Sight impairments can affect people's visual acuity (i.e. the ability to see fine detail) and/or visual field (i.e. how much of an environment the eyes can take in without moving).

People may be 'severely sight impaired', with very little (if any) functional sight, or 'sight impaired', with some useful vision that can vary in different environmental conditions. People use varied terms to describe their sight, although 'visually impaired' is often used as an umbrella term for people who are 'blind' or 'partially sighted'.

A wide range of eye conditions can compromise people's vision, be it at birth or later in life. Some of the more common conditions include:

1. **Age-related macular degeneration** – compromises the central field of vision. Although people will usually retain some peripheral vision, fine detail may be difficult.
2. **Glaucoma** – results in a significant reduction in peripheral vision through high pressure in the eye and damage to the optic nerve.
3. **Diabetic retinopathy** – a complication of diabetes that causes obstructive 'floaters' and blurred vision through irreversible damage to the retina.
4. **Cataracts** – the main cause of sight impairment globally, this causes blurred vision as the lens becomes increasingly cloudy over time.
5. **Retinitis pigmentosa** – a name given to a diverse group of inherited conditions, which can start with compromised vision in dim light and the dark, gradually causing loss of peripheral vision over time and leaving some people with tunnel vision or just light perception.

6. **Homonymous Hemianopia** – experiences of stroke or traumatic brain injury can cause complete loss of one side of the visual field.

It is important to remember that not all sight loss is caused by physical damage to the eye. **Cortical vision impairment** can occur following changes in the visual centres of the brain i.e. the eyes may function healthily but the brain is unable to interpret what is being seen.

People may have additional conditions to be aware of, such as **nystagmus** (an involuntary eye 'wobble' that can impact on people's balance), **corneal dystrophies** (when visual acuity is lost through damage to or a build-up of material that clouds the cornea), **hearing loss** (e.g. with conditions like Usher's Syndrome), **physical mobility constraints** (e.g. amongst people whose sight loss has occurred through head injuries with more wide-ranging impacts), or **learning difficulties** (at least one in 10 people with a learning disability have significant sight loss, particularly people with conditions such as Down's Syndrome and cerebral palsy).

People may also experience **Charles Bonnet Syndrome** with sight loss, causing the sudden onset of silent visual hallucinations. These can be disorientating and disturbing, causing even the most familiar places to become strange.

People who lose their sight are at increased risk of experiencing **isolation**, **anxiety** and **depression**; according to the RNIB, nearly half of people with sight impairment feel moderately or severely cut off from society. This stems in part from the challenges of adapting to life with sight loss and the sight-dominant qualities of our everyday environments. However, it is also influenced by detrimental social interactions shaped by unhelpful stereotypes of what it means to be sight impaired. Indeed, some people do

The Sensing Nature Study

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not feel directly 'impaired' by the ways in which they perceive the world, but rather by the tendency for society to devalue their modes of perception and experience.

It is important not to make assumptions about how people's conditions will affect their sight or the support they may need. Every individual is different and it is best to learn from them regarding their priorities and interests, recognising that these may change over time.

Through sharing the experiences of a range of people living with sight impairment, for example via the participant quotes included in this booklet, we aim to highlight opportunities for engaging with nature in pleasurable and meaningful ways for those who wish to do so. However, it is also important to recognise that nature is just one of many ways to connect with the world and may not resonate for everyone at all times.



The Sensing Nature project has been exploring how people with varying forms and severities of sight impairment describe and experience a sense of wellbeing (or otherwise) in diverse types of nature during their lives.

Conducted from February to December 2017, the Sensing Nature fieldwork comprised two overlapping research phases. Phase 1 involved volunteering with a range of activity groups around the country to build an initial awareness of people's diverse sensory worlds.

Phase 2 incorporated a series of in-depth interviews with 31 people in both rural and urban areas around the country, including:

- 15 men, 16 women;
- People aged from mid-20s to mid-80s;
- People living with a range of eye conditions – both congenital and acquired – and varying degrees of residual vision.

Of the 31 people who took part in Phase 2, everyone participated in an initial nature-themed interview. This examined what nature is to them, how they experience different types of nature during their everyday lives, how this has changed over time, and how they feel about existing efforts to facilitate inclusive multisensory nature encounters, based on their experiences both within the UK and beyond.

Twenty-five of the 31 participants took part in a second 'go-along' interview within a setting they valued for promoting access to nature. These in situ interviews offered subtle insights into the strategies used to negotiate varied forms of nature. Settings included participant gardens, local residential road/path networks, urban parks, woodland, coastal and countryside areas.

The Sensing Nature findings have important implications for how we understand, enable and promote more positive, multisensory nature experiences. As noted by one of our participants:

"I think nature has become more important to me in some ways, now that I find it harder to get to it ... because it's unnecessary that it's harder to get to, so it feels like an unnecessary separation. And an unfair separation...

It's like, it should be more important to get us out into the wilderness because we know that it's beneficial for health and happiness. So it should be more important that we get there, and yet you know that it's not. And that is really frustrating, because I know that I will feel better when I get outside. But it's just difficult to get outside, sometimes".

Recognising the importance of promoting more inclusive opportunities to experience nature – be it 'the wilderness' or nature closer to home – this booklet aims to highlight opportunities for easing some of those difficulties and bridging the unnecessary separation from nature that people may encounter with sight impairment.

After exploring how nature can contribute to people's sense of wellbeing with sight impairment, we highlight potential avenues for promoting and raising awareness of such opportunities, while resisting counterproductive stereotypes of life with sight impairment.

Where further resources are pointed to in the text, relevant links to these resources are provided in the final pages of this booklet.

If you would like to learn more about the Sensing Nature project, do visit www.sensing-nature.com or contact the Lead Researcher, Dr Sarah Bell: Sarah.Bell@exeter.ac.uk.



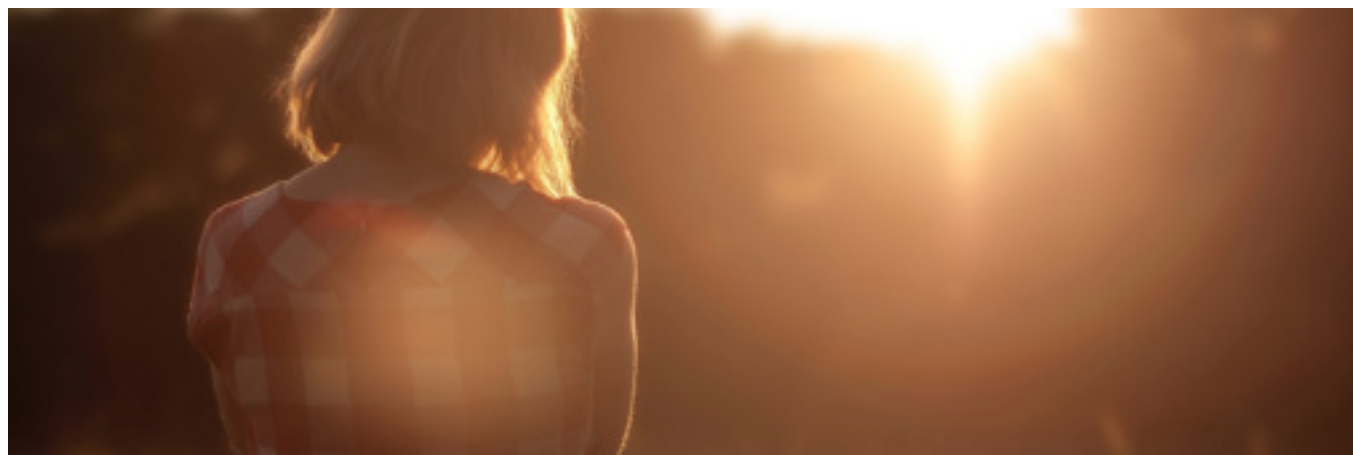
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Wellbeing with nature with sight impairment

According to the RNIB, 40% of people living with sight impairment in the UK report feeling cut off from the people and things around them. Participants in the Sensing Nature project have highlighted several ways in which interactions with nature can provide valuable opportunities to forge meaningful connections with the world, helping to counter feelings of isolation, resist unhelpful social stereotypes and nurture a sense of freedom.

Participants described the enlivening influence of nearby nature, be it feeling the breeze, the sun's warmth, or gaining a different sense of space, light and air movement.

"It's life giving really, to me, nature. It's an awareness of the space that I can find myself in, and when I go outside, I'm aware of light, which I'm not always aware of inside. I'm aware of, just the air and the sounds, the natural sounds around, which are very special. And when you can't see anything, the smallest sounds, especially if they're birdsongs, are very, very special... I think if I don't get out or involved with it, I feel very drab, very dull, very flat."



Many gained a sense of comfort and reciprocal care from nature, from the soothing sensations of a gentle breeze to the companionship of trees and birds.

"You can be touched by nature, even in a physical way... There was a woman that I worked with who had long-standing mental health issues. And I could totally relate to what she was saying because I experienced it myself as well. She used to like to feel the breeze and gentle rain, because it's almost like, it's like being touched but it's non-threatening. And so you know it's not going to hurt you, but it is a touch. So if a human touch might be threatening, or has been abusive and that sort of thing, being touched by nature, you know, grasses, the breeze, gentle rain, it's all very sort of accepting. I mean obviously it's all relative. If it was hurricane force wind and torrential rain, it might be a different thing".

One participant described the local resident birdlife as his "extended local family", explaining that "the little robins welcome me in the morning, and then the blackbird follows me in".

Given over a third of people with sight impairment in the UK report experiencing negative attitudes from the general public (RNIB, 2015), it is perhaps not surprising that some people find comfort in these gentle interactions with nature rather than more complicated human encounters.

Participants also touched on valued opportunities to experience a sense of awe or perspective with nature, particularly through bird song, trees, and the different qualities of air or sound that unfold in areas that are often otherwise valued for scenic views.

"When you hear the bird song, especially in March/April, and they're singing in the woodland, it's a wonderful feeling because, I don't know why, but the wood echoes and it's like being in a cathedral. You hear the birds singing and all this echoing, it's a most amazing sound... it's the most beautiful sound".

"There's a particular group of beech trees on a corner in the park, and it's just the configuration of them, the way that they stand there. They're like sentinels, and it's like they welcome you in ... There's something about them that I really respect... It's that sense they've taken so long to grow, and their roots go so deep, and they reach so high ... And I love the way they burst into such vibrant new growth. However old they are, that new growth is just so green and fresh and lovely, every year. I can get quite emotional about trees ... I think it probably started when we were very little. I used to love to climb them. I used to get told off for climbing them. But, yes, I used to like to climb them in the orchard, the apple trees were easy to climb. And I loved getting up into them and hiding away ... Trees were like friends. They sheltered you and they supported you".



With the challenges and anxieties often associated with negotiating everyday environments with sight impairment, many participants valued moments of relative freedom within less crowded, relatively accessible nature settings where they felt able to reassert a sense of independence in their day-to-day lives.

"Sometimes, if I have been too sedentary and I've been at home too much, too long, I just long to get out and actually swing along in it. I can get quite frustrated with being in too much. And, well you'll appreciate that where I live, it's very closed in by houses and the garden is very small. And you can feel quite claustrophobic. And even though I can't actually see that much of it, I am just very aware of the presence of buildings. And when I get like that, I really want to get up high and I want to be swinging along and moving. If I'm troubled, I think if I've got anxieties and things that are really pressing in on me, I like to get up high, and get some perspective, just to sort of, I suppose get a better sense of the smallness of my troubles, in relation to the bigness of the world. I think if I'm relatively at peace with myself, I am content to just sit and be. And just let nature come to me, really, rather than me having to go out and embrace it".





“For me, the wonderful thing about nature is when I can step to a place where I can be free in my body and be quiet, but just with different noise, with natural – well I say ‘natural’ noise, but you know – birdsong, trees, being able to hear the sound of a river nearby, different smells, it kind of makes me straighten up and feel less vulnerable, funnily enough... whereas, the kind of concrete and scaffolding and crowds and cars, lorries going past, people revving, all that tension, people, you know, emotional tension as well, people yelling at their kids, or calling out after each other or car doors slamming... it’s very wearing... so just to have a time when you can just be physical, walking, but really free in the body, to not to have that constant anxiety about what’s going to happen next”.

A role for nature while adjusting to sight loss

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For people living with progressive eye conditions, or those adapting to sight loss later in life, it might take some time to work out how, if at all, different types of nature can play a role in maintaining a sense of wellbeing. This may be closely entangled with the, often painful, process of coming to accept the onset or progression of sight impairment. For some people, nature may not feature at that stage.

Any advice I would give to anybody would be to sit, take stock and listen. And listen to yourselves. Because a lot of people don’t. They’re so busy worrying about what other people think of them ... And they are busy fighting it. You know, ‘this isn’t going to beat me’. It will. Whether you like it or not, a deterioration is going to take place. And that’s what I mean by listen to yourself, as well as what’s happening around you”.

“I’ve had to adapt how I get around nature. I can’t go down the rough ground, and I use the cane sometimes to get around. Now and again, I’ll use my phone to zoom in places to see what’s there ... so it’s just having to adapt ... there’s three A’s - you need to accept your sight loss ... you need to accept what’s happening which, sometimes it can take six weeks, sometimes it can take six years. I didn’t possibly fully accept it until last year, because I was too embarrassed to walk round with the white cane at such a young age. Once I’d done my white cane training, and started using the technology in public, that was me fully accepting it then. You need to adjust too... adjust in any way you can and, once you’ve done those two, you can hopefully get out and start achieving things. Whether that be a walk down to the local shop... or some of the things I’ve done ... everyone’s goals are going to be different. It’s not the size of the goal, it’s the size of the goal to the individual”.

That process of acceptance, adjustment and achievement is unlikely to be linear. There may be times when confidence falters or opportunities shift, for example with fluctuations in a progressive sight condition, with changes in public transport provision, with the shorter hours of daylight and greater slip hazards of ice and heavy rain in winter, or when domestic situations, life circumstances or routines change.

“Ironically, the main school of thought would be, ‘if you go out it’ll make you better’. But, and I don’t mind saying this, unfortunately, I’ve been diagnosed with OCD and anxiety and depression. So, going out can actually trigger those things, as well ... So I would say I have to grab when I feel up to it and then I go out ... Being in the fresh air, though, if I’m feeling okay in myself, I do find the fresh air’s quite helpful, it clears my head a bit. It doesn’t necessarily make the anxiety go away, but it’ll really make my head feel good sometimes ... I had quite a lot of bereavements at one time, since I came here. Five or six of them, unexpectedly ... and then I had an accident as well... and so there’s my paradox, that I don’t always go out as much as I should do, for that reason, basically ... And so as I said, the school of thought is that going out always helps. But it depends, really, how you are at the time”.

At times when getting outside feels more difficult, participants highlighted the importance of creativity (e.g. writing, poetry, visualisation) and technology (e.g. listening to classical music inspired by nature, radio programmes, birder podcasts etc.) as interim strategies for sustaining a sense of nature connection.

“There was the imagery when I had to lay face down for seven days with this gas bubble in my eye, to keep my retina flat. And I really did think I was going to go completely mad. But then I suddenly thought about doing poetry... and that was my saviour, really... and when I was doing this imagery, I was shutting my eyes, and I was going through the gas bubble, and I was going down into the sea, and then I was swimming. And I suddenly realised my breathing had changed to my breathing when I swim. So I really was there, swimming. And I could sort of feel my arms and my legs were moving and, well, they weren’t, but in my mind they were... So that was good. So I, perhaps, need to practice some more imagery”.

“I was listening to Claire Balding’s ramblings in Alderney, I’ve never been to Alderney... And she described it, and she was going through these paths with all these wild brambles and vegetation. Ooooooh and it just felt like slipping an overcoat round me while I was listening. I just wanted to be there. She described it so well, and I thought, ‘I could just be there and I’d be enveloped in all this’”.

“Don’t focus on what you haven’t got, and you can’t do. Focus on what you have got and you can do. So you can listen, and you can sense, and you can smell, and you can touch. So, if somebody loved the sound of running water, or birdsong, or rain, and that sort of thing, get some audio CDs ... use visualisation. If they had sight before, okay it might be painful, but they’ll have all those visual memories, so while they’re listening, visualise. And use all your senses ... So, if you visualise being somewhere, then make it a multisensory experience. You know, if you’re visualising walking along a grassy path, maybe into a forest clearing, or something. What can you feel? What can you see, hear, touch? What do you sense? What do you smell? Really make it multisensory”.



Unlocking the wellbeing potential of 'doorstep' nature

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Most of our everyday environments are, unfortunately, designed and managed by people who are fully sighted. Learning to navigate those safely without a full visual interaction can be daunting, whether born with sight impairment or it develops later in life. Doing so often requires new ways of tuning into, reading and moving with the world.

We discuss varied ways of unlocking the wellbeing potential of nature here, from the initial stages of building familiarity with nature on the doorstep, to cultivating skills and confidence to venture further afield.



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Easing into nature: an incremental process

Many participants highlighted the importance of building confidence and skills to engage (or, for some, to re-engage) with nature incrementally.

“Your depth perception, where it goes fuzzy, is often first to go. So I mean, it’s bad enough to find the kerb edge, and that’s only a drop, whereas unknown countryside and pitfalls etc – therefore nature was something that you just thought was going to be an area you wouldn’t be able to go to anymore. So that was a kind of bereavement, of losing nature. Until you realise, actually there’s nature all around us ... So it’s something you can still experience, in a different way ... And it might be, all you need to do is tend some plant pots on your windowsill, as opposed to saying, ‘I need to climb Mount Everest’. And if you can imagine all the variations between a plant pot and Mount Everest, you will find something that you want to do and like and enjoy and get fulfilment from”.

“You just do a little bit at a time ... go little and often, even if you only spend ten minutes somewhere, that’s a start. And then keep going back and you get a bit more confidence up each time you go. And try and get a bit tactile about it and sort of feel where you are, and what’s around you, if you have somebody with you to help ... you can’t expect to understand everything that’s going on, straightaway. But you sort of pick things up”.

Many participants highlighted the value of starting with nature on the doorstep, be it within the safety and relative privacy of a garden, or simply by potting indoor plants or outdoor hanging baskets.



“Going into the garden and just touching and feeling the plants ... I’ve got lots of pots. So every day I like to go out and just feel, sniff... And if you’re feeling a bit down, you go and feel at your plants, and it’s fantastic. Especially when it’s wintertime and the first snowdrop’s popping up”.

“We bought a couple of hanging baskets ... And we bought some nice flowers, some trail-ey ones and some tall ones ... We bought some little crystals that would hold the water so they would survive a bit in the hot sun ... and I arranged the three pots according to height. And I tried to position them. I took them each out of their pot, and then got some soil and sort of felt round all of them, and filled in all the holes. And put in the crystal things ... And I was really pleased. I couldn’t see any of it, but I could feel it, and I felt all around and pushed them in as hard as I could go, got very dirty! ... But I so enjoyed it, it was wonderful. And they’ve gone on all through the summer... So that was a great thrill, because I didn’t think I’d ever do that again”.

Participants shared various tips for gardening, many of which are also included in a series of online resources produced by the horticultural charity, “Thrive”, in collaboration with the RNIB. Thrive helps to build skills and confidence amongst people who would like to take part in gardening, be it at home, on an allotment or in community settings.



Thrive's resources for gardening with sight impairment include ideas about how to arrange and design a garden that moves beyond sight to stimulate multiple senses. Their website features useful advice about how to get started as a new gardener, and how to carry on gardening using tried-and-tested gardening equipment and tools (e.g. sound beacons, right-angle guides, light-weight gardening gloves etc.). They also describe tips for digging, weeding, mowing, pruning, hedge trimming, sweeping, raking, watering, sowing and labelling seeds, planting and using containers to provide flexible and manageable growing spaces.

"Roses have the shoots coming out – so I'll want a little bud that's facing outwards. So whereas before I would have just looked down and seen it and cut, now I sort of run my hand along the stem, and can feel it, and then cut it, and do it by feeling".

"I'm a bit of a pot person ... I have seventy-five pots ... And people say I've got an obsession. And I acknowledge I have. But it also means I've got a sense of control because they're mine, and I know what the plants are. The garden borders tend to be a bit of an unknown, unless there's a big plant in it, there be dragons, it's foreign territory! Plus the fact it's low down, so I can't easily act on it. But at least in a pot, I know, 'Right, there's the main plant I put in, hang on, there's something else in there, that's a weed. I can therefore pull it out'".

Thrive's website also offers various suggestions about how to set up an inclusive local gardening club for those interested in doing so.



In addition to nearby plant life, participants highlighted the value of tuning into local bird song, often using bird feeders and careful planting to encourage birds to visit. Some people liked to be able to decipher different birds from their songs and calls, while others just found their presence uplifting, comforting and inspiring.

"We plant things that have red berries, orange and yellow. And the birds sit on the red and eat them. But the others, they're waiting for them to change. So as the winter goes on and they have a greater need for food, then they'll eat those. If you only have red ones, they all disappear early on, and you haven't got the ones later... And, you see, you can hear the amount of birds that are around and about now".

"You're listening to all the background noise which nature provides. And with the little bit of vision I've got left, we have a display out there of various birds and we do like to see the unusual ones coming in. We have the run of the mill regulars too, everything from wrens up to pigeons and crows ... They say when your eyesight goes, your other senses improve, they don't. You use them more to listen to what's happening around you, so you end up hearing the things that you never bothered to hear before. And they rise in importance ... the two main ones are touch and hearing.

The hearing, to me, is enhanced by the background noise ... you'll be walking down through the woods, you'll hear the birds in the background ... and it fills that sort of, space where there'd be nothing. Not that you have to fill it, but it's nice to have something to fall back on ... It's a therapy, and a total distraction".

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Refining multisensory awareness and mobility skills

Many participants emphasised the importance of learning to use your other senses more effectively. This counters the common misperception of automatic compensatory 'super-sense' development with sight impairment. Multisensory awareness was something to work at, developing alternative ways of tuning into, navigating and deriving pleasure and meaning from different environments.

"Just because you can't see very well, it doesn't mean that your powers of observation aren't there. And just because you can see very well, doesn't mean that you're very observant... You can be steeped in something and not really notice it ... So I think an awful lot of it has to do with me, and the space that I'm in. If I'm preoccupied, if I'm not paying attention, not being mindful, then I miss out an awful lot".

Several participants described this process of learning to use their senses in different ways, sometimes drawing on existing botanical or biological knowledge, and finding new points of reference for identifying and relating to different plants and animals, be it via scent, touch or sound.

"I can recognise things by touch ... the others ask me, 'What plant's this?' So I ask for a leaf. And it depends on what it is, but you can tell by the texture of the leaf, the feel of the stem... And most flowers have a distinctive aroma. So you just use those senses more".

"I've always been animal mad, and if I can be amongst animals, and better still if I can actually touch the animals, I love all that stuff as well ... I think just handling an animal and touching it, it just makes you feel better ... But I also appreciate, that obviously when you're talking about certain kinds of animals, it's going to be very difficult to actually touch them... When we went to a wildlife park near here, there's an enclosure they've got lemurs in. And the lemurs were incredibly noisy and chattery, which was still brilliant for a sensory experience".

Using the senses differently was highlighted as essential for moving through nature safely and comfortably, with many participants emphasising the importance of learning to read the environment through sound and via long cane training.

"There are mobility experts throughout the country that give you long cane training ... It's a whole science and skill on its own. So, you know, you can't really go exploring the countryside without a long cane, on your own. And you have to be very proficient in using it. So my first advice would be to learn to use the long cane ... And I often compare it to driving lessons ... You're sort of scared stiff to leave your front door, and you're waving your cane about. And then you get taught how to hold it properly ... And you maybe go out, initially once a week. And then it can be up to three times a week, for half an hour at a time. And then, like with driving, you've got to build up the confidence of the person".

“Talking to other blind people, you’ve probably got a sense of the use of sound as a navigating, or structuring sense. So when I go into a room, I’ll pretty immediately have a kind of impression of how big it is, how high it is, some things about internal furnishings or that sort of stuff ... Not pinpoint accuracy but quite a lot of information ... And when you’re outside, that obviously expands ... So, if I’m outside here, I can hear the wind stirring the trees at the top of the garden and approaching down the garden. And from that sort of data, you can construct quite a lot of information about the nature of things around you. But it’s variable ... and if it’s very windy, that messes up your navigation system, so it’s a blind person’s equivalent to fog really.”

Other participants valued the support and connection experienced with the companionship of a guide dog. However, participants also emphasised the level of care that such relationships require, and the challenge of maintaining a sense of independence in periods between guide dogs.

“Having the guide dog helps me enjoy nature because you can walk through the space and you’re not having to pay attention to obstacles and things. So you can have your head up and you can be trying to look up into the tops of trees or, you can just be relaxing a bit... So, the dog is part of enabling me to enjoy being out and being in those environments”

“When we moved here I connected with the guide dog community. And they knew all these walks around... And again this is kind of, to do with nature in a way because dogs bring nature in and there’s a part of them that is also very elemental ... There’s that energy, you know, how animals respond to each other and how, at an atomic level, we exchange atoms. So living with her 24/7, all the time, I think I exchanged dog with her, and she exchanged human with me”.

“I had a period when one of my previous guide dogs died very suddenly and I was without a dog. And I got another one quite quickly but he didn’t work out. He went back. So I had a two-year gap, ultimately, and I wasn’t going out and about as much. And it did affect my mood. I got into a low mood, and I thought, ‘Right, I’m going to have to do something about this’. And where I used to live, there was an old wagon way for the mines and it’s just a straight path now. And if I walked from my house up there for a bit, and came back, briskly, with my cane, I knew that was a half-hour walk. So basically I said I would try and do that at least five times a week. And that did help me, I did feel better ... We know with sight loss, you are at higher risk of low mood and depression. And I don’t think it’s surprising, there are many factors towards that. So I think you’ve got to understand what works for you to keep yourself fit and healthy and sort of feeling well”.



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Encountering nature further afield

Underpinning people's nature encounters with sight impairment lies a balance between independent, supported and shared experiences, and this balance can shift over time. Unlocking the wellbeing potential of nature further afield depends on people's individual skills and resources, but also the physical fabric of different nature settings and the abilities of people and professionals in situ to open up genuine opportunities for immersive and inspiring multisensory encounters.

"I suppose it's looking at the idea of, either going around these places with someone that's guiding you – that would be one set of resources, to help you get the best out of that experience. And then, the other one is going around them on your own, and what resources are needed there, either from the environment itself, or that you bring, yourself, to the environment. Because it's very easy to explore with someone, or easier, but then again, you don't necessarily know what you're missing and you don't want the person you're with spending all day explaining things to you... So if there's something that would assist the person that you're with, so that they don't have to describe so much, then that's going to help, isn't it?"

Here we highlight resources that can enhance opportunities to experience a sense of wellbeing with nature in situ, in terms of the physical layout of different settings, useful tools and equipment, and the importance of appropriate support when exploring somewhere new.

Inclusive design: designing with sight impairment in mind

7a.

At the heart of sustainable, socially cohesive communities lies a commitment to equality and inclusion, and a respect for the varied ways in which people come to live and move through the world. With growing awareness of the health and wellbeing benefits of time spent with nature, it is important that this commitment extends to the inclusive design and management of our everyday nature settings, from street trees to urban parks, gardens, woodlands and trails.

Too often we are preoccupied with the visual aesthetic of a place, and fail to notice more subtle, yet valuable opportunities to appeal to the wider senses. By designing with sight impairment in mind, we can nurture more immersive, multisensory nature experiences, and better cater for the needs and priorities of people who engage with the world in more than visual ways.

In collaboration with the Sensory Trust, Sensing Nature has produced a separate 'Inclusive Design' guide to discuss this in more detail. The guide shares ten top tips for promoting access with dignity and ensuring people with sight impairment feel welcome and supported. Some key points from the guide are shared here in summary form.

A common solution to promoting inclusive access to nature is to designate specific areas of a nature setting as a 'sensory garden' or 'sensory trail' (with many resources for doing so available online). These seek to concentrate a diversity of sensory experiences into a designated area. Such efforts can be of great value to people with limited mobility.

"I think it's lovely if, if people don't expect too much, you know, it's lovely just to be able to sit in my wheelchair, sometimes, and just relax, and enjoy the pleasure of relaxing in the countryside".

However, there was also a strong sense amongst our participants that people should be focusing on sensory design more broadly, enabling sensory journeys that unlock access to the full range of sensory pleasures available within urban parks, gardens, woodlands and the countryside.

"I've a slight pet hate for sensory gardens... because I think, by their nature, gardens are multisensory. So I don't really see a need to try and, in a way, artificially create that because that is really what environments and landscapes and gardens are. Whether it's designed and created in a more structured way or more free form, you should find all of that... There's a lot that you can be aware of, whether that is visually or by the sounds, or by the microclimate, or just the freshness of the air, or the soft cushion of pine needles that might be under your feet. It's the combination of all of those things that you're taking in".

As noted by several participants, the sense that can be overlooked when designing sensory gardens is the kinaesthetic sense; the opportunity to move, and to move freely and safely through a range of nature's habitats.

"It's being able to move that I think is most enriching, and being able to move safely... One of the things that I like about the park near here is, it's got a number of different types of environments. And I think that's what needs to be considered. So you've got somewhere that is cool and dark and damp. But you've also got somewhere that is high and light and airy, and somewhere where you can hear water, but also somewhere where you've got really lofty trees. So it's variety really".

Nature settings with clear and manageable boundaries – such as parklands and woodlands – offer a valuable opportunity to promote such freedom of movement through sensitive user-informed design and management. The presence of legible path networks and appropriate interpretation materials are particularly important across wide, open spaces that otherwise provide few landmarks for orientation.

"The trouble is, when you're somewhere that's vast or open, you can't actually appreciate it as a whole, and where everything is in relation to each other. So, when you have a model of something, it gives you an appreciation of what it actually looks like... a sense of scale and dimension".

"Launching out into invisible space, which is what it feels like, it takes more courage than I've got ... you launch yourself out into that space but you don't know quite where you're going to fetch up... which is why the park is so good because it is confined. It's space, but it's within safe confines".

Path surface materials should contrast with those of the surroundings to provide clear tactile information underfoot. Whilst this can sometimes happen naturally through repeated use over time, it will be more durable through the use of carefully chosen path materials, and can be enhanced with the inclusion of appropriate path edging.

"Changes in what you're walking on make a big difference, whether that's naturally occurring or manmade. So, for instance, on parts of the South Downs Way where it's – I don't technically know what it is – but almost like compressed stone or gravel. That's really great because, to be honest, I can switch off at a certain level, as long as my feet are on that surface. Either side is grass ... and if you know your route, you know what you're expecting to transition to, that helps you moderate what your footing is. So I think, what's under your feet always is telling you something".

“One of the biggest contributors to being able to enjoy a habitat is actually feeling secure within that habitat. So, an example of it is where you’ve got paths that have been made from adapted tramways or disused railways, where typically, I mean, quite a lot of those are sort of wheelchair accessible. And so you can actually relax, you can put one foot in front of the other, and you can appreciate the landscape and all that sort of thing. And that can be a huge relief. The problem with that is, though, that quite often such developments – I mean they’re really good at improving access – but sometimes they can be very short”.



A key challenge to inclusive design is the tendency to conflate the needs and priorities of people with sensory impairment with those of wheelchair users. Whilst people with sight impairment may also use a wheelchair due to other mobility constraints, this is not always the case.

Contrary to typical ‘accessible’ trails, it is important to recognise that many people with sight impairment will appreciate varied topography, providing access to different microclimates, soundscapes and navigation clues. However, steeper gradients should still be signposted (using accessible signage) for people with additional mobility needs.

“The sound of running water in streams is quite an interesting thing. With water, usually the sounds and smells of water are very soothing. If they’re loud, then that can be a slight disruption to navigation. But, broadly speaking, I enjoy interactions with water. And also with hills, and I think with that, partly it’s freshness of air and the way that you tend to get bigger vistas than when it’s flat. I mean I know, visually, flat landscapes you get big skies, and all that sort of thing. But that’s less obvious to me. Whereas if I’m standing at the top of a hill, then it gives me, usually, more of an impression of the surrounding countryside than if I’m at the bottom... when you’re up you’ve got a bigger perspective and that’s true for both vision and sound”.

“I’m getting older now so going uphill is getting more of a problem. On the other hand, I get bored if the walks aren’t at all challenging, and they’re all just flat. We went round a park the other day, and it was all laid paths. But it wasn’t a challenging walk. So I do like some hills... I still like a few challenges in my life”.



Any efforts to promote more inclusive nature encounters need to go beyond promoting basic access to enhancing quality of experience. By collaborating with people with sight impairment while designing or redesigning a site, they can have a direct role in identifying potential areas of sensory interest, be it sites of invigoration, creativity and pleasure, or nooks of peace and comfort. This may be considered during accompanied walks or through more focused activities such as adapted sound mapping, smell walks or tactile nature palettes.

Assistive tools and equipment

7_{b.}

Sensing Nature participants made several suggestions about tools or techniques that can help in negotiating more challenging nature encounters or situations.

These included: using a long cane or telescopic walking poles to enhance stability and give depth perception clues; visors or caps to deflect bright light and give extra warning of upcoming branches; eye shields and sunglasses with photochromic lenses that get darker as it gets brighter outside (wearing glasses with foam padding may also help to reduce soreness amongst people with dry eyes or corneal conditions in windy conditions); wellies/walking boots to minimise the discomfort of walking through deep puddles or mud; wearing gloves when the likelihood of encountering nettles, brambles and gorse is high (with one person also carrying antihistamines as a contingency measure); and even using string to negotiate the back garden in times of snowfall.

“Having been a long time serious walker, fell walking in this country, my pal and I who have walked together for almost fifty years, every year – as my sight gradually deteriorated and I was having difficulty following him, we moved through a whole series of ideas – of brightly coloured ribbons... a flashing lamp on the back of his rucksack... a rope between us... holding on to the elbow... which gave me the opportunity to get out but I’d lost my own independence. Then he came across a book by Erik Weihenmayer... and in that, he did mention the fact that he followed bells by the person who was leading in front of him... So we’ve had to experiment with cat bells and jingle bells and all sorts of things. But actually we have now developed a method, which we’ve used successfully in lots of long distance walks... and I’ve got two trekking poles so that I’ve always got three points of contact with the ground. So I know that I’m safe, that the trekking poles are swinging and going ahead of me”



Participants also valued **smartphones** (often carrying a back-up battery pack), using GPS technology to retain a general sense of location, although the full benefits of this technology remain somewhat limited to settings with clearly defined path and road networks.

Participants with some sight used the phone's camera zoom to magnify features of interest, and many discussed the use of **mobile applications** for object recognition. Participants also suggested value in developing applications that could assist in identifying nature through sound or touch e.g. to recognise birds from their calls/songs (such as 'ChirpOMatic' or 'Warblr'), or plants from audio descriptions of their tactile qualities.



7c.

Finding appropriate support to negotiate nature further afield

Inclusive design and specific equipment/tools can help people to explore more managed forms of nearby nature but may be insufficient or inappropriate when seeking to explore nature further afield, including 'wilder' nature.

Many of our participants highlighted the sense of pleasure, freedom and fascination of exploring new terrains – or known terrains but in different ways – for example, via horse riding, sea swimming, sailing, kayaking, caving and climbing.

“The thing is that quite a lot of the skill in sailing isn’t necessarily to do with what you can see. Quite a lot of it’s what you can hear, and what you can feel, and so on. So it’s an absolutely amazing thing. Really, really empowering, and it really does get you out there and in the water, the wind and the weather and the skies”.

“I love the feel of being on the horse, I feel a lot of freedom out of it ... I love being round the horses and stroking them and grooming them ... also the places have to be calm, because the horses have to be kept calm. So it’s a bit like a different world, because you don’t have people rushing around ... It’s just really relaxed, because it has to be for the horses”.



“When I’m out in the sea, it really is just the freedom it gives to me. On the land, I have to watch I don’t trip, I don’t walk into something, I can’t tell when a step’s a step easily, so I’m hesitant, I probably bend over more, in an effort to try and see. Whereas when I’m out in the sea, I just walk in, I know there’ll be nobody in my way like there would be in a swimming pool ... it’s just the freedom there really, that I don’t have to worry, as long as I swim parallel to the shore and I make sure I can still touch the bottom... It’s like floating in the air to me ... And at the end of the swim, I lie like a star with my arms and my legs out, and I float on my back. And it’s as if something is just holding you up by threads. And the sea, I mean this is obviously on fairly calm days, but the sea just lifts you up and drops you back, and lifts you up and drops you back. And that is quite a magical feeling, it really is.... very enlivening and uplifting, de-stressing and just beautiful, just really, really beautiful”.



Notably, however, these 'wilder' or more unpredictable environments and encounters did not appeal to everyone. One participant, for example, explained her fear of swimming in the sea after a childhood incident in a dinghy where she ended up too far from the shoreline to hear her 'life sounds' from the beach. As she explained:

"I know you can see for miles, but the sounds from the beach, they disappeared. So my world had gone, and I was terrified because I could have been in the middle of the Atlantic. I knew I wasn't, but I could have been because I had nothing to go by. No sounds, no reference points, they'd all gone".

Learning the skills and building the confidence needed to anticipate, negotiate and manage risk is largely dependent on the availability of appropriate assistance. For some people, support came in the form of walking groups tailored to the needs and priorities of people with sight impairment. As one participant explained:

"It's only since I've been walking with the walking group, I've got into nature. So seventeen years ago, the earliest memory was just really enjoying it. We went through woods and fields, and meeting other people who are visually impaired, and just not being as isolated... And since that day I was hooked, really".

However, other participants raised concerns about being 'lumped together' by virtue of sight impairment, explaining that everyone does things differently. Some wondered whether the experience of being in a group would detract from the aspects of nature that they enjoy most, the opportunities to experience stillness and peace.

"I suppose I tend to naturally stay away from group activities where everybody's got a visual impairment because it's sort of lumping everybody together... And I think one of the things I like to do, is work towards independence, really. So I don't know if there are any group walks with the right sort of forward-thinking attitude. Or is it just, 'Let's get this blind person through this'".

Participants living in rural areas also highlighted the challenge of initiating or getting to any kind of specialist group given the relatively low numbers of people living with sight impairment in such dispersed areas.

Recognising the importance of tailored support in both specialist and mainstream activity groups, Sensing Nature has produced a separate set of guidance for people involved in walking groups (e.g. Walking for Health, the Ramblers). This guidance provides tips for welcoming, supporting and sharing walking experiences appropriately with sight impaired walkers, and is available to download online.

Mainstreaming is already happening within Sport England's Parkrun initiative; a free 5km run held in local parks and outdoor settings around the UK. Since 2016, Parkrun has been supporting a volunteer network of guide runners to be matched with sight-impaired runners, with the aim of encouraging both a safe and sociable running environment. Such opportunities are further supported by the 'Find a Guide' database established by England Athletics and British Blind Sport. Importantly, however, the matching process needs to account for unpredictable energy levels, particularly when first adjusting to life with sight impairment.

“Whereas in the past I could have just decided to rock up to a Parkrun – now, because of dodging people, I’d want to do it with someone and automatically you become less spontaneous. And you have to predict that you’re going to do this, then, and make that commitment... and the irony is that I find sight loss really tiring, and I’m a lot more tired than I used to be. So actually you’ve got unpredictable energy levels, but with then having to have a much more predictable life”.

For some of our Sensing Nature participants, opportunities to learn the techniques and skills required to negotiate ‘wilder’ environments were central to feelings of freedom; providing a distraction from everyday life while also exploring new – often uncomfortable – terrains and cultivating a spirit of adventure. Finding people with the skills to provide appropriate support in these situations was, however, noted as a challenge.

“I mean, you can’t say it’s comfortable to do outdoor activities. You’re often wet, cold, tired, you often hurt yourself, there is a degree of risk. But it was all of that, it was all of the contrasts between those things and normal life that appealed to me, and I think appeal to a lot of people who have the chance to do it. But the sad thing is, not that many disabled people do, certainly not that many visually impaired people do. And I think one of the biggest barriers is the insufficient numbers of people – able-bodied people – who have the experience and the appetite to take the risk ... and not over perceiving risk, but having a realistic appreciation of risk, and having the ability and the skills to manage that risk ... And the real knack, I think, of a true professional is to be able to make those very fine judgements, but to do it with grace and ease. And without the participants necessarily feeling that they’re always balancing that risk... because if you’re being made to feel that other people are constantly balancing risk for you, then it entirely detracts from doing that activity because then the sense of achievement and freedom that you have is no longer there”.



Activities run by the Calvert Trust, Blind Veterans, the Milton Mountaineers and the Bendrigg Trust (via the ‘Spirit of Adventure’ programme) were highlighted as particularly valuable, especially with the provision of regular opportunities to get involved rather than one-off taster sessions. In this way, people can build specialist skills and situational awareness in these environments over time, all the while challenging some of the more identity-limiting stereotypes that tend to circulate around disability in society.



“It was a very big change for me giving up my work. And going from working, whatever it was, ten hours a day to working zero hours a day ... For me, there was a big loss of identity... And as a disabled person you carry quite a lot of baggage, anyway, from society. You know, you’re disabled so you have all those stereotypes, you’re either a ‘hero’ or a ‘scrounger’ ... But a lot of that baggage can be kind of offset against an alternative identity, if you have a strong one. And for me my career helped me to kind of offset all that stuff ... and I think it wouldn’t be going too far to say that, having found the opportunity to get involved in these outdoor activities, not only did it give me a focus, but it’s also helped reform my own identity. It doesn’t replace the one that I’ve lost... but in my own mind, at least, I find that being involved in lots of outdoor activities, and having a sense of personal achievement when I do some increasingly difficult things, that has made me feel a lot better about myself”.

Fostering trust, dignity and respect is essential when organising these types of activities. Taking time to cultivate person-centred assistance, based on people’s individual strengths, priorities and skills, can facilitate positive risk taking, countering the tendency to make disempowering assumptions on the basis of particular medical diagnoses. Allowing for ‘down time’ within more intensive periods of activity can also be valuable in encouraging valued shared experiences and reflection within group settings.

Finding appropriate support to engage in nature conservation

7_{d.}

Building the capacities of people involved in running mainstream nature-based activities was also highlighted as important in the realms of environmental volunteering, wildlife monitoring and citizen science.

Linked to this, the Bat Conservation Trust produced a series of resources from 2008 to 2012 as part of their ‘Count the Bat’ inclusive conservation project. This aimed to include people with sight impairment in bat walks and bat conservation efforts.

Available online, these resources highlight opportunities to produce accessible tactile diagrams and models of different bat species using, for example plastic film, swell paper, thermoform machines, foam cut outs and plastic models. They also discuss how to modify bat detector equipment using ‘bump-on’ stickers (raised plastic bumps) or ‘raised strips’ to indicate dial positions for detecting different bat species in the field.

This learning could be adapted to build familiarity with other animal species too, working with people with sight impairment to find mutually relevant sensory references. In this way, people can maximise use of the senses they do have to build mental maps or ‘models’ of settings, plants and creatures, allowing deeper engagement and exploration. By learning these skills, activity coordinators and volunteers could enhance the inclusivity of such activities, allowing more meaningful participation amongst people living with sight impairment.



"Partly because of my children, trying to get them involved in nature, we go on a few organised events ... And we went to one at the beach, into the rock pools, identifying things and stuff. But, the other people on it, none of them really spoke to me or came over or anything... Now, the organiser, again he didn't really come over and tell me much ... But then he did get good because when we tramped across to see some seaweed, he said, 'Hey, have a taste of this'... And that really made me feel part of the group then, and then he started telling me a little bit about it, like you would to everybody. And then other people were tasting as well... And it was just all very nice and natural".

"I did volunteer at an ecology park near here, and that was great, I really enjoyed it – but I'm not sure they really knew what to do. Or how to open up a discussion about what was appropriate and what was not appropriate... And I didn't feel there was any learning going on ... I've, in the past looked at other places to volunteer in outdoorsy things ... And I don't know how much of an extra manpower burden I'll be. Because there is a degree to which I need to get settled in to what I'm doing. Once I'm settled into it, I'm probably okay, so again I suppose you come back to people, don't you? Do you have people with the skills and the confidence and the ability to facilitate those things?"

Opportunities for inclusion do rely on effective description and creative engagement skills on the part of people running or volunteering with these activities. Recognising this, Sensing Nature is now working with VocalEyes (a charity providing valued access and audio description services to museums, galleries and cultural heritage sites across the UK) and the Royal Society for the Protection of Birds to support tailored visual awareness and audio description training amongst people working in natural heritage settings around the country. These training materials will be available via the Sensing Nature website from May 2019, with the aim of supporting people to engage with plant and wildlife across the senses, be it for recreation, learning or conservation purposes.

This work will include the basics of audio description, covering size, scale, dimension, texture and narrative, while also encouraging people to pause and tune into more fleeting nature encounters as they unfold.

"Lots of it, I think is aimed at the visual, 'Oh what a lovely view'. And when people say that, you want to say, 'And? Describe it. We want description!' And lots of people can't do it... and it's also getting a sense of how the person feels when you see a wonderful view. And maybe, only a poet can do that, for example... and to be able to go and hug a tree, which I know is very happy-clappy, but you only get truly a sense of its size, especially if you've never seen – the concept of a tree can be described to you, but the physical reality – it's like that with animals as well. From when they're described, you know they're big, but if you're right by it and feeling it, just the sense of the size of it".

Sharing experience, challenging stereotypes

The complex role of social dynamics in shaping opportunities to experience a sense of wellbeing with nature was apparent throughout the Sensing Nature study.

Shared experiences with people who appreciate the dignity of risk often enhanced such opportunities by offering valued companionship, cultivating the skills required to take on a mountain, cave or rock face, or simply offering support, orientation clues and everyday encouragement.

However, crowding, noise and negative social attitudes encountered in other social contexts were flagged as particularly detrimental to people's nature experiences. People tend not to understand that one's eyesight can change in different conditions – with the light, the weather, stress – and that this can influence the support needed. Through lack of awareness or, conversely, by being hyper aware and overly controlling, many participants explained how the reactions of other people could undermine their experiences of wellbeing.

"I still love being outside, I still enjoy the air, the feeling of space, the sounds, you know, that makes me want to go out. And sometimes it can be very hurtful if somebody says, 'Oh, you're stuck in here,' or, 'Oh, it's a lovely hot day, it's far too hot in here. Why don't you go outside?' That hurts, that really hurts ... it's almost like being punched, POM. I don't know whether I can explain that very well. But it can be very painful ... It's just the words. And I know they don't mean it unkindly, but it can be very, very hurtful at times, if you're feeling tired, or a bit scratchy, or you haven't been out for a couple of days".

"I gave a talk, the other day about guide dogs and my life... and a lady came up to me at the end, and she said, 'I think you're so brave', and I do hate that ... people think, because they use their eyes so much, they cannot conceive of having none at all ... I don't think of myself as a poor old blind person that can't do anything, that has to be cared for. That's not who I am, at all. I'm an outgoing person ... but you do need support to help you do things within the sighted world".

The detrimental impacts of language can also permeate through promotional materials produced to inspire people with sight impairment to try new things, or venture beyond the so-called 'comfort zone'. As highlighted by our participants, it is important to share learning and experiences in ways that other people can relate to. Developing promotional materials in collaboration with a wide range of people, with varied life circumstances, could minimise the risk of alienating individuals who have differing priorities, needs and resources for taking part in such activities.

"I'm very keen to get the message out to people that may be losing their sight or have recently lost it, that there's lots of hope out there. One of the things that I've always struggled with over the years is not having any kind of role models of people that have lost their sight. Because you can't really see them. Like if somebody suddenly needs to use a wheelchair or crutches or something, they can be out and about, and they'll see someone else, 'Oh look at that person over there, using a wheelchair... They're zooming along, and they're not being pushed. Ooh, I could try that'. You get inspired, don't you, by what you see? Whereas when you're out, maybe on somebody's arm or something, and there's a blind person with their cane, zooming along, or a guide dog, or whatever, you don't see them. So you can't sort of be inspired, can you?"



"I don't know if you've read much in the way of the publications that are put out for sight impaired people but they drive me mad sometimes. There's one particular little mantra that I see regularly, 'The only limitations in your life are the ones you choose to accept'. And I think that is so damning. It's just not true ... There are certain things which it is just not possible to do. Or even if it is possible, it's too risky to do, especially if you've not got a lot of support... It's not fair to put that upon other people whose life experience is so different from yours ... You need the ordinary – dare I say it, the sort of day-to-day – sight impaired people, who are just living a life, if you like, and not doing anything particularly extraordinary. You need to talk to them as well because they're the ones who will really be able to tell you about the challenges that need to be met, and how they could perhaps be better overcome".

Recognising this, we have tried in this booklet to highlight a whole range of nature experiences that people might like to participate in, alongside the different ways in which such experiences can be supported and encouraged.

We hope this booklet acts as a catalyst for people to share their own everyday experiences of nature; including the strategies and tools used in different situations, the benefits or challenges encountered, the types of support that have helped and those that hinder, and the advice they can share with others as a result of giving things a go.

Sensing Nature is very happy to raise broader awareness of these experiences via the website or social media, in audio or written form, so do get in touch if you would like to (Sarah.Bell@exeter.ac.uk).

As noted at the outset of this booklet, through highlighting the experiences of a range of people living with sight impairment, we aim to demonstrate opportunities for engaging with nature in pleasurable and meaningful ways for those who wish to do so. However, we also recognise that nature is just one of many ways to connect with the world.



9

Links to further information

RNIB guide to eye health, including an A-Z of eye conditions:
<https://www.rnib.org.uk/eye-health>

RNIB tips for sighted guiding:
<https://www.rnib.org.uk/information-everyday-living-family-friends-and-carers/guiding-blind-or-partially-sighted-person>

Thrive resources for gardening with sight impairment:
<https://www.thrive.org.uk/gardening-for-blind-or-partially-sighted-people.aspx>

Sensory Trust resources for designing sensory gardens and trails:
<http://www.sensorytrust.org.uk/information/factsheets/sensory-garden-1.html>

Royal Horticultural Society resources for sensory garden design:
<https://www.rhs.org.uk/get-involved/community-gardening/resources/sensory-garden?type=0&tag=>

Sensing Nature Inclusive Design Briefing, 'Designing with sight impairment in mind': downloadable from www.sensing-nature.com

Sensing Nature resources for supporting people with sight impairment in Walking for Health: downloadable from www.sensing-nature.com

British Blind Sport 'Find a Guide' database: <https://britishblindsport.org.uk/membership/bbs-sports/guide-running/>

Bat Conservation Trust resources for running inclusive bat events:
http://www.bats.org.uk/pages/visually_impaired_people_.html

Living Paintings audio-tactile nature books: <https://sensing-nature.com/news/living-paintings>

Casual Birder Podcast series: <https://casualbirderpod.libsyn.com>

BBC Tweet of the Day: <https://www.bbc.co.uk/programmes/b01s6xyk>

ChirpOMatic: <http://chirpomatic.com>

Sensory Trust-designed creative activities, designed to engage the senses and connect with nature, including sound walks, nature palettes and texture journeys: <http://www.sensorytrust.org.uk/information/creative-activities/index.htm>

Sensing Nature resources for visual awareness and audio description in natural heritage sites: in production in collaboration with VocalEyes, RSPB, Heritage Ability and Andy Shipley. Will be available online from May 2019: www.sensing-nature.com.

Heritage Ability: <http://www.countrysidemobility.org/heritage>

Silent Space Network: <https://silentspace.org.uk>

Moorvision: <http://www.moorvision.org/>

Bendrigg Trust 'Spirit of Adventure' programme: <https://www.bendrigg.org.uk/what-we-do/individual-residential-courses/spirit-of-adventure/>

Milton Mountaineers: <https://www.sightlinedirectory.org.uk/Listings/Details/2804/milton-mountaineers>

Calvert Trust: <http://www.calvert-trust.org.uk>

Blind at Sea: <https://blindatsea.co.uk>

Blind Veterans: <https://www.blindveterans.org.uk>

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