



# Mental Health Awareness Week 2021



## Nature

# How connecting with nature benefits our mental health

# Executive summary

Our relationship with nature – how much we notice, think about and appreciate our natural surroundings – is a critical factor in supporting good mental health and preventing distress.

When it comes to mental health benefits, nature has a very wide definition. It can mean green spaces such as parks, woodland or forests as well as blue spaces like rivers, wetlands, beaches or canals. It also includes trees on an urban street, private gardens, verges and even indoor plants or window boxes. Surprisingly, even watching nature documentaries has been shown to be good for our mental health.

This is great news as it means the mental health benefits of nature can be made available to nearly every one of us, no matter where we live.

This report provides a summary of the evidence of how and why our relationship with nature is so important and beneficial to our mental health. The report highlights the unequal access to nature's benefits for specific groups and the steps needed to address that inequality.

**Nature is an important need for many and vital in keeping us emotionally, psychologically and physically healthy.**



Our 'Coronavirus: Mental Health in the Pandemic' research programme tells us that spending time outdoors has been one of the key factors enabling people to cope with the stress of the Covid-19 pandemic.

Our findings are echoed by other research which has found that people visiting and noticing nature in particular was important in supporting their wellbeing.

This is a really important point, as it helps us to understand that a connection with nature helps unlock the mental health benefits – and it also gives us essential clues on how to maximise these benefits for our wellbeing.

## Nature has played a critical role in our mental health during the pandemic

# 45%

Nearly half of people in the UK told us that visiting green spaces, such as parks, helped them to cope throughout the pandemic.



Spending time in nature is good for us for lots of reasons.

# Quality counts. Connecting with nature is critical.

'Fresh air and exercise' has long been recommended as a way for many to feel better, physically and mentally.

Now evidence shows us that the quality of our relationship with nature is part of the reason for its positive impact on our wellbeing.

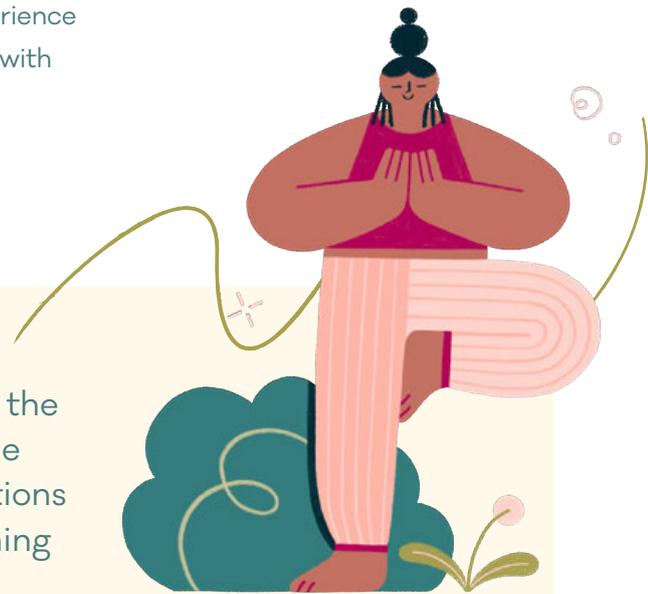
Researchers use the term 'connectedness' to describe the ideal relationship.

'Connectedness' refers to the way we relate to nature and experience nature. A strong connection with nature means feeling a close relationship or an emotional attachment to our natural surroundings.

There are ways that we can develop our connectedness with nature. Activities that involve the senses can help to develop our connection with the natural world, as can activities where we feel emotions such as compassion, perceive beauty or find meaning in nature.

For instance, we might notice the beauty of nature by listening intently to birdsong or touching the bark of trees. Smelling flowers or feeling the soil between our fingers whilst planting bulbs in the garden are also highly effective ways to connect with nature using our senses.

We don't always have to be in nature to further our relationship with the natural world: writing a poem about our favourite nature spot or reflecting on preferred walks help us consciously notice, consider and pause to appreciate the good things in nature.



## People with good nature connectedness tend to be happier

Research shows that people who are more connected with nature are usually happier in life and more likely to report feeling their lives are worthwhile.

Nature can generate a multitude of positive emotions, such as calmness, joy, creativity and can facilitate concentration. Nature connectedness is also associated with lower levels of poor mental health; in particular lower depression and anxiety levels. Perhaps not surprisingly, people with strong nature connectedness are also more likely to have pro-environmental behaviours such as recycling items or buying seasonal food.

This is likely to lead to further benefits, if these pro-environmental activities can lead to improvements in nature that we can then go on to enjoy. At a time of devastating environmental threats, developing a stronger mutually supportive relationship between people and the environment will be critical.



## Green and serene

**“High quality” natural spaces are better for us and our wellbeing.**

### We benefit from “high quality” nature spaces

Quality can mean higher biodiversity (a wide variety of plants and wildlife). Whether we are in rural or urban spaces, certain characteristics of nature are particularly important.

These include the amount of “green” in trees, plants, and grass, the variety of plants and wildlife, and ‘serene’ landscapes that feel calm and quiet.

Cleanliness, such as the absence of litter, in nature spaces is also a factor in how much our mental health benefits from spending time outside. Cleaner nature areas are linked to lower rates of depression.

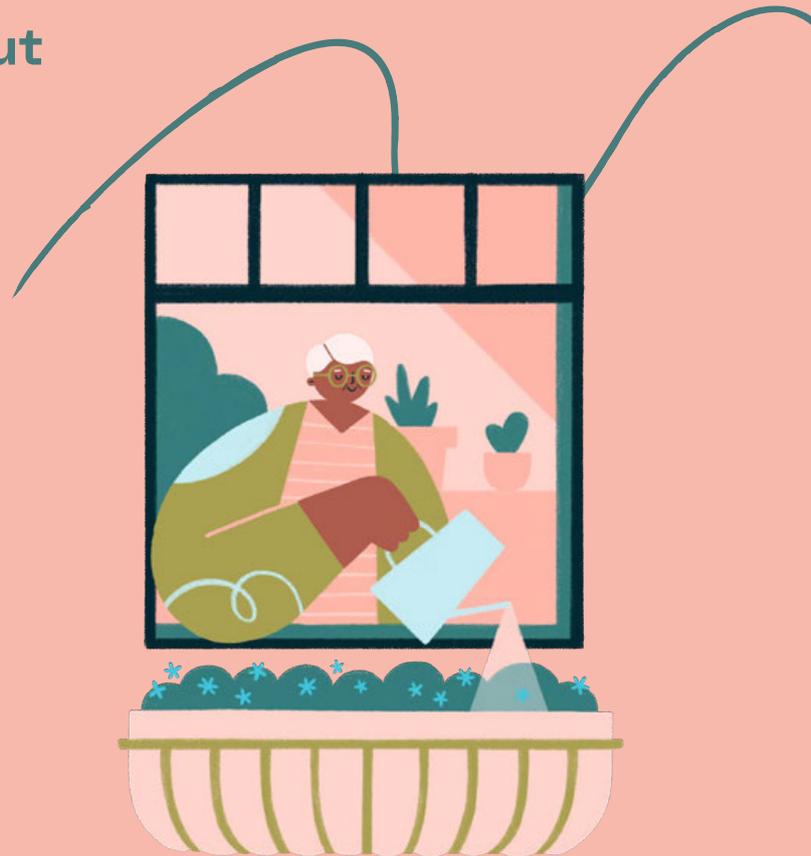
## Nature is everywhere, but high quality nature isn't available equally.

Whilst nature can be found anywhere, high-quality nature spaces which we know are most likely to help support good mental health are not available equally to everyone in the UK. This is a more complicated picture than just how far we live from a high-quality nature space.

Proximity is certainly a factor, with deprived communities least likely to live near a high quality nature space. Perhaps unsurprisingly, our poll found that people living in urban areas were less likely than rural residents to connect with nature as much as they wanted, and people without gardens less likely than those with gardens.

Younger adults in particular may face many barriers to connecting with nature. People living with a disability or health condition often face particular barriers to access, when natural spaces are not equipped with inclusion in mind or there is a lack of accessible routes.

For some groups, including many women, younger people, disabled people and people from ethnic minorities, nature spaces may feel inaccessible or less enjoyable because they are not safe – from risk of physical harm, sexual harassment, hate crime or discrimination. For many of these groups there is a double effect of this inequality.



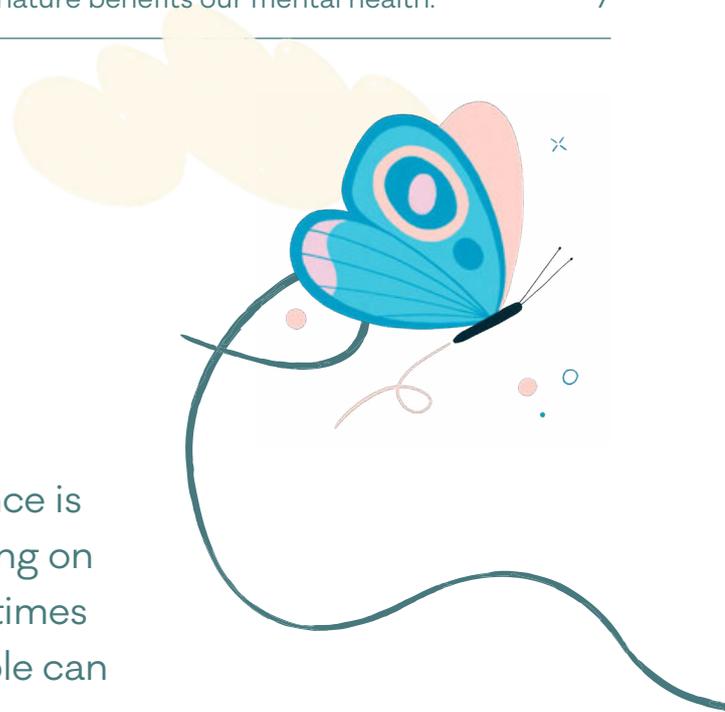
Several groups described above not only get less of the wellbeing benefit of connecting with nature as a result of these access barriers, but they are precisely the groups within our population who are most at risk of mental health problems.

There are good examples of initiatives in nature spaces to reduce the inequality of access, and allow all groups to benefit from connecting with nature to support their wellbeing.

High quality urban parks, designed with accessibility in mind, can enable more people to enjoy and connect with nature. Other solutions include planting flowers and trees along our streets or even recreating natural habitats where new human developments such as a road have been built. These are known as "green corridors".

# Conclusions

The key message of this research evidence is a need to shift our attention from focusing on getting people to visit natural and sometimes remote spaces, to focusing on how people can tune in and connect with 'everyday' nature close to home through simple activities. We can develop a new relationship with the natural world by noticing nature, and that doing so has been found to bring benefits in mental health.



## Policy recommendations

- O1. Facilitating connection with nature
- O2. Protecting the natural environment and restoring biodiversity
- O3. Improving access to nature
- O4. Using the planning system and urban design to improve the visibility and availability of nature in every local area
- O5. Making green spaces safe for all
- O6. Building Developing a life-long relationship with nature

# 01

# Introduction

Our relationship with nature – how much we notice, think about and appreciate our natural surroundings – can be a critical factor in supporting good mental health alongside other factors such as how much money we have or what kind of job we do.



Nature has played an important role in supporting many people's mental health during the coronavirus pandemic, and this is one of the reasons why it has been chosen as the Mental Health Awareness Week theme for 2021.

In this report, we present the latest evidence of how nature impacts positively on our mental health and why it is important to develop a good connection with nature and develop our connectedness.

We also include findings from the YouGov poll we have conducted on this theme specifically for Mental Health Awareness Week.<sup>1</sup>



## What do we mean by nature?

We commonly think of "Nature" as referring to wild plants, animals, ecosystems, landscapes and waterscapes, in contrast to built environments and places shaped by human activity.

Nature exists on a spectrum, from wildernesses with little evidence of human impact to small parks in highly urbanised areas, from a dandelion or an urban stream, to extensive woodlands (*Bratman et al, 2012*).

It is now widely accepted that green features which are partly the products of human activity, such as urban parks and back gardens, also represent nature (*McAllister et al, 2017*).

<sup>1</sup>All figures described as coming from 'our poll' are from YouGov Plc. Total sample size was 4274 UK adults. Fieldwork was undertaken between 6th - 8th April 2021. The survey was carried out online. The figures have been weighted and are representative of all UK adults (aged 18+).

Key to how we define nature is our own personal experience - our perceptions of and/or interactions with any stimuli from the natural world, for example listening to birds singing from our window, growing herbs in our kitchen, looking at nature photos, sitting in the back garden, going to the local park, feeling the weather, and noticing the movements of the sun (*Bratman et al, 2019; Miles Richardson et al, 2015*).

As we will explore later, 'nature connectedness' describes the way we relate to, and experience, nature. It refers to the kind of relationship we develop with the natural world. When we have high levels of nature-connectedness we are often happier in life, feel our lives are more worthwhile and have lower levels of depression and anxiety (*Capaldi A. et al, 2014; Richardson et al, 2021*).

# A new love of nature during lockdown?

## 73%

of UK adults surveyed in our YouGov poll said that, connecting with nature has been important in terms of managing their mental health during the pandemic.

## 34%

of UK adults had connected more with nature during the pandemic

## 18%

of UK adults had connected less with nature during the pandemic

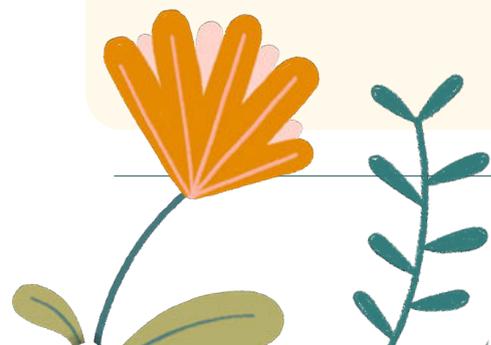
At the Mental Health Foundation, we have been conducting our own research on the mental health impacts of the pandemic. We have learnt the important role that nature played in supporting many people's mental health at this time. In that study, people of all ages (except teenagers – more on this later) told us that visiting green spaces, such as parks was one of the top coping strategies and 45% of the UK adult population used this to cope with the stress of the pandemic and its restrictions.

Other studies have likewise found that different levels of lockdown restrictions have had negative consequences on people's mental health, but that contact with nature has helped people to cope (Soga *et al*, 2020). During the pandemic, many people turned to nature, visiting nature spaces more often and being more likely to notice the nature that is all around us.

In fact, the increase in noticing nature was much greater than the increase in time spent in nature. Between April and June 2020, fewer than half of adults reported they were spending more time outside, but three quarters reported they were noticing and engaging with everyday nature more (*Natural England, 2020*). And studies showed that these changes in the relationship with nature contributed to improvements in people's wellbeing; particularly in feelings of life being worthwhile (*M Richardson & Hamlin, 2021*).

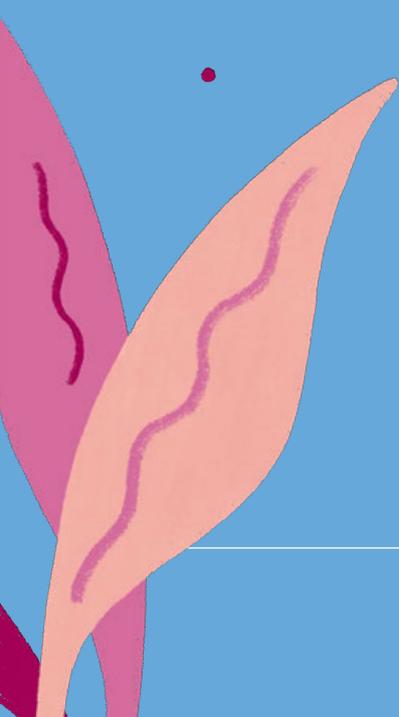
At the Mental Health Foundation, we therefore believe that connecting with and developing a close relationship with nature can help to promote good mental health, and that nature can act as a protective factor for good mental health.

By green spaces we mean any nature area that is predominantly green in colour such as parks, woodland or forests. By blue spaces we mean any nature area that is predominantly blue in colour such as rivers, wetlands, beaches or canals.



# 02

# Nature as a protective factor for good mental health





Intuitively, most of us feel that spending time in nature is good for our wellbeing. Whilst inequalities and barriers mean that by no means everyone is currently able to connect with nature in the optimal way (see section 3 below).

Studies have found that wellbeing can be linked, in part, with how close we live to nature spaces and street trees or private gardens, in both urban and rural settings (*Jiricka-Pürerer et al., 2019; Kruize et al., 2020*).

Spending time in blue spaces and green spaces is linked to improved life satisfaction, reduced anxiety and increased happiness (McMahan & Estes, 2015). Contact with nature generates an increase in positive emotions and feelings of vitality, and a decrease in negative emotions; it also provides relief of from mental tiredness, and an improvement in our attention span (*Lackey et al., 2019*).

Furthermore, research in different contexts demonstrates the positive effects of being exposed to nature. In the workplace, for example, people with 'high exposure' to nature (taking more frequent breaks to spend time outdoors in green spaces) reported significantly higher work engagement compared to the participants in the same study who described themselves as having a low 'exposure to nature' profile (those who spent more time in the office or who took indoor breaks).

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# 70%

of UK adults agreed that being close to nature improves their mood.

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# 49%

said being close to nature helps them to cope with stress.

This is fully backed-up by research evidence, which consistently shows that nature has a beneficial impact on our mental health. The relationship we develop with nature is emerging as an important protective factor for our mental health.

'Connectedness' is our individual way to feel emotionally connected to the natural world with nature. Connectedness goes beyond simply having contact with nature; the concept of connectedness encompasses how we feel, think and experience our relationship with the natural environment.

In general, when we are more connected with nature we tend to be happier and are more likely to be flourishing and functioning well psychologically.

Individuals who are more connected with nature may also seek out more opportunities to spend time with nature, and therefore experience its psychological benefits, and have a positive disposition towards the environment (*Martin et al., 2020*). Importantly, with the crises of climate warming and biodiversity loss, which will bring further challenges for mental health, people who are more connected with nature are also more likely to take part in pro-environmental behaviours (*Mackay & Schmitt, 2019*) and pro-nature conservation actions (*Miles Richardson et al., 2020*).



# Nature connectedness: a key contributor to good mental health



# Nature connectedness: For a new relationship with nature

By Miles Richardson

Our mental wellbeing has been challenged during the coronavirus pandemic and many people have found a friend in nature. The natural world is also struggling.

The warming climate and loss of wildlife show our relationship with nature is failing. The good news is that actively developing a new relationship with nature is good for both human and nature's wellbeing.

Understanding the human-nature relationship is complex. However, "nature-connectedness" has provided some clarity and new evidence of the benefits a close relationship with nature brings. Nature-connectedness provides an internationally accepted way of measuring how close a person's relationship with nature is. It can form the basis of scientific studies. It can be improved.



**Miles Richardson,**  
Professor of Human Factors and Nature  
Connectedness, Derby University

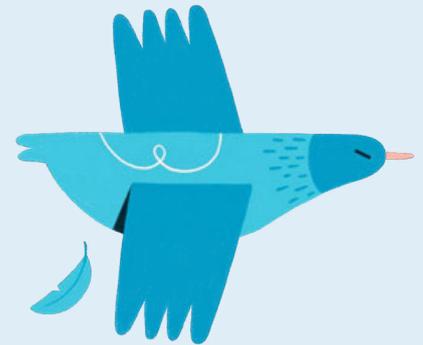
Those scientific studies have increased rapidly in recent years and have established that:

- People's nature connectedness, rather than visits to nature, is key for feeling that life is worthwhile – nearly four times larger than the increase associated with socio-economic status.
- Nature connectedness and simple engagement with nature explains pro-environmental household behaviours and pro-nature conservation behaviours.



## Life feels better when people have a strong connection with nature, so how do we improve it?

Improving people's relationship with nature comes through simple, yet meaningful engagement with nature. For example, we found that simply tuning in and noticing the good things in urban nature led to significant and sustained improvements in people's mental health. More widely, our research has identified five distinct types of activity that activate people's connection with nature. The "pathways to nature connectedness" provide a new approach to improving human-nature relations.



## The 5 pathways to a new relationship with nature are:

### 01 Senses

Noticing and actively engaging with nature through the senses, e.g. listening to birdsong, smelling wild flowers, or watching the breeze in the trees.

### 02 Emotion

Experiencing the joy and calm nature can bring, e.g. talking about, and reflecting on your feelings about nature.

### 03 Beauty

Simply taking time to appreciate nature's beauty, e.g. exploring the beauty of nature through art, music or in words.

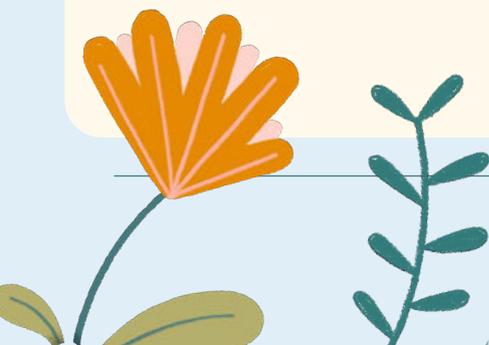
### 04 Meaning

Exploring and celebrating how nature brings meaning to life, e.g. exploring how nature appears in songs and stories, poems and art, or by celebrating the signs and cycles of nature.

### 05 Compassion

Taking actions that are good for nature, e.g. creating homes for nature, and making ethical product choices.

The pathways provide a flexible design framework to help bring about a closer relationship with nature. These can be simple changes in the focus of outdoor activities through to the design of places to improve the human-nature relationship on a larger scale. All because a new relationship with nature is needed for a worthwhile and sustainable life – a good life.



# Green, serene and biodiverse: we benefit from 'high quality' nature spaces

Some evidence suggests that variety within nature (or biodiversity) is an important factor in maximising its mental health benefits. Biodiversity through bird-species richness, followed by plant-species richness, habitat diversity and butterfly richness are all related to improved wellbeing (Aerts *et al.*, 2018), increased positive affect (mood) and lower levels of anxiety (Wolf *et al.*, 2017).

Other data tell us that a 'serene' landscape (defined as a place of calm or silence; often a forest with different varieties of trees, or near a water course) has a positive impact on our mental health (M. A. van den Bosch *et al.*, 2015). Large areas covered by vegetation and bird varieties are linked to lower levels of depression, anxiety, and stress (Cox *et al.*, 2017). Urban nature can also improve mental wellbeing, for example flowering plants, water, urban wildlife and trees (McEwan *et al.*, 2020). However, as we will see below, it is important that both urban and rural green and bluespaces are safe and accessible for everyone to enjoy.

In our poll, we asked people how they benefitted from different activities in nature:

**62%**

felt the benefits of spending time in the countryside

**65%**

of people said that spending time by water has a positive impact on their mental health

**57%**

felt benefits from seeing nature as they go about their daily life,

## More active engagement brings greater benefits

Benefits may be gained from intentionally interacting with nature (e.g. through visiting neighbourhood green spaces or spending time in a garden), or occasionally from incidental contact with nature while we carry out daily activities (e.g. walking to the shops, driving to work), or indirectly while not actually present in nature (e.g., viewing it through a window; watching a documentary) (Keniger *et al.*, 2013).

However, more active engagement tends to bring greater benefits (Miles Richardson *et al.*, 2021).



## Many activities have been designed to improve our connectedness with nature.

These can have a positive impact on our wellbeing and range from immersive residential wilderness camps, to increasing the amount of nature in front gardens (*Chalmin-Pui et al., 2021*). Some of these activities are intensive but less regular (e.g. a school trip), and others might be more long-term (for example, doing gardening every weekend).

To maintain wellbeing day to day it is important to develop activities in which we can participate close to home. For example, The Wildlife Trust's 30 Days Wild campaign focuses on simple activities that help us form a close relationship with everyday nature; it has brought about improvements in mental wellbeing that have been sustained for periods of two months (*Miles Richardson, Cormack, et al., 2016*).

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# 57%

of people benefited from spending time in their garden

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# 43%

agreed that spending time in the park is good for their mental health

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# 30%

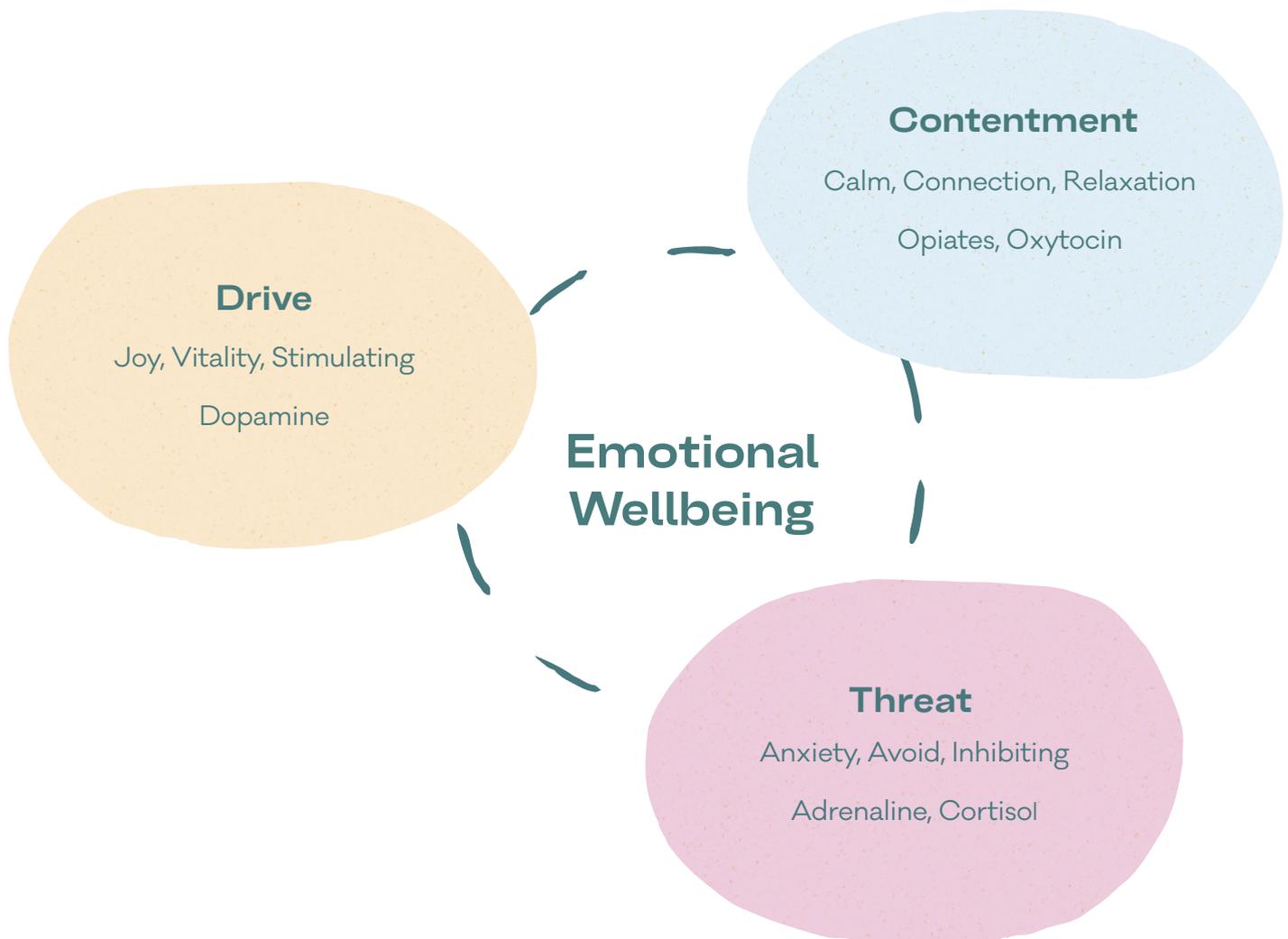
of people even agreed that watching or listening to nature documentaries on TV or radio has a positive impact on their mental health.



## How nature helps our mental health

Some of the leading experts in nature research have presented a model of how nature balances and regulate our emotions (*Miles Richardson, McEwan, et al., 2016*).

According to this model, there are three areas of emotion which can be affected by our experiences with nature. These three dimensions are: threat, drive and contentment. Each dimension is linked to different feelings and motivations. 'Threat' is motivated by avoidance and leads to the emotion of anxiety. 'Drive' is motivated by pursuit and leads to joy. 'Contentment' is motivated by rest and brings calm. These emotions each release specific hormones in the body. This is represented in the diagram below.





In order to experience good mental health, we need a balance between these three dimensions of threat, drive and contentment. For example, when our threat response is overactive (perhaps because we feel constantly driven at work) our positive emotions are reduced, and we can become anxious or depressed.

Exposure to nature can generate positive emotions and balance our moods, resulting in better resilience (*M. Richardson, K. McEwan, Maratos, 2016*).



In our poll, we asked people how they benefitted from different activities in nature:

**65%**

of people agreed that they experience positive emotions from being in nature (e.g. calm, joy, excitement or wonder).

**44%**

of people said that being close to nature makes them less worried or anxious.

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It is clear that the natural atmosphere of forests and nature in general is beneficial to human health.

# The healing power of trees (and plants)

Psychologists refer to the Stress Reduction Theory (SRT) developed by *Ulrich et al. (1991)* to explain our need to experience the natural elements. This theory states that when we observe natural scenery, such as forests or rivers, we experience positive feelings and emotions that have a restorative calming effect.

Studies of Japanese *shinrin-yoku* (forest bathing) have compared how the body reacts to being immersed in nature with being in an urban environment. They confirm the calming effects of being in nature, with benefits for both physical and mental health (*Rajoo et al 2020*).

Some researchers have looked at the general positive effects of nature and consider that the healing powers of forests is partly due to phytoncides, a substance emitted by plants, and that even indoor exposure to phytoncides can improve health and immune function (*Song et al. 2016*).

## Quantity versus quality: our connectedness with nature is critical

It makes sense that if spending time in nature is good for us, then the more time we spend outside in nature the bigger the benefit. On this theme, recent research has looked at what the idea of a weekly 'dose' of time in nature should be. Two hours a week has been found to be a dosage that significantly boosts health and wellbeing (*White et al., 2019*).

*Concerningly, our poll found that 'in normal times' before the pandemic, 16% of people spent an average of an hour or less around nature each week – or no time at all. These proportions were particularly high for the youngest adults (21% and 22% of 18-24 and 25-34 year-olds respectively), and for people without access to gardens (27%).*

Interestingly, however, when time and connectedness are measured together, time can emerge as less important (*Martin et al., 2020; Miles Richardson et al., 2020*). This fits with the understanding that it is the quality of our relationship with nature that contributes to its positive impact on our wellbeing (*Dobson et al., 2020*). This suggests we should focus on finding effective ways to engage with nature, as we know that nature-connectedness leads to a virtuous circle of spending more time in nature.

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# 16%

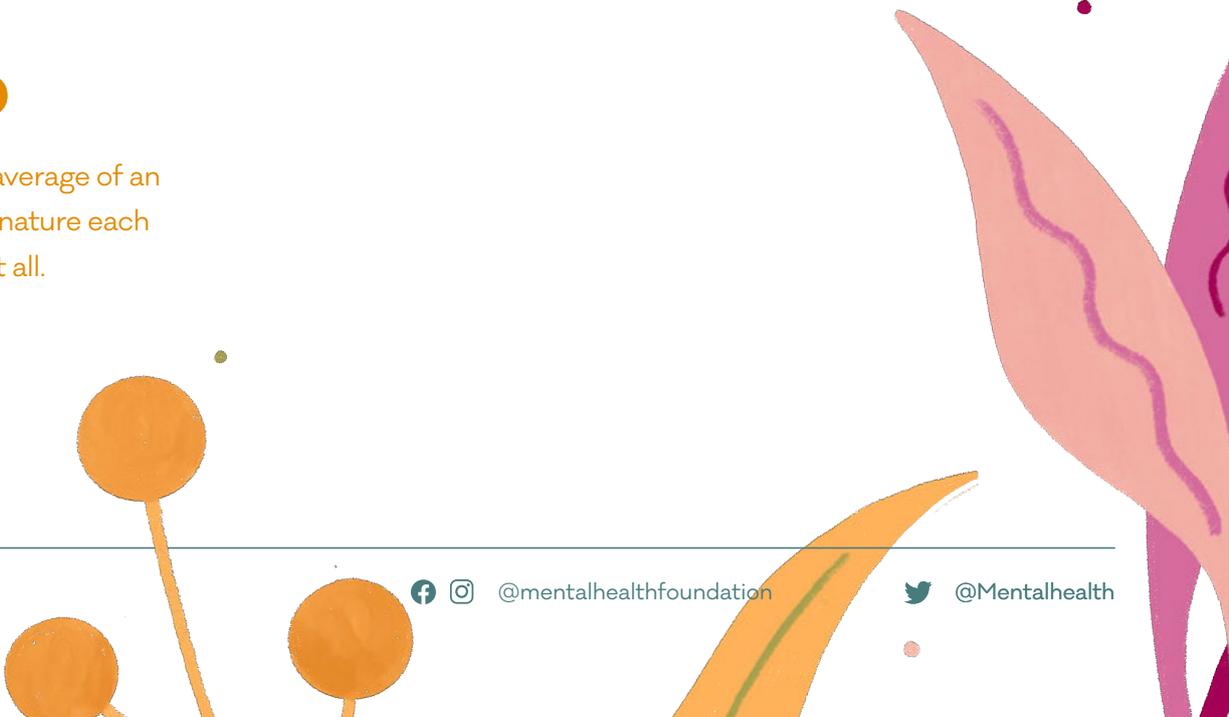
of people spent an average of an hour or less around nature each week – or no time at all.



@mentalhealthfoundation

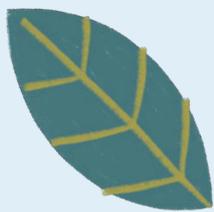


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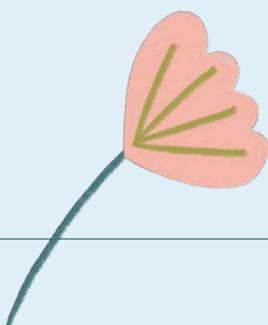


# 03

## Universal access to nature can reduce mental health inequalities



Everyone has the capacity to connect with nature (*Miles Richardson et al., 2019*), which is why access to nature is important for all. However, mental health benefits from connecting with nature may vary by socioeconomic status, residential location, occupation, disability, culture, gender, and age.



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# 11%

of respondents to our poll found it fairly or very difficult to access nature whenever they wanted to.

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# 44%

of people said that they were not connecting (that is, feeling a close relationship and emotional engagement) with nature often enough to help their mental health.

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# 38%

of respondents wanted to connect with nature more often.

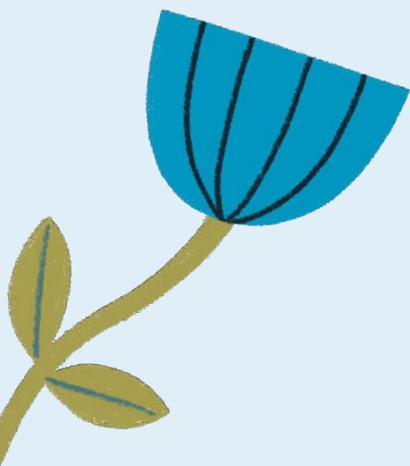
## Green spaces are currently not equally accessible, safe and welcoming to all

Well-designed or adapted green spaces have the potential to be a free, universal resource that can benefit people from all backgrounds. However, natural spaces are currently not equally accessible to all, and may be particularly inaccessible to certain groups because of other social, economic and health inequalities. Some places are inaccessible due to physical inaccessibility to people who are physically disabled or who have sensory impairments, geographically inaccessible for people who do not own cars, or inaccessible due to safety concerns.

A study found that urban parks are less accessible to some groups including people in deprived communities, women, and LGBTQI+ people. The reasons presented were all different, such as distance to parks, lack of a pleasant walking experience, and an insufficient number of parks in their neighbourhood.

Also important are the lack of cultural and/or shared activities, safety concerns, and insufficient leisure time available (*Wang et al., 2015*). Income is also related to different use of green and blue spaces for physical activity. This is due mainly to people with less income having less access to these spaces.

However, not all studies see this relationship. It appears that levels of physical activity are also influenced by neighbourhood walkability and natural environment. Other relevant factors are the sense of community, number of recreational facilities and motivation levels (*Spencer et al., 2020*).



# Many barriers prevent people from spending time in nature

In our poll, we asked people which factors (in normal times before the pandemic) limited their ability to be close to nature, or to enjoy nature in the way they would like.

## Limited time or lack of company

The most frequently noted barrier to being close to nature was spending too much time at work or studying (26% of people), or another time factor; being busy looking after family or with other caring responsibilities (11%). Not having people with whom to spend time in nature was a barrier for 10% of people.

## Not always feeling safe in nature

Whilst 'not feeling safe' being in nature at the times of day/places where they could do so was mentioned by only 6% of respondents as a factor limiting their ability to be close to nature before the pandemic, when we asked specifically which fears have prevented people from enjoying nature 'in the way they would like', 18% of UK adults said that not feeling physically safe or safe from harm was a problem.

## Women, young people, disabled people and Black, Asian and minority ethnic people feel less safe in nature

When we asked about particular fears around safety and harassment, there was a pronounced gender gap. Not feeling physically safe/safe from harm had hindered 26% of UK women from enjoying nature, compared to 9% of UK men. In particular, fear of sexual harassment had affected 13% of women surveyed compared to 1% of men surveyed in terms of their ability to enjoy nature, and actual experiences of sexual harassment 12% of women compared to 1% of men.

This was even more pronounced among young women aged 18-24, for 27% of whom their enjoyment of nature had been impacted by actual experiences of sexual harassment.

28% of people with long term health conditions or disabilities which limit their daily life 'a lot' also said that they had been prevented from enjoying nature due to not feeling physically safe/safe from harm, and they were also notably more likely to experience violence and hate crime, and to fear verbal harassment and feeling unwelcome, than the population overall.

When we asked specifically about race discrimination, 23% of respondents from Black, Asian and minority ethnic backgrounds (not including non-British white groups) said that this had limited their ability to enjoy nature as they wished, compared to 1% of white British respondents. For hate crime, these figures were 12% compared to 2%.

These striking figures point to the need to ensure that natural environments are safe for everyone, including women, younger people, people from ethnic minorities and people with disabilities or long term health conditions.

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# 23%

of respondents from Black, Asian and minority ethnic backgrounds said that race discrimination limited their ability to enjoy nature as they wished.



## There are more barriers for different ethnic groups and disabled people

Different types of inequality also seem to impact different ethnic groups. In our poll, we asked whether people found it easy or difficult to access nature whenever they wanted to. More people from ethnic minorities found it difficult than white British people. In particular:

- 21% of respondents from Black, Asian and minority ethnic backgrounds (not including non-British white groups) found it fairly or very difficult.
- 20% of all respondents who were not 'white British' (such as e.g. Black, Asian and minority ethnic, and non-British white groups), said that they found it fairly or very difficult.
- In comparison, 10% of white British respondents found it fairly or very difficult.



All of the factors we investigated as potentially limiting people's ability to connect with nature were cited more often by people from Black, Asian and minority ethnic groups overall. However, we do not yet know how these experiences and barriers vary among all of the different ethnic groups in the UK.

In our poll, 19% of people with long-term health conditions (LTCs) and disabilities said they were unable to physically access nature because of their health (or that of a family member) as a factor which limited their ability to be close to nature. This rose to 37% of people with a LTC/disability which limits their daily activities 'a lot'.

## Young people tend to lose a connection with nature, but it is not inevitable

Teenagers and young adults appear to be less connected with nature, which in nature research has been coined the 'teenage dip'. Connection with nature starts to dip as early as 10 years old and may not recover until people are in their early 30s (Miles Richardson et al., 2019).

In our poll of UK adults, younger age groups were more likely to say that they did not want to or did not enjoy spending time in nature, with this feeling at its highest among adults in the 18-24 age group (8% compared to 3% of the overall adult population, and just 1% of over-55s).

However, the majority of other factors we explored as potential limitations on people's ability to be close to nature also tended to affect more people in the younger age categories. This included some of the most frequently mentioned barriers overall listed to the right.



Some factors related to the availability of natural spaces were also more pronounced among younger people than the population as a whole. For example, the poor quality of the parks and natural spaces nearby was cited as a limitation by 13% of 18-34 year olds, compared to 6% of the population as a whole and 2% of over-55s.

# 43%

of 18-24 years olds found time spent working or studying a barrier

# 18%

of 18-24 years olds found a lack of people to spend time in nature with a factor

# 4%

of 18-24 years olds factored not caring responsibilities



It has been suggested that the greening of areas in and around schools in disadvantaged areas, particularly with trees, could promote optimal socio-emotional and behavioural functioning for children from homes with both low and high levels of exposure to nature (*Scott et al., 2018*).

Initiatives like this are much needed, as pupils/students report being less connected with nature than people in employment or retirement (*Holli-Anne Passmore, Leanne Martin, Miles Richardson, Matthew White, Anne Hunt, 2020*).

Access to nature beyond an urban setting can also benefit all communities. Modest-scale physical changes to woodlands to improve their attractiveness for use, consisting largely of footpath surfacing and drainage, improving entrances and clearing rubbish; and community engagement events to attract the local community to use the woods, including 'family fun days', photography and environmental art workshops, and activities for school children, can all help deprived communities to connect with nature and increase social cohesion (*Thompson et al., 2019*).

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# 23%

of UK adults with no garden said that before the pandemic, they were able to connect as much as they wanted with nature.

## Let's improve access to urban nature

We should take action to further improve the accessibility of urban nature, potentially through structured activities (O'Brien *et al.*, 2014). We can improve access by applying universal design principles to make parks and playgrounds accessible and inclusive spaces, able to be used by people with all types of people with all types of disabilities (Lynch *et al.*, 2018).

In our poll, 23% of UK adults with no garden said that before the pandemic, they were able to connect as much as they wanted with nature, compared to 46% of people with access to a private and/or communal garden. Some research suggests that public open space and access to a private garden may also be important to the mental health of children from poorer households (Alderton *et al.*, 2019).

A study in Sheffield suggested that smaller gardens were linked to higher rates of depression. This effect may have been exacerbated during lockdowns, with limited opportunities for people to access nature outside of private gardens.

However, any public greenspace accessibility was also important for good mental health (Mears *et al.*, 2020). Having good access to green/recreational areas can reduce inequalities in mental wellbeing between people of different socioeconomic statuses (Mitchell *et al.*, 2015). Urban nature can also play a positive role in reducing stress on the wellbeing of migrant families (Hordyk *et al.*, 2015).

Universal design is the design and composition of an environment so that it may be accessed, understood and used to the greatest possible extent, in the most independent and natural manner possible and in the wildest



# 04 Nature is not just found in rural areas

When we think about nature, we might think about forests, wilderness spaces and national parks in the great outdoors, but nature can be all around us in the cities and towns we live in.

Moreover, nature is not just found in designated green spaces such as parks, but throughout our streets, in our gardens and on our balconies and even the most surprising and ingenious places - bus stops with living roofs, roundabouts planted with flowers or wildflowers growing on railway sidings. There are also ways to incorporate nature into people's daily lives in settings such as schools and care facilities.

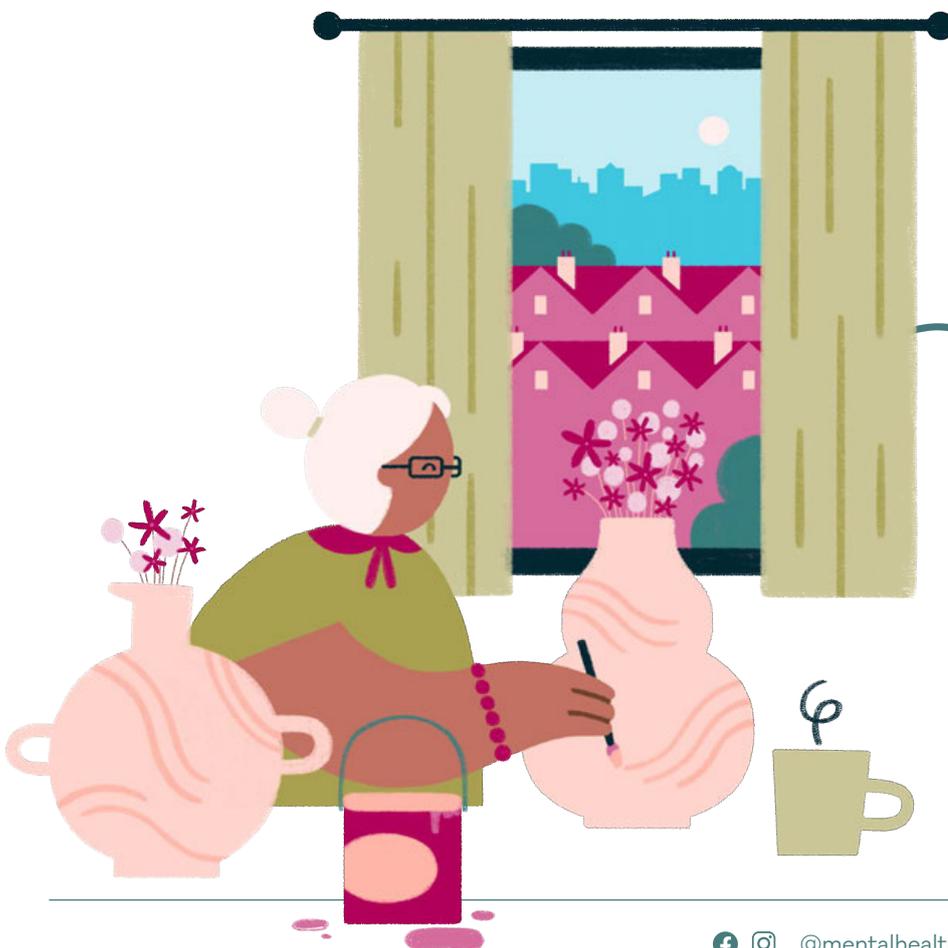
## Connectedness with nature in rural living is not a given

Despite rural nature being what most of us think about when we hear the word “nature”, there is surprisingly little research on how people benefit from nature in rural settings. This is perhaps because we assume that people who live in rural areas automatically benefit from the abundance of nature in their environment.

This lack of research might also stem from an assumption that all people in the countryside connect with nature as a matter of course, which may not be the case. In our poll, 62% of rural residents in the UK said that before the pandemic, they were able to connect as much as they wanted with nature – though this was the case for only 40% of urban residents (and only 32% of people in London).

# 62%

of rural residents in the UK said that before the pandemic, they were able to connect as much as they wanted with nature



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# 70%

of the world's population is anticipated by 2050 to live in urban areas.

It is notable that happiness has been found to rise from its lowest levels in the centres of large cities to its highest levels on the edges of small towns (*Berry & Okulicz-Kozaryn, 2011*), rather than in the heart of the countryside. Indeed, some rural occupations, including farming, report poorer mental health than the general population, with high levels of loneliness and isolation (*Davies et al., 2019*). Farmers also experience particularly high suicide rates (*Office of National Statistics, 2018*).

There are specific mental health challenges that people living in rural communities face and a better understanding of the role of nature as a protective factor would be a highly beneficial addition to the evidence in this area. (*Davies et al., 2019*). The benefits for mental health of nature-connectedness and noticing nature are no less relevant for people in rural areas, and these benefits should also be actively promoted within these communities.

## High quality, abundant urban nature can positively affect our mental health

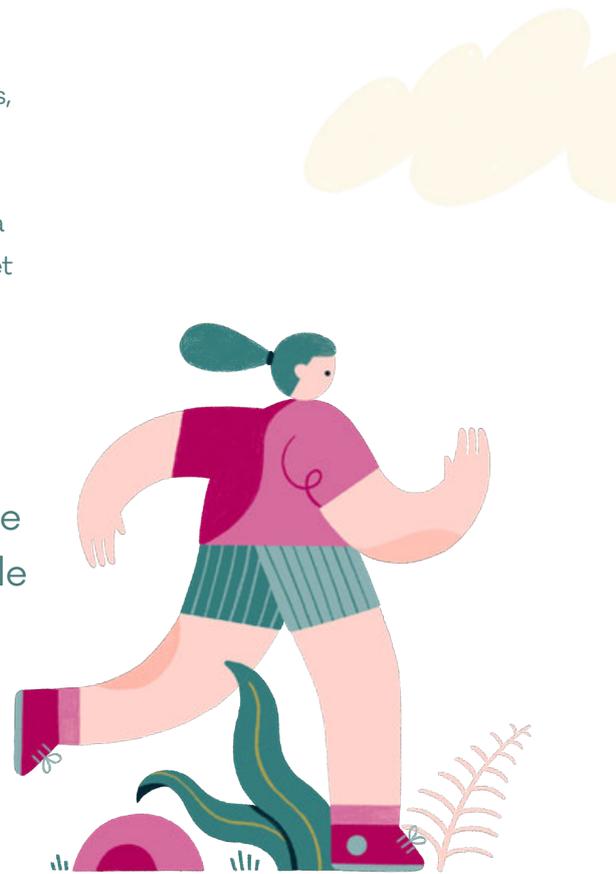
By 2050, it is anticipated that 70% of the world's population will live in urban areas (*Ghosh, 2019*). In many cases, urbanisation of land has a negative effect on biodiversity. Given that there is strong evidence for a positive link between nature and mental health, particularly where there is strong biodiversity, we must consider how nature can be better included in urban environments (*M. van den Bosch & Ode Sang, 2017*).

For urban residents who can't access natural environments easily or frequently, urban nature that is abundant and biodiverse has the potential to benefit mental health. However, this is not as effective in restoring people's wellbeing as rural nature (*Menardo et al., 2019*).



As discussed previously, biodiversity is an important feature of rural nature that benefits mental health. In studies in the UK and Australia, a greater percentage of vegetation in the neighbourhood (e.g. street trees, and gardens) and an abundance of birds were linked to many positive effects. These were: lower levels of depression, anxiety, and stress; and better personal wellbeing and neighbourhood wellbeing (a measure of a person's satisfaction with their neighbourhood) (Cox et al., 2017; Luck et al., 2011).

It should be noted that variables such as a person's age and level of social and physical activity largely explained the relationship in one of these studies, suggesting there is not a simple relationship between urban biodiversity and wellbeing.

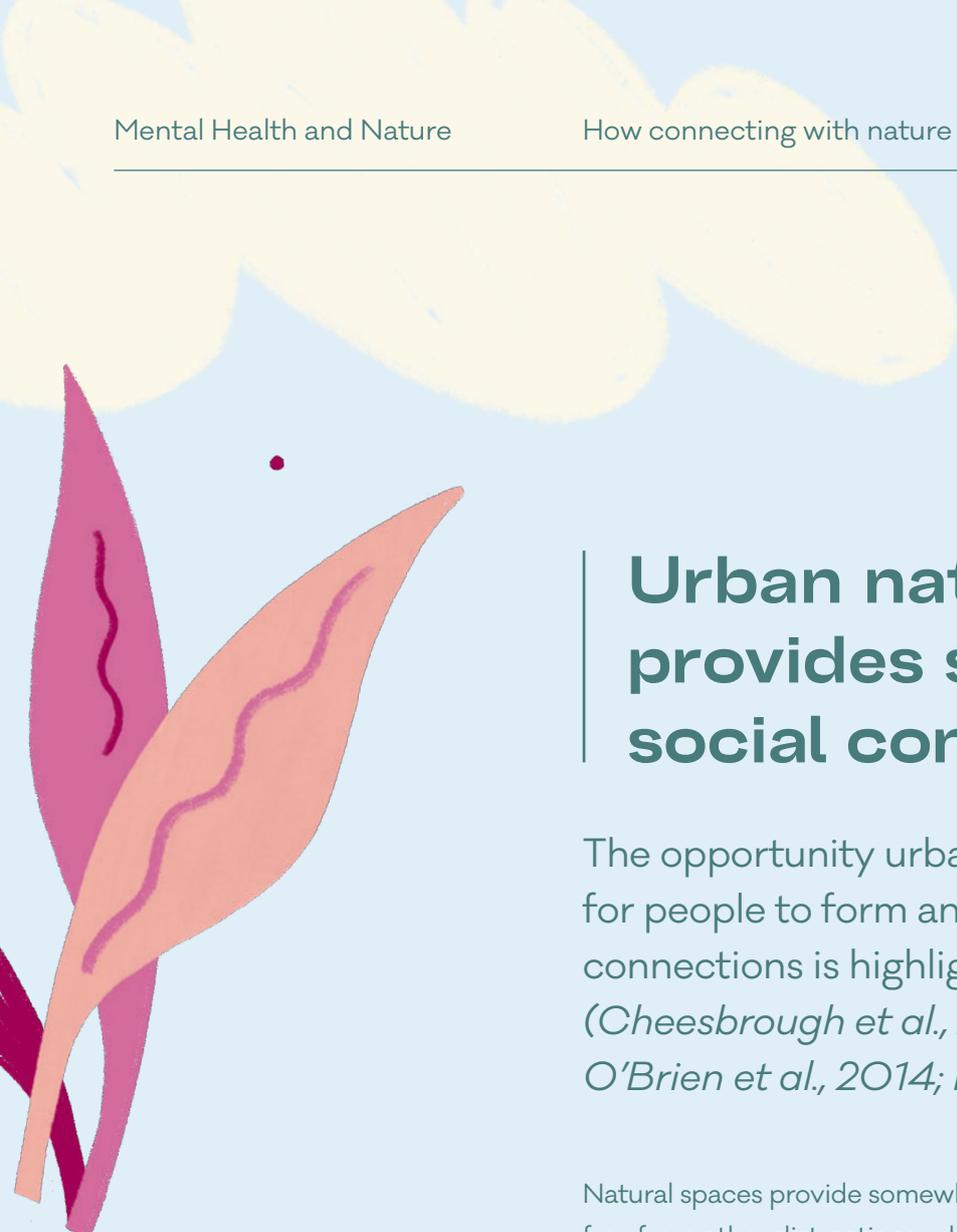


Another study found higher vitality and lower anxiety were reported by people in more richly biodiverse urban environments (*Wolf et al., 2017*).

Furthermore, perception of higher biodiversity and 'naturalness' of urban green spaces (i.e., such as, being untouched by humans) has been linked to more positive nature experiences (*Cameron et al., 2020; Hedblom et al., 2017*).

Given the importance of biodiversity in urban settings, a balance needs to be struck between maintained and wild/natural green spaces to achieve maximum positive benefit.

Another element that needs to be considered in this balance is how safe people feel in green spaces – including women, younger people, disabled people, and people who experience racism (see overleaf).



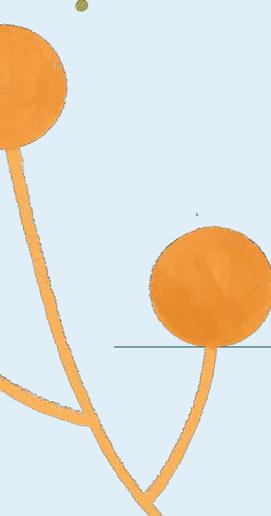
## Urban nature provides spaces for social connections

The opportunity urban nature provides for people to form and develop social connections is highlighted by many researchers (*Cheesbrough et al., 2019; Hordyk et al., 2015; O'Brien et al., 2014; Rugel et al., 2019*).

Natural spaces provide somewhere to talk and connect with others, free from other distractions, while appreciating the surroundings (*Cheesbrough et al., 2019*). Beautiful, calm and serene nature is also linked to pro-social behaviours, such as volunteering time to help others and donating more money to charity (*Zhang et al., 2014*).

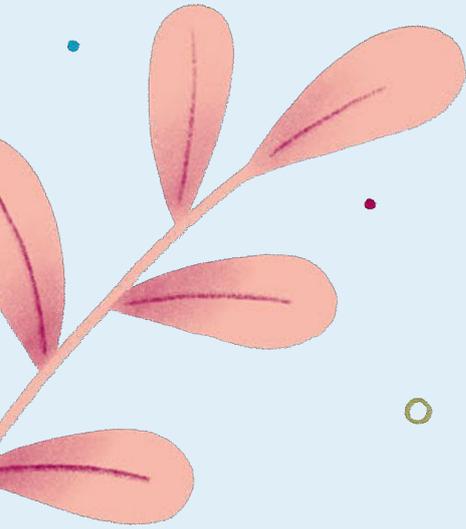
The importance of nature in urban environments has been articulated by a small study where young people from Black, Asian, and minority ethnic groups were interviewed (aged 17-27 years old). This study found that trees, water, open spaces and views in their urban environment offered benefits connected to mental health. Benefits included a stronger sense of self, feelings of "escape" and of connection with and care for the wider human and non-human worlds (*Birch et al., 2020*).

Similarly, young people from indigenous groups (aged 15-25 years old) in Canada found urban nature to be calming and to provide a sense of hope, helping youth to cope with stress, anger, fear, and difficult situations (*Hatala et al., 2020*).



# 25%

of young adults aged 18-24 said that they had been prevented from enjoying nature in the way they would like to because of not feeling physically safe or safe from harm.



However, these benefits can be reduced where the features of nature are poorer. Uncared for and unsafe-feeling “natural”, green and blue spaces can reduce young people’s likelihood of visiting what could otherwise be a helpful resource (*Birch et al., 2020*).

Greater public green space cleanliness has been linked to lower rates of depression, suggesting that cleanliness may therefore be more important than green space size and overall quality. Examples of good quality nature include: the presence of signage; provision of facilities such as bins, seats and toilets; maintenance of paths; safety; planting and plant management (*Mears et al., 2020*).

The upcoming sections explore how nature can be utilised in settings used by significant parts of the population such as children and older people, or those at higher risk of mental health problems.

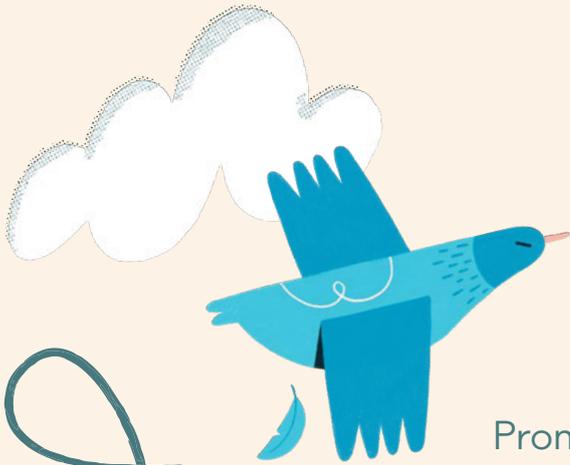
## Benefits of nature to children

**We all connect with nature in different ways and we have our individual preferences.**

Although we might have a natural tendency to connect and identify with the natural world, this may be shaped by early childhood experiences (*Piccininni et al., 2018*). Research tells us that the parents’ or guardians’ connection with nature can influence and impact their child’s future connection.

This is regardless of the child’s age, level of neighbourhood deprivation, and access to green space (*Holli-Anne Passmore, Leanne Martin, Miles Richardson, Matthew White, Anne Hunt, 2020*).

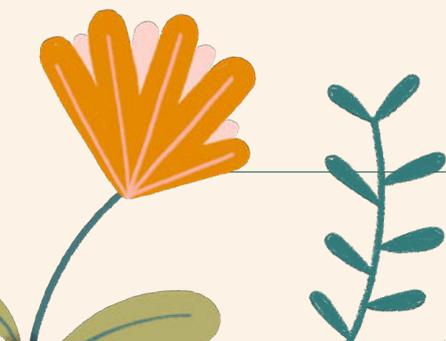




Promoting young people's connection with nature is important, as adolescents (aged 11-15 years old) who perceive connection with nature as important have been found to have better psychological wellbeing than adolescents who do not (*Capaldi A. et al., 2014; Martin et al., 2020*).

Education outside the classroom in nature may also have benefits for child wellbeing, although the evidence is slightly contradictory. In one study with preschool children in outdoor classrooms, teachers reported evidence of improved wellbeing, but the children did not report similar improvements in happiness (Largo-Wight et al., 2018). Among older children, however, education outside the classroom was found to promote social wellbeing, particularly for pupils of low socioeconomic status. This was potentially most beneficial when concentrated into fewer, longer sessions (Bølling et al., 2019). **This shows the importance of carefully designed programmes that develop a close relationship with nature, rather than simply providing an outdoor environment or facts and figures about nature.**

Forest schooling has been shown to benefit children's wellbeing by enabling them to let off steam, shout and run. It also provides opportunities for calm reflection, confiding in peers and interacting with family members (Thomas & Thompson, 2005). Forest schooling has also been shown to increase the self-confidence of children by enabling them to initiate their own ideas of play, by trying out new activities, taking leadership roles in woodland play with their peers, and demonstrating a higher level of independence (*O'Brien & Murray, 2006*).





Educational settings may provide an opportunity to increase children and young people's connection with nature, and potentially reduce mental health inequalities. An induction programme for children transitioning to secondary school that included bespoke outdoor adventure activities tailored to the school's educational objectives

or aspects of self-determination, such as a group-planned nature-based journey, achieved the most improvement in children's psychological wellbeing and self-determination, when compared to a generic outdoor adventure residential and a non-outdoor adventure school-based induction programme (Slee & Allan, 2019).

## Nature in health and social care settings is being promoted and more research is needed as to its benefits for mental health

Green social prescribing is being used increasingly by the NHS to improve physical and mental health and to address inequality of access to green space. Green prescribing is where individuals are linked to nature-based interventions and activities, such as local walking for health schemes, community gardening and food-growing projects.



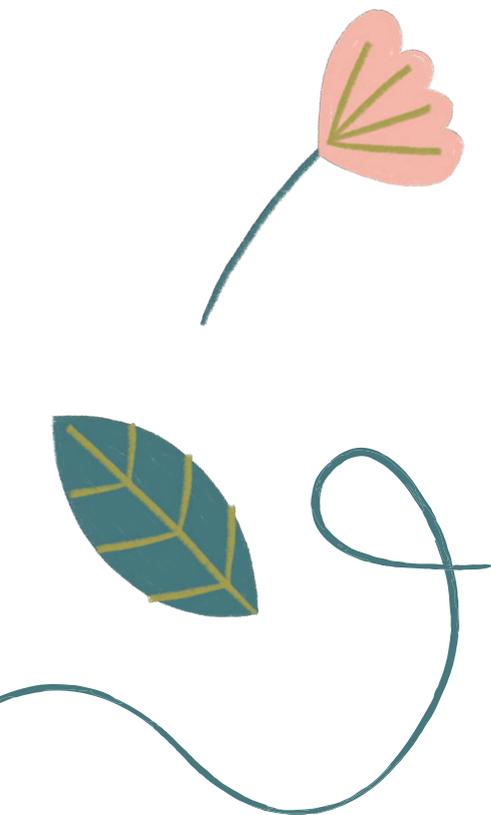
Green care interventions such as social and therapeutic horticulture, care farming and environmental conservation are linked to reductions in depression, anxiety, and stress symptoms. People involved in these types of green care interventions have a greatly increased level of social contact and inclusion, as well as a sense of belonging and personal achievement all of which are good for mental health (Bragg, R., Atkins, 2016).

**The NHS is committed to increasing access to green space on or near to NHS land through the NHS Forest initiative to improve the health and wellbeing of patients, staff and communities. It aims to encourage greater social cohesion between NHS sites and the local communities around them.**

**Projects bring together professionals and volunteers to use woodland for art, growing food, reflection and exercise, and to encourage biodiversity.**

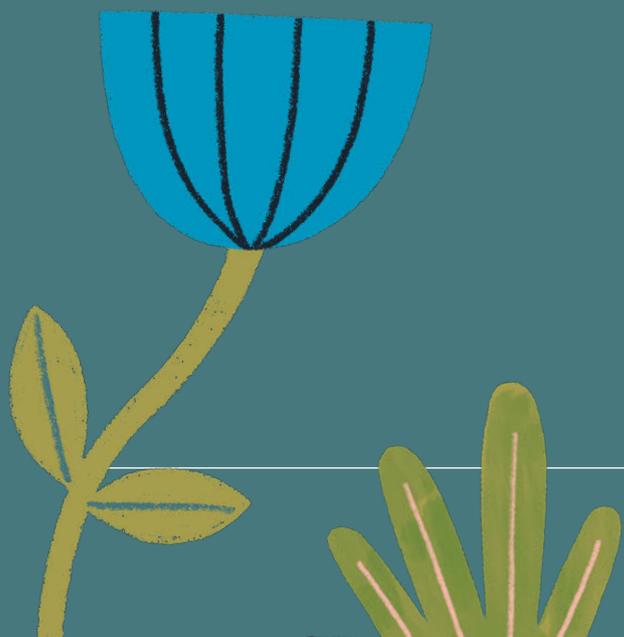
The NHS Forest initiative also models innovative ideas to encourage the use of gardens and other green space for therapeutic purposes. The NHS Forest is in its early stages therefore results are not yet available regarding its effect on mental health.

Associations have been found between greenery in residential care settings and some aspect of residents' mental wellbeing (for example, quality of life and depression). Garden use showed the strongest associations, but there were also benefits from the mere presence of a garden and indoor/outdoor plants (*Carver et al., 2020*). Research finds that some groups of patients in healthcare settings who benefited from a view of nature through a window, reported improvements in their physical and mental health during their residential stay (*Raanaas et al., 2012*). This is particularly relevant considering that nearly 500,000 people live in care homes (*Competition & Markets Authority, 2017*).



# 05

## Implications & Conclusions



There is enough evidence to inform policy-makers and practitioners of the longer-term benefits of nature and human interconnectedness with nature and to ensure that nature is at the heart of how we live and work.

The research evidence tells us we can develop a new relationship with the natural world by noticing nature, and that doing so has been found to bring improvements in mental health.

We need a society that facilitates regular and sustained engagement with nature within more biodiverse spaces to maintain population wellbeing and resilience. This has wider implications for the design of our places. From the need for networks of green corridors to help reverse the decline in biodiversity, to considering the cultural aspects of green cities, such as moving beyond exposure to new relationships with nature. For example, urban nature festivals and symbolic celebrations of nature across the seasons (Richardson 2016).

Urban parks in town and cities could be a way to bring nature to all residents, provided they can be made safe and accessible. By applying universal design principles and ensuring people's safety, parks and amenities within them can be accessed and enjoyed by everyone. Another way to bring nature into people's daily lives is to ensure that streets in our cities, towns and neighbourhoods have trees and flowers alongside (or at least visible from) walkways and routes to public transport and shopping areas.





Long-term planning for urban “greenways” connecting parks, the public, routes of transit, schools, and shops, with prompts to notice this nature, would improve the lives of all residents. There is also a need to consider how to counter the urban noise that can block access to the sounds of nature, such as birdsong.

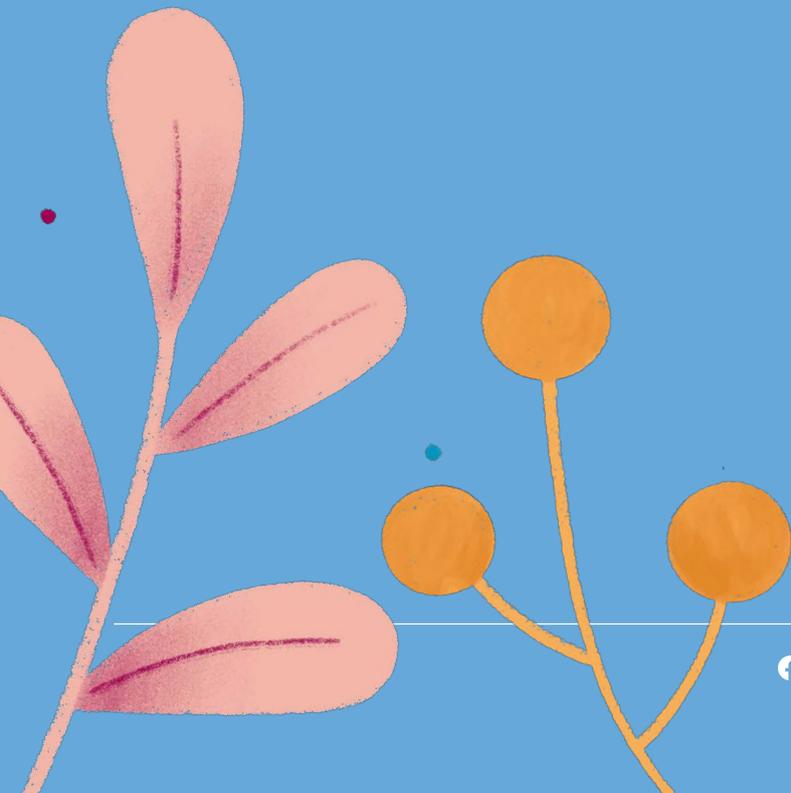
It is important to note that current evidence is based on a lot of

cross-sectional and self-reported studies, which means that people tell us how they feel about nature at different points in time. Despite the increasing research in this area, a need remains for on-going investment in experimental studies over time on the relationship between nature, neuroscience and the impact on mental health and wellbeing to strengthen the existing evidence base cited in this report.



Overall, the most important implication of this research evidence is a need to shift our focus from getting people to visit natural and sometimes remote spaces to giving more attention to the nature around them. This includes focusing on how people can tune in and connect with “everyday” nature close to home through simple activities. Not only does this closer relationship with nature improve mental wellbeing, it helps nature too.

# 06 Policy Recommendations

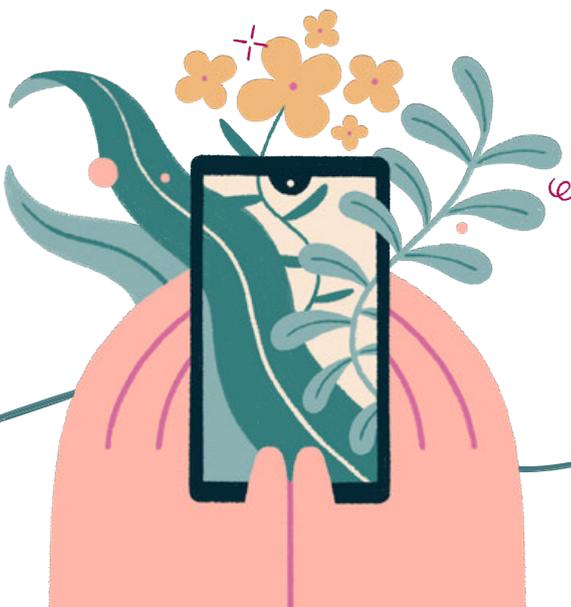


The natural environment has the potential to be enormously beneficial to our health and wellbeing, yet almost everywhere we look, the role and visibility of nature is diminishing. Government action is needed to turn this around.

Despite the continued decline in the state of nature, 2021 is a year of enormous opportunity. Our collective experience of the coronavirus pandemic has spurred something of a renaissance in our relationship with nature and the outdoors and, later in the year, the UK will be hosting the UN Climate Change Conference (COP26), as well as the G7 Summit in July, which will have a strong environmental component.

This is a chance to acknowledge the intrinsic link between nature’s wellbeing and our own, and to put better mental wellbeing for all at the heart of our environmental policies.

Based on the evidence presented in this report, we propose the following recommendations for the governments of the UK.



## 01. Facilitating connection with nature

We recommend that the UK governments’ focus on connection with nature in the formation of all policies relating to nature and mental health. Connection with nature should be the measure of each policy’s efficacy, rather than measuring the time spent in nature or the number of visits to nature (as is so often the case with many policies, such as “green prescribing”).

## 02. Protecting the natural environment and restoring biodiversity

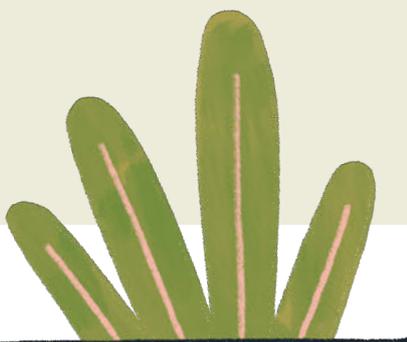
We recommend that the UK governments' set ambitious interim and outcome targets to halt the decline of species and habitats in the UK by 2030. Their delivery plans should prioritise biodiversity gain in deprived areas to bring the wellbeing benefit of nature to the communities that need it most. These targets should be in line with the UK Government's commitment as a member of the High Ambition Coalition for Nature and People to halt global biodiversity loss by 2030.

## 03. Improving access to nature

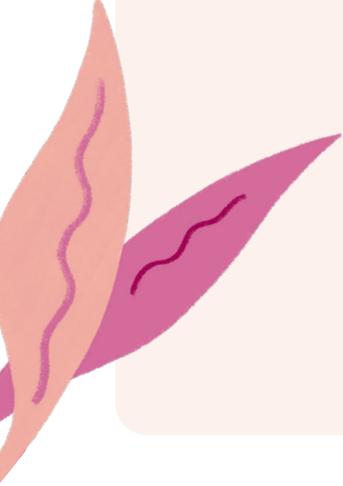
We recommend that local authorities across the UK should strive to maintain and improve green spaces so that they can be accessed and enjoyed by all. Local authorities should seek opportunities to increase the amount of green space and the number of parks available to communities, especially in areas that have poor existing provision or where barriers such as safety and accessibility are a concern. Local authorities should adopt universal design and ensure that green spaces are accessible for disabled people.

## 04. Making green spaces safe for all

We recommend that local authorities work with local community groups and police services to ensure that the green spaces for which they are responsible are safe and can be enjoyed by everyone, free from fear of harassment, sexual harassment, violence and discrimination.



## 05. Using the planning system and urban design to improve the visibility and availability of nature in every local area



We recommend that planners look for natural places of rest or pause, such as at bus stops or in places where queues regularly form, and build up the nature visible in these places.

Local authorities also have a convening role in bringing together

public health experts, planners, local nature partnerships, and other partners to ensure that local planning and policy-making all works towards the common goal of developing the natural environment, urban or otherwise, to support people's connection with nature.

## 06. Developing a life-long relationship with nature

To address the 'teenage dip' in interest in and connection with nature, we recommend that nature is woven into secondary-school life as a way of teaching curriculum subjects. Nature is not only something to learn about, but something to interact and connect with. Classes should include outdoor activities that support the learning of curriculum subjects; nature should be a part of the learning process.

This needs to be accompanied by changes to school estates to prioritise and protect wild areas and green areas for such purposes. All new schools should be planned with nature in mind and the governments across the UK should review the amount and type of green space available in secondary schools and develop a plan for building it in to the schools' ways of teaching.

**Note:** More detailed policy analysis on these issues is also available for policy-makers and others who wish to consider these policy areas in more depth. These are: our policy briefing for England, our policy briefing for Wales, and our Scotland MHAW report.

# Our top tips on connecting with nature to improve your mental health



There's a lot of good research to support the role nature can play in protecting and supporting our mental health. For many of us though, "being in nature" may not be as easy as it sounds.

The good news is, you don't have to climb a mountain to feel the benefit – there are lots of simple ways to bring nature into your everyday.

**Here are some top tips on how you can develop your own connection with nature:**

## 01. Find nature wherever you are

Nature is all around us. It might be a garden, a local park, a nearby beach or open countryside. Even in cities where nature can be harder to find, there are community gardens or courtyards to discover and explore. Look out for the unexpected – an urban fox on your way out for the early shift, changes in the weather or birdsong outside your window. Try to notice nature wherever you are, in whatever way is meaningful for you.

## 02. Connect with nature using all of your senses

Taking some quiet time to reflect in natural surroundings using all your senses can be a real boost to your mental health. Whether you're relaxing in the garden or on your way to work, try listening out for birdsong, look for bees and butterflies, or notice the movement of the clouds. All of these good things in nature can help you to find a sense of calm and joy.

## 03. Get out into nature

If you can, try to spend time visiting natural places – green spaces such as parks, gardens or forests – or blue spaces such as the beach, rivers and wetlands. This can help you reduce your risk of mental health problems, lift your mood and help you feel better about things. If it feels daunting to get outside, try going with a friend or relative, or picking somewhere familiar.

## 04. Bring nature to you

Nature is all around us. It might be a garden, a local park, a nearby beach or open countryside. Even in cities where nature can be harder to find, there are community gardens or courtyards to discover and explore. Look out for the unexpected – an urban fox on your way out for the early shift, changes in the weather or birdsong outside your window. Try to notice nature wherever you are, in whatever way is meaningful for you.

## 05. Exercise in nature

Nature is all around us. It might be a garden, a local park, a nearby beach or open countryside. Even in cities where nature can be harder to find, there are community gardens or courtyards to discover and explore. Look out for the unexpected – an urban fox on your way out for the early shift, changes in the weather or birdsong outside your window. Try to notice nature wherever you are, in whatever way is meaningful for you.

## 07. Protect nature

Taking care of something can be a really great way to feel good. And what better thing to take care of than nature? Nature is truly amazing – do what you can to look after nature - in your actions and choices. This can be as simple as recycling, to walking instead of driving, or even joining community conservation or clean-up groups. Taking care of nature can help you feel that you're doing your part, and that can make you feel more positive all round.

## 06. Combine nature with creativity

Taking some quiet time to reflect in natural surroundings using all your senses can be a real boost to your mental health. Whether you're relaxing in the garden or on your way to work, try listening out for birdsong, look for bees and butterflies, or notice the movement of the clouds. All of these good things in nature can help you to find a sense of calm and joy.



These are just a handful of the ways you can connect with nature. You can also download our free “Thriving with Nature” guide – created in partnership with WWF-UK – for even more tips a

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All figures described as coming from 'our poll' are from YouGov Plc. Total sample size was 4274 UK adults. Fieldwork was undertaken between 6th - 8th April 2021. The survey was carried out online. The figures have been weighted and are representative of all UK adults (aged 18+).



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