

# **COVID-19 and greenspace use**

**Survey findings summary**

Publication date: 6 July 2022



Translations



Easy read



BSL



Audio




Large print



Braille

Translations and other formats are available on request at:

 [p hs.otherformats@p hs.scot](mailto:p hs.otherformats@p hs.scot)

 0131 314 5300

Public Health Scotland is Scotland's national agency for improving and protecting the health and wellbeing of Scotland's people.

© Public Health Scotland 2022

0767 7/2022

**OGL**

This publication is licensed for re-use under the [Open Government Licence v3.0](#).

For more information, visit

[www.publichealthscotland.scot/ogl](http://www.publichealthscotland.scot/ogl)



[www.publichealthscotland.scot](http://www.publichealthscotland.scot)

# Contents

- The Environment and Spaces for Public Health Partnership Group 3
- Acknowledgements 4
- 1. Introduction 5
- 2. Background 5
- 3. Main survey findings 6
  - 3.1. Use of greenspace 6
  - 3.2. Inequalities in greenspace use 6
  - 3.3. Greenspace impact on mental health 8
  - 3.4. Greenspace at home 8
  - 3.5. Impact on children and young people 9
  - 3.6. Barriers to greenspace use 9
- 4. Conclusion 10
- References 12

# The Environment and Spaces for Public Health Partnership Group

This report was produced by the Data and Evidence subgroup of the Environment and Spaces for Public Health Partnership Group, previously the Social and System Recovery Environment and Spaces Group. The group, which is hosted by Public Health Scotland (PHS), was established to bring together evidence on how our responses to the COVID-19 pandemic have affected our environment and spaces and how people interact within these, articulate how this might impact on people's health and wellbeing, and use this to inform national and local responses to policy and practice.

## **Members of the group include colleagues from:**

Glasgow Centre for Population Health

greenspace scotland

Living Streets

NatureScot

Public Health Scotland

University of Edinburgh

University of Glasgow.

## **Contributors (on behalf of the Environment and Spaces for Public Health Partnership Group, Data and Evidence Subgroup):**

Richard Mitchell, Jonathan Olsen, Julie Procter, Jodi Dean,  
Douglas Mitchell and Ali Macdonald.

## Acknowledgements

This work was partly funded by the UK Medical Research Council (MRC) Places and Health Programme (MC\_UU\_00022/4 ) and the Chief Scientist Office (CSO) (SPHSU19) at the MRC/CSO Social and Public Health Sciences Unit, University of Glasgow.

## MRC/CSO Social and Public Health Sciences Unit



Medical  
Research  
Council



CHIEF  
SCIENTIST  
OFFICE



University  
of Glasgow

With thanks to NatureScot for access and permission to reproduce results from the three waves of 'Enjoying the Outdoors: Monitoring the impact of Coronavirus and social distancing'.



# 1. Introduction

Mitigation measures introduced to reduce transmission of COVID-19 resulted in changes in the use of local greenspaces. This briefing provides an overview of findings from surveys carried out by NatureScot,<sup>1,2,3</sup> YouGov/University of Glasgow,<sup>4,5,6</sup> and Public Health Scotland<sup>7,8,9,10</sup> looking at visits to and use of greenspace during the pandemic.

# 2. Background

There is strong evidence that greenspaces such as parks, river corridors and woodlands benefit both physical and mental health.<sup>11,12</sup> Greenspace affects health in many ways, including directly through nature itself reducing stress, through physical activity, and by the social interaction that happens there.<sup>11,12</sup> Recent evidence shows the positive impact on stress and anxiety is particularly strong.<sup>13</sup> Additionally there is strong evidence that exposure to greenspace can have significant health benefits for children and young people with access to greenspace associated with improved mental wellbeing, overall health and enhanced cognitive development.<sup>14</sup>

The availability, quality and use of greenspace is, however, unequal.<sup>15,16</sup> Before the pandemic, people living in the most deprived areas were less likely to live within a five-minute walk of the nearest greenspace.<sup>16,17</sup> Furthermore, people who experience higher levels of socio-economic deprivation, have a long-term health condition or are disabled and/or non-white were also more likely not to visit greenspaces at all, or to do so infrequently.<sup>18</sup> As there is some evidence that the benefits from greenspace are felt more strongly by populations experiencing deprivation, greenspaces may have an important role to play in tackling health inequalities.<sup>12</sup>

## **3. Main survey findings**

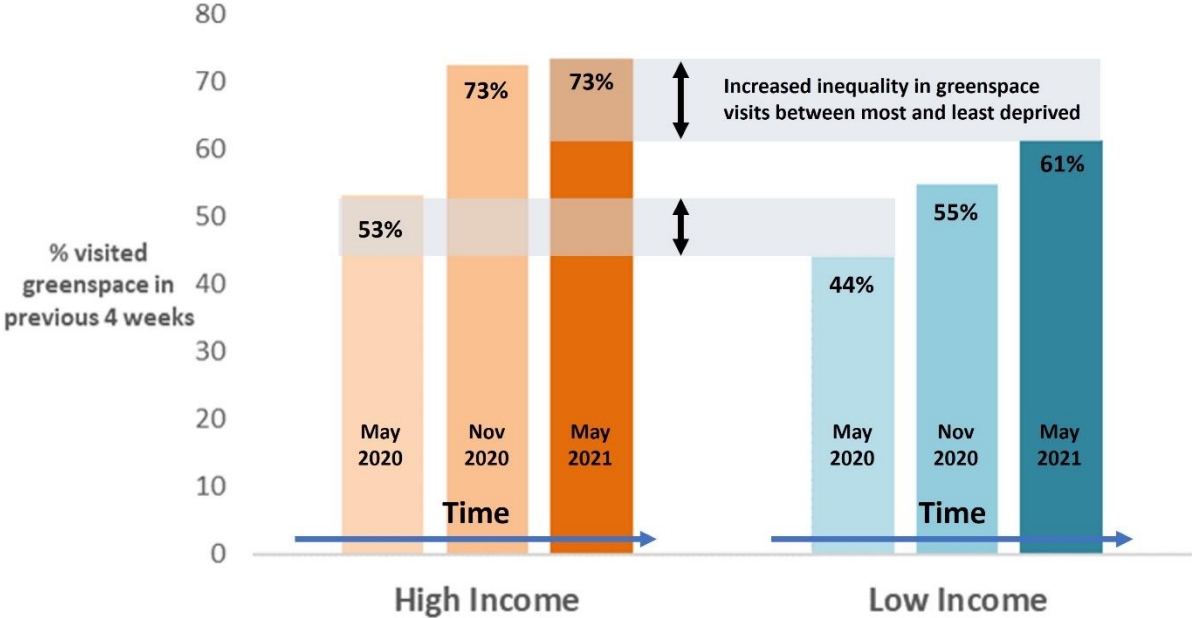
### **3.1. Use of greenspace**

In general, use of greenspace increased during the COVID-19 pandemic. Surveys vary in both timing and measurement but data from NatureScot suggest that participation rose to 77% of the population visiting greenspace at least once a week by the end of 2021 from about 60% in 2019, before the pandemic. The proportion who reported never visiting natural space at all also fell, by about a third. So far, these increases in visiting greenspace have been largely sustained, although there are signs of a return to pre-pandemic levels in the most recent data.

### **3.2. Inequalities in greenspace use**

Socio-economic inequality in relation to use of greenspace increased during the pandemic. Data from the University of Glasgow show greater rises in reported use of greenspace among more advantaged groups than disadvantaged (Figure 1). Employment type may have been an influence, with those permitted, or better able, to work from home having more opportunity to visit greenspace. Increases in visits were also generally greater among younger people than older and in those who were private renters and/or homeowners than social housing tenants. This is despite social housing tenants tending to have less access to an outdoor space or garden at home.

**Figure 1: Visits to greenspace in previous four weeks by socio-economic status<sup>6</sup>**

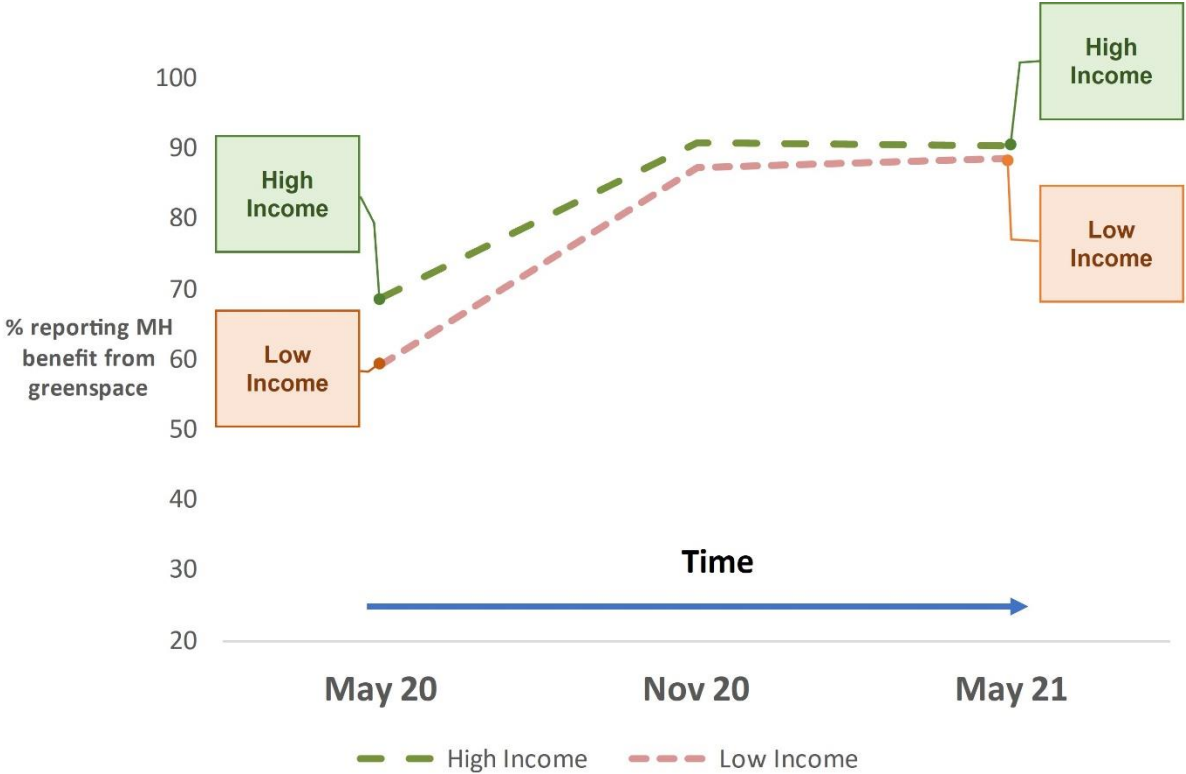




### 3.3. Greenspace impact on mental health

For those that did visit, greenspaces became very important venues for exercise, social interaction and stress recovery. Greenspaces are now more appreciated for their mental health benefits, with surveys registering between 70% and 90% agreement that they benefit mental health. Both high-income and low-income groups reported mental health benefits from greenspace with the gap in reported benefits between groups decreasing over time (Figure 2).

**Figure 2: Reported benefit of being in greenspace for mental health (MH)<sup>6</sup>**



### 3.4. Greenspace at home

During the pandemic, having greenspace at home, such as a garden, patio or balcony, increased in importance for some groups. Older people in particular used these to a greater extent and they were also important spaces for children to play.

Those living in flats, social housing and/or private renters were less likely to have these spaces at home and were also less likely to have visited greenspace at all.

### **3.5. Impact on children and young people**

The first COVID-19 Early Years Resilience and Impact Survey (CEYRIS) found that while one third of children had visited a park or other local greenspace on at least four out of the last seven days, one third of children had not visited any public greenspace in the previous week. In the second CEYRIS survey again one third of children had not been to a greenspace in the last week, and children living in social housing, low-income households and/or with no access to outside space at home were less likely to have played outside at any time in the previous week. Importantly, the third CEYRIS survey found that as well as having less access to greenspace and reporting less use of greenspace, fewer families from lower-income households reported positive experiences of greenspace, both at home and in the local area. This is linked to safety, size and other quality-related factors.

### **3.6. Barriers to greenspace use**

As the pandemic progressed and guidance changed, there were shifts in reported barriers to the use of greenspace. Initially, barriers relating directly to the risk of COVID-19 itself were highlighted. Older people, for example, were more likely to report not visiting greenspace because of worries about physical distancing or risk of contagion. As better information became available about the risks and vaccination was rolled out, access, quality and time available to visit greenspace became relatively more important.

## 4. Conclusion

People who used greenspaces during the pandemic reported positive benefits, particularly for their mental health and wellbeing. However, not everyone experienced these benefits equally. While many people's use of greenspace increased, some people, including those that did not have access to a garden or shared outdoor space at home, did not access or use parks and other public greenspaces.

Before the pandemic, evidence suggested underlying inequalities in access to and use of high-quality green and open spaces. Survey findings during the pandemic indicate these inequalities may have widened. There is a need for concerted and focused action to maximise the positive health and wellbeing impacts of greenspace and to reduce health inequalities.

Scotland's National Performance Framework includes an indicator measuring the proportion of adults who live within a five-minute walk of their local green or blue space.<sup>16</sup> There has been little change to this indicator in the last four years with around two thirds (65%) of people living within a five-minute walk of green or blue space. Action should aim to improve progress on this indicator, while simultaneously addressing the disparity in the quality of and use of these spaces for those who did not experience the benefits before and during the pandemic.

Adopting a 'Health in All Policies' approach, considering the potential impacts on a range of health determinants, including greenspace access, when developing policies and plans, is central to this response.

The survey findings highlight the need to use the opportunities offered by Scottish Government policies or initiatives that promote and improve access to green and open spaces, particularly for those without access to gardens at home or high-quality greenspace close by. Improvements are required in the provision of, access to and use of, high-quality local greenspaces, with a range of different types of greenspace to meet different needs, abilities and interests.

Gardens and other attractive green and open spaces at home are an important resource, especially for children, older people and those with underlying health

conditions. Findings suggest that public and private greenspaces meet different needs and planning and housing policy should take account of their different contributions. Policy opportunities include providing gardens for new housing;<sup>19</sup> retrofitting of existing provision;<sup>20</sup> ensuring access to good-quality greenspaces within 20-minute neighbourhoods;<sup>21</sup> and action to address unequal access to greenspace through open space strategies and play sufficiency assessments.<sup>22</sup> Local implementation of spatial planning policy should take account of the proposed outcomes in draft National Planning Framework 4 and Open Space Strategy regulations on improving health and wellbeing and advancing equality and eliminating discrimination.

Ensuring the benefits of greenspace that many experienced during the pandemic are sustained, and can be realised for all regardless of age, gender, income, housing tenure or disability, will require a multi-agency response working with communities. This will include planning and local authority services, housebuilders and developers, community planning partners and voluntary sector organisations.

The surveys demonstrate the importance of green and open spaces, particularly for mental health and wellbeing, with 90% of greenspace users in the YouGov/University of Glasgow surveys reporting that spending time in green and open spaces benefitted their mental health. These benefits were sustained over time and are similar between socio-demographic groups. Over time the gap in reported benefits between high-income and low-income groups closed for those who visited greenspace, suggesting access to greenspace has an important contribution to make in tackling health inequalities. Public mental health policy should therefore explicitly include the benefits of green and open spaces for mental wellbeing.

Evidence and experience during the pandemic have shown that greenspace can be a powerful public health resource and community health asset, supporting physical activity, mental wellbeing, healthy child development and, by connecting individuals and communities, is a valuable tool in tackling loneliness and isolation.

## References

- <sup>1</sup> Stewart D, Eccleston J. 2020. Enjoying the Outdoors: Monitoring the impact of Coronavirus and social distancing. NatureScot Research Report No. 1252. [www.nature.scot/doc/naturescot-research-report-1252-enjoying-outdoors-monitoring-impact-coronavirus-and-social](http://www.nature.scot/doc/naturescot-research-report-1252-enjoying-outdoors-monitoring-impact-coronavirus-and-social) (Accessed 31 May 2022).
- <sup>2</sup> Stewart D, Eccleston J. 2020. Enjoying the Outdoors: Monitoring the impact of Coronavirus and social distancing – Wave 2 survey results (September 2020). NatureScot Research Report No. 1255. [www.nature.scot/doc/naturescot-research-report-1255-enjoying-outdoors-monitoring-impact-coronavirus-and-social](http://www.nature.scot/doc/naturescot-research-report-1255-enjoying-outdoors-monitoring-impact-coronavirus-and-social) (Accessed 31 May 2022).
- <sup>3</sup> Stewart D, Eccleston J. 2022. Enjoying the Outdoors – Monitoring the impact of Coronavirus and social distancing – Wave 3 survey results (September 2021). NatureScot Research Report No. 876. [www.nature.scot/doc/naturescot-research-report-1289-enjoying-outdoors-monitoring-impact-coronavirus-and-social](http://www.nature.scot/doc/naturescot-research-report-1289-enjoying-outdoors-monitoring-impact-coronavirus-and-social) (Accessed 31 May 2022).
- <sup>4</sup> Olsen J, Mitchell R. October 2020. S&SR Environment and Spaces Group – Change in use of green and open space following COVID-19 lockdown ‘stay at home’ phase and initial easing of lockdown. [www.gla.ac.uk/media/Media\\_757600\\_smxx.pdf](http://www.gla.ac.uk/media/Media_757600_smxx.pdf) (Accessed 2 June 2022).
- <sup>5</sup> Olsen J, Mitchell R. March 2021. S&SR Environment and Spaces Group Report: COVID-19 Green and Open Space Use in Autumn 2020. [www.gla.ac.uk/media/Media\\_779126\\_smxx.pdf](http://www.gla.ac.uk/media/Media_779126_smxx.pdf) (Accessed 2 June 2022).
- <sup>6</sup> Olsen J, Mitchell R. September 2021. S&SR Environment and Spaces Group Report: COVID-19 Green and Open Space Use in Spring 2021 (Wave 3) Priorities for pandemic recovery. [www.gla.ac.uk/media/Media\\_805950\\_smxx.pdf](http://www.gla.ac.uk/media/Media_805950_smxx.pdf) (Accessed 2 June 2022).
- <sup>7</sup> Public Health Scotland. Use of private and public greenspace by housing tenure during the COVID-19 pandemic. (In print – publication expected September/October 2022). Edinburgh: Public Health Scotland; 2022.

Please contact PHS Place and Equity at [phs.placeandequity@phs.scot](mailto:phs.placeandequity@phs.scot) for more information.

- <sup>8</sup> Watson M, Sarica S, Parkinson J, Mitchell R, Wason D. COVID-19 Early Years Resilience and Impact Survey (CEYRIS). Report 2 – Play and learning, outdoors and social interactions in children in Scotland aged 2–7 during COVID-19. Edinburgh: Public Health Scotland; 2020.  
<https://publichealthscotland.scot/publications/covid-19-early-years-resilience-and-impact-survey-ceyris> (Accessed 31 May 2022).
- <sup>9</sup> Public Health Scotland. COVID-19 Early Years Resilience and Impact Survey (CEYRIS): Findings from round two (November/December 2020). Edinburgh: Public Health Scotland; 2021.  
<https://publichealthscotland.scot/publications/covid-19-early-years-resilience-and-impact-survey-ceyris-findings-from-round-2> (Accessed 2 June 2022).
- <sup>10</sup> Public Health Scotland. COVID-19 Early Years Resilience and Impact Survey (CEYRIS) – Round 3 – Report 2 – Children’s play, learning and experience of infection control measures. Edinburgh: Public Health Scotland; 2022.  
<https://publichealthscotland.scot/publications/covid-19-early-years-resilience-and-impact-survey-ceyris-report/covid-19-early-years-resilience-and-impact-survey-ceyris-findings-from-round-three-september-to-october-2021> (Accessed 2 June 2022).
- <sup>11</sup> WHO Regional Office for Europe. Urban green spaces and health: a review of evidence. Copenhagen: WHO Regional Office for Europe; 2016.  
[www.euro.who.int/\\_\\_data/assets/pdf\\_file/0005/321971/Urban-green-spaces-and-health-review-evidence.pdf](http://www.euro.who.int/__data/assets/pdf_file/0005/321971/Urban-green-spaces-and-health-review-evidence.pdf) (Accessed 20 May 2022).
- <sup>12</sup> Public Health England. Improving access to greenspace: A new review for 2020. London: Public Health England; 2020.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/904439/Improving\\_access\\_to\\_greenspace\\_2020\\_review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf) (Accessed 31 May 2022).

- <sup>13</sup> Beute F, Andreucci MB, Lammel A et al. Types and characteristics of urban and peri-urban green spaces having an impact on human mental health and wellbeing. Report prepared by an EKLIPSE Expert Working Group. Wallingford: UK Centre for Ecology & Hydrology; 2020. <https://eklipse.eu/request-health> (Accessed 22 May 2022).
- <sup>14</sup> Islam MZ, Johnston J, Sly PD. Green space and early childhood development: a systematic review. *Reviews on Environmental Health*. 2020 Jun 25;35(2):189-200. doi: [10.1515/reveh-2019-0046](https://doi.org/10.1515/reveh-2019-0046). PMID: 32167931. (Accessed 16 June 2022).
- <sup>15</sup> Office for National Statistics. (2020). One in eight British households has no garden. [www.ons.gov.uk/economy/environmentalaccounts/articles/oneineightbritishhouseholdshasnogarden/2020-05-14](http://www.ons.gov.uk/economy/environmentalaccounts/articles/oneineightbritishhouseholdshasnogarden/2020-05-14) (Accessed 2 June 2022).
- <sup>16</sup> Scottish Government National Indicator Performance, Access to green and blue space. <https://nationalperformance.gov.scot/measuring-progress/national-indicator-performance> (Accessed 31 May 2022).
- <sup>17</sup> Mears M, Brindley P, Maheswaran R, Jorgensen A. (2019). Understanding the socioeconomic equity of publicly accessible greenspace distribution: The example of Sheffield, UK. *Geoforum* 2019;103:126–137.
- <sup>18</sup> Stewart D, Eccleston J. 2020. Scotland's People and Nature Survey 2019/20 – outdoor recreation, health, and environmental attitudes modules. NatureScot Research Report No. 1227. [www.nature.scot/doc/naturescot-research-report-1227-scotlands-people-and-nature-survey-201920-outdoor-recreation-health](http://www.nature.scot/doc/naturescot-research-report-1227-scotlands-people-and-nature-survey-201920-outdoor-recreation-health) (Accessed 31 May 2022).
- <sup>19</sup> Scottish Government. Housing to 2040. A vision for our future homes and communities. Edinburgh: Scottish Government; 2019. [www.gov.scot/publications/housing-to-2040/pages/what-is-housing-to-2040](http://www.gov.scot/publications/housing-to-2040/pages/what-is-housing-to-2040) (Accessed 31 May 2022).
- <sup>20</sup> Scottish Government. Green infrastructure: design and placemaking. Edinburgh: Scottish Government; 2011. [www.gov.scot/publications/green-infrastructure-design-placemaking](http://www.gov.scot/publications/green-infrastructure-design-placemaking) (Accessed 31 May 2022).

<sup>21</sup> Scottish Government. Scotland 2045 – fourth National Planning Framework – draft: consultation. Edinburgh: Scottish Government; 2021.

[www.gov.scot/publications/scotland-2045-fourth-national-planning-framework-draft](https://www.gov.scot/publications/scotland-2045-fourth-national-planning-framework-draft) (Accessed 31 May 2022).

<sup>22</sup> Scottish Government. Open Space Strategies and Play Sufficiency Assessments Regulations: consultation. Edinburgh: Scottish Government; 2021.

[www.gov.scot/publications/consultation-open-space-strategies-play-sufficiency-assessments-regulations](https://www.gov.scot/publications/consultation-open-space-strategies-play-sufficiency-assessments-regulations) (Accessed 31 May 2022).