CIVIC UNIVERSITIES AND GREEN SPACES: EXPLORING THE CURRENT AND POTENTIAL IMPACT ON THE WELLBEING OF LOCAL COMMUNITIES, STAFF, AND STUDENTS

EVIDENCE REVIEW
BY JACK LAYTON

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National Civic
Impact Accelerator

BACKGROUND

The National Civic Impact Accelerator (NCIA) is an ambitious three-year programme to gather evidence and intelligence of what works, share civic innovations, and provide universities across England with the framework and tools to deliver meaningful, measurable civic strategies and activities. The programme is funded by Research England, part of UK Research and Innovation (UKRI). It aims to drive collaboration and policy and practice innovation, involving universities, local government, business groups, and the community sector to inform place-based transformations

AIMS AND OBJECTIVES

The Institute for Community Studies at The Young Foundation is carrying out primary and secondary research activities to generate an evidence base supporting the NCIA programme. This research focuses on the role of universities in delivering impact in their places, considering the perspectives of a range of organisations, actors and communities, to develop a holistic understanding of the impact of university activities and strategies.

The evidence generation process of the Institute is guided by four co-commissioning panels, which represent a range of stakeholder perspectives. This rapid evidence review responds to the input of the Health and Wellbeing Panel, made up of representatives from universities across England and third sector organisations with a stake in the issue.

Following on from the Institute's Healthy Universities, People and Places evidence review, the panel prioritised three lines of enquiry around the health and wellbeing impact of universities, which the Institute team developed into research questions . The aim is to ensure the evidence produced is as meaningful and useful to a range of stakeholders as possible, within the natural constraints of the project. For a full description of the process and prioritised research topics, please refer to the Research Agenda published by the Institute.

1. INTRODUCTION

Parks and green spaces have long been viewed as vital for the health and wellbeing of urban residents. In the 19th Century, the popular belief was that they functioned as the 'lungs of the city'. Although this view might be best understood as a generous analogy, scientific research continues to underscore just how important access to green spaces is to the health and wellbeing of urban residents. Population-wide studies in the UK have shown that health inequalities, and mortality from circulatory diseases, are lower for populations living in the greenest areas.[1]

Access to green space has been associated with lower mortality from cardiovascular disease, lower rates of obesity and Type 2 diabetes, improved mental health, and increased wellbeing.[2],[3],[4],[5],[6]

Yet research has also highlighted the stark inequalities that exist in access to green space in the UK's towns and cities.[7] People who live in more deprived areas are less likely to live in neighbourhoods with ready access to green spaces.[8] And this is felt most acutely by people from ethnic minority backgrounds, who are less likely to live in neighbourhoods with access to green space than people from white backgrounds.[9] Access to green space is not just a 'nice-to-have' but an important dimension of public health. This clear disparity increases pressure on those institutions and organisations fortunate enough to be able to provide high-quality green space.

With this evidence in mind, large institutional bodies have begun to re-think the ways in which the green spaces they are responsible for can better support the health and wellbeing of local communities. A prime example is NHS Forest.

Starting life as a tree-planting project in 2009, NHS Forest is now an alliance of 360 healthcare sites across the UK, working to better support health, wellbeing and biodiversity. NHS Forest has worked hard to reframe the ways in which the NHS manages its estates – planting trees, creating gardens, organising community activities, conducting research, and hosting conferences. The alliance has also begun consolidating evidence around the impact

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[1] Mitchell, R. and Popham, F. (2008) Effect of exposure to natural environment on health inequalities: An observational population study. The Lancet, 372(9650): 1655-1660.
[2] Gascon, M., et al. (2016) Residential green spaces and mortality: A systemic review. Environment international, 86: 60-67.
[3] Lachowycz, K. and Jones, A. P. (2011) Greenspace and obesity: A systematic review of the evidence. Obesity Reviews, 12(5): 183-9.
[4] Bodicoat, D. H., et al. (2017) The association between neighbourhood greenspace and type 2 diabetes in a large cross-sectional study. BMJ Open, 4(12): 1-8.
[5] Alcock, I., et al. (2013) Longitudinal effects on mental health of moving to green and less green urban areas. Environmental Science and Technology, 48(2): 1247-1255.
[6] White, M. P., et al. (2013) Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. Association for Psychological Science, 24(6): 920-928.
[7] Mell, I. and Whitten, M. (2022) Green space access is not equal in the UK – and the government isn't doing enough to change that. The Conversation, 25th February.
[8] The Health Foundation (2024) Inequalities in access to green space. https://www.health.org.uk/evidence-hub/our-surroundings/green-space/inequalities-in-access-to-green-space.
[9] Health Foundation (2024) Inequalities in access to green space.

of green space on health, and been cited as a critical case study in a Department of Health White Paper.[10]

This alliance approach could model ways for universities to reimagine their role as stewards of green spaces: turning more spaces green; activating spaces to bring communities, students, and staff into them; consolidating research; and promoting policy change. The Health Foundation highlighted that the ways the NHS manages its buildings and spaces could help the organisation realise its role as an anchor institution in locations across the UK.[11] There is similar potential here for universities. Approaching the management of university green spaces with a health and wellbeing objective could be an impactful way for universities to realise their civic potential.

This paper reviews evidence around the relationship between green space, health and wellbeing in the context of universities. Given that the research on the health impact of green space is extensive and well established, this rapid evidence review highlights some key mechanisms through which green spaces achieve a positive impact on wellbeing – as spaces for physical activity, as social infrastructures, and as mitigation against the impacts of climate change -- to inform the ways in which university estate teams, senior leaders, professional services staff and academics think about how university green spaces are used and managed.

After the evidence review are two practical tools. The first is an identifying framework, designed to support the public to better understand the breadth of green spaces that their local university might be responsible for.

The second summarises key principles established in the literature on how green spaces can be managed to support health and accessibility. This is intended to engage estate managers and key university stakeholders, providing some principles and critical questions for those who want to see their local green spaces managed more civically.

As institutions with large footprints, universities and their green spaces have the opportunity to help make towns and cities across the UK greener and healthier.

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[10] UK Government (2010) Health Lives, Healthy People: Our strategy for public health in England.
[11] Reed, et al. (2019) Building Healthier Communities: The role of the NHS as an anchor institution. The Health Foundation.

2. RAPID EVIDENCE DELIVERY

This rapid evidence review was undertaken by using key search terms - 'university', 'green spaces', 'health', 'wellbeing' – to identify peer reviewed articles and literature from think-tanks and policy institutes on the relevant topics. Databases searched included Web of Science, Scopus, and Google Scholar. Given resource constraints, articles were selected for review based on how recently they were published, by number of citations, by how closely they aligned with the research question(s) identified in the evidence brief, and by relevance to the UK context. Articles that addressed the relationship between university green spaces and wellbeing directly were used to identify further articles via their reference lists and citation data. This process generated 22 articles and reports to review.

The method provides a rapid overview of the evidence available. It is not an exhaustive review, and some studies may have been missed. This rapid evidence review therefore provides a concise summary of current knowledge in academic literature on this topic.

2.1 UNIVERSITY GREEN SPACES, STUDENT AND STAFF WELLBEING

There is an established evidence base identifying the health and wellbeing impact of green space on students and young people. A recent systematic review identified how nature exposure for young people improves cognitive function, brain activity, blood pressure, mental health and sleep.[12] The evidence even suggests positive impact over the long term, with longitudinal observational studies highlighting the long-term impact on depression and anxiety. For students in particular, a 2023 systematic review identified how green spaces on campus increased levels of physical activity, supported mental health, and provided thermal comfort.[13]

This is supported by systematic reviews looking at the role of urban green spaces in general for human wellbeing. A 2022 systematic review found that urban green spaces supported physical, psychological, mental, social and subjective wellbeing – concluding that urban green spaces are the 'primary pillar' for sustainable urban spaces, with positive correlations between urban green spaces and wellbeing.[14]
It is clear that students themselves recognise these benefits. Research highlights that students associate green space on campus with restoration and a greater quality of life, and are likely to identify green spaces when asked about spaces that support their mental health.[15],[16]

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[12] Jiminez, et al. (2021) Associations between nature exposure and health: a review of the evidence. International Journal of Environmental Research on Public Health 18(9): 4790.
[13] Ding, et al. (2023) Exploring the association between campus environment of higher education and student health: A systematic review of findings and measures. Urban Forestry and Urban Greening 91: 128168.
[14] Jabbar, et al. (2022) Assessing the role of urban green spaces for human well-being: A systematic review. GeoJournal 87: 4405-4423.
[15] Hipp, J. A. et al. (2016) The relationship between perceived greenness and perceived restorativeness of university campuses and student-reported quality of life. Environment and Behaviour, 48(10): 1292-1308.
[16] Windhorst, E. and Williams, A. (2015) "It's like a different world": Natural places, post-secondary students and mental health. Health and Place 34: 241-250.

Considering mechanisms to achieve these benefits, research found students that engaged with green space in active ways (ie, physical activity) led to better outcomes (quality of life, stress, and mood), than students that used green space in passive ways (ie, sitting).[17] Similarly, another study identified outdoor recreation as important for overall wellbeing, physical activity and social relationships.[18]

However, physical activity is not the only way in which positive health and mental wellbeing impacts are achieved in green space. Other studies highlighted the value of student engagement with community gardens and farms.[19],[20] These less strenuous activities in green space still provided positive impact on wellbeing and contributed to lower reported stress.

As the evidence on positive impact has become clearer, efforts have been made to specify how to encourage engagement with green space. An innovative study based on GPS data suggests an average exposure of 71 minutes per day is associated with positive mood.[21] Another highlights the importance of 'green prescribing' – prompting students to use green space and be exposed to nature.[22] Others have argued that it's the quality of green space that matters – particularly that which students have routine access to within their neighbourhoods.[23]

This evidence is primarily about the benefits of university green spaces for students. However, students are not the only stakeholders in this landscape. Universities are large employers and their green spaces are also an asset for staff. Moreover, university green spaces are often large areas of land that affect local communities and neighbourhoods. As highlighted in the previous section, in the UK there is a highly uneven distribution of quality green spaces, and those that do exist are often under increasing financial pressure.[24] The positive benefits highlighted in literature on health, wellbeing, stress reduction, restoration, and quality of life could also have wider benefit, if made available to the diverse communities neighbouring universities and their green spaces – and could present opportunities as sites of connection between university communities and their neighbours.

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[17] Holt, E. W. et al. (2019) Active and passive use of green space, health and wellbeing amongst university students. International Journal of Environmental Research and Public Health 16(3): 424.
18] Puhakka (2021) University students' participation in outdoor recreation and the perceived well-being effects of nature. Journal of Outdoor Recreation and Tourism 36: 100425.
[19] Baur (2022) Campus community gardens and student health: A case study of a campus garden and student wellbeing. Journal of American College Health 70(2): 377-384.
[20] Angstmann, et al. (2022) Reductions in student self-reported perceived stress after a one-hour campus farm tour. College Student Journal 56(3): 305-220.
[21] Bardhan, et al. (2023) Time in nature is associated with higher levels of positive mood: Evidence from the 2023 NatureDose student survey. Journal of Environmental Psychology 90: 102083.
[22] Boyd (2022) Between Library and Lectures: How can nature be integrated into university infrastructure to improve students' mental health. Frontiers in Psychology 13.
[23] Lemyre, et al. (2023) Neighbourhood greenspaces and mental wellbeing among university students in England during the Covid-19 pandemic: an online survey under lockdown. Cities & Health 8(2): 155-170.
[24] Communities and Local Government Committee (2017) Public Parks: Seventh Report of Session 2016-17. House of Commons, 11 February 2017.

2.2 UNIVERSITY GREEN SPACES AND PHYSICAL ACTIVITY

A theme in the literature is that physical activity is one of the key mechanisms through which access to green spaces has a positive impact on health and wellbeing. It is not just about the presence of green spaces, but what people are able to do in them.

This means it is important to think about the accessibility of outdoor sports facilities as part of the green space management agenda - and necessary to think about the range of physical activities people are able to do in a university's outdoor green spaces. Mile after mile of football pitches might be good for some, but trail walks, cycling routes, allotments, outdoor yoga and calisthenics spaces will increase the range of people able to make use of a university's green spaces for physical activity.

Beyond the literature identified above, there is a wide range of evidence about the role of physical activity in green space on health and wellbeing. A systematic review and meta-analysis of nature-based outdoor activities found that an eight- to 12-week programme of physical activity in green space (eg, gardening, exercise, nature-based therapy), are consistently associated with improving mental health outcomes in adults, including those with pre-existing mental health problems.[25] This is one reason the UK Government has highlighted parkruns as a key initiative in social prescribing programmes.

This is an intuitive mechanism for students already at university – encouraging them to make the most of the green space facilities they have access to and undertake physical activity. The challenge will be to ensure that access extends beyond students to staff and local communities. How accessible are university playing fields to local communities? Are there regular, organised sports and fitness activities for the general public on campus? Is it prohibitively expensive to access and hire university green space? Do the public know if they can access – and exercise in – a university green space? These questions are central to ensuring the health and wellbeing benefits of university green spaces are extended to as many people as possible.

2.3 GREEN SPACES AS SOCIAL INFRASTRUCTURE

One of the critical mechanisms for how green spaces support health and wellbeing is in the way they can create time and space for social connection. A recurring theme in the literature was students' use of green spaces to socialise.[26] This research recognises that human connection is central to achieving psychological wellbeing, and sees the role of natural environments on campuses in supporting those relationships.[27]

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[25] Coventry, et al. (2021) Nature-based outdoor activities for mental and physical health: Systematic review and meta-analysis. SSM – Population Health 16: 1000934.
[26] Foellmer J., et al. (2021) Academic greenspace and well-being -- can campus landscape be therapeutic? Evidence from a German university. Wellbeing, Space and Society 2: 100003.
[27] Alves, et al. (2022) An exploration of how biophilic attributes on campuses might support student connectedness to nature, others, and self. Frontiers in Psychology: 793175.

Green spaces are forms of social infrastructure; spaces and places that support social connection.[28] Research has identified the ways that urban green space can support a broad range of social connections, making it easier for people to spend time with one another to relax, walk, picnic, or play sport.[29] Recognising the social role of green spaces is critical during a time that has been described as an 'epidemic of loneliness and isolation'.[30] In the aftermath of the Covid-19 pandemic, there is an acute awareness of the relationship between loneliness, social isolation and mental health.[31]

Within a university context, there are opportunities to enhance the role of green spaces as social infrastructures. These might involve organising regular activities hosted in green spaces, creating opportunities for volunteering, or through the shared activity of growing food and flowers together in a community garden or allotment.

The strong relationship between social activity and mental health is at the heart of the UK Government's social prescribing efforts. Indeed the NHS, in collaboration with the National Academy for Social Prescribing, has developed a 'Green Social Prescribing Toolkit' on how to utilise green space to support mental health.[32]

There is a further opportunity with universities to ensure these social opportunities are not singularly about students socialising with other students. A university's green space might also function as social infrastructure for the wider neighbourhoods in which they're based – ensuring that local communities have opportunities to be social with one another around university green spaces. Additionally, universities might consider how their green spaces might function as sites of meaningful engagement between students and local communities – creating opportunities for different stakeholders to socialise together.

2.4 CLIMATE CHANGE AND BIODIVERSITY

The value of university green spaces should also be seen in the context of climate change. As the planet warms and the UK experiences more extreme weather conditions, spaces that are able to mitigate some of these impacts will become increasingly valuable. Research on the impact of green spaces on health and wellbeing already notes some of these benefits.

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[28] Klinenberg, E. (2018) Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and The Decline of Civic Life. London: Penguin.
[29] Layton, J. and Latham, A. (2022) Social infrastructure and public life – notes on Finsbury Park, London. Urban Geography 43(5): 755-776.
[30] US Surgeon General (2023) Our Epidemic of Loneliness and Isolation: The US Surgeon General's Advisory on the Healing Effects of Social Connection and Community. US Public Health Service.
[31] Hertz, N. (2020) The Lonely Century: A Call to Reconnect. London: Hodder & Stoughton.
[32] Alford, S. (2023) NHS Green Social Prescribing Toolkit. National Academy for Social Prescribing.

For example, in the literature above, the provision of tree shade is mentioned as an important contribution that university campuses are already making.[33]

However, the provision of tree shade is not a resource that is equally available to all.[34] UK Charities the Woodland Trust and the Centre for Sustainable Healthcare have developed a Tree Equity Score. Their tool shows that on average, the most affluent neighbourhoods in the UK have more than 50% more tree cover than the least affluent neighbourhoods.[35] This means poorer neighbourhoods will experiences the thermal stresses of climate change much more acutely than the wealthiest neighbourhoods. With less tree coverage, these neighbourhoods will also have on average lower air quality, and higher risk of flooding.[36] There could be a role here for universities - as key institutions with significant scope and reach across the UK - to help ameliorate these inequalities.

Beyond these direct tangible impacts on health, the provision of green spaces in the context of climate change and biodiversity has further benefits too. A point made in the literature is that connection with nature, and achieving a sense of purpose, are important factors in achieving overall wellbeing.[37],[38] There is also wider evidence that people who volunteer for environmental causes and organisations improve their health and wellbeing.[39],[40] In the context of a university green space, there could therefore be opportunities for significant co-benefits – for example, encouraging students and local communities to volunteer in support of environmental efforts around the university, which will help the environment and improve participant wellbeing.

Climate change is a cause students care deeply about; up to 90% say it impacts their mental health and wellbeing.[41] There is a role for universities in creating environments that directly mitigate the impacts of climate change, and create opportunities for students and local communities to contribute at a local scale to environmental efforts.

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[33]Ding, et al. (2023) Exploring the association between campus environment of higher education and student health: A systematic review of findings and measures. Urban Forestry and Urban Greening 91: 128168.
[34] Bloch, S. (2019) Shade. Places Journal, April 2019.
[35] Randall, E. (2024) Online tool reveals UK tree cover inequity. Land Journal, 30 May 2024.
[36] Ibid.
[37] Foellmer J., et al. (2021) Academic greenspace and well-being -- can campus landscape be therapeutic? Evidence from a German university. Wellbeing, Space and Society 2: 100003.
[38] Alves, et al. (2022) An exploration of how biophilic attributes on campuses might support student connectedness to nature, others, and self. Frontiers in Psychology: 793175.
[39] Patrick, R. (2022) Exploring the co-benefits of environmental volunteering for human and planetary health promotion. Health Promotion Journal of Australia 33(1): 57-67.
[40] Pillemer, K., et al. (2010) Environmental Volunteering and Health Outcomes over a 20-year period. The Gerontologist 50(5): 594-602.
[41] Smith, J. (2023) Climate Change and Student Mental Health. UPP Foundation.

2.5 BEYOND THE CAMPUS

Much of the literature highlighted above centres the university campus as the principal university green space. However, it is important to think of beyond the university as a metaphorical (and sometimes literal) walled garden, not least because students themselves do not exist solely within the boundaries of the university. They are people that live in places and neighbourhoods. As one of the articles reviewed above found, the quality of neighbourhood green space is particularly important for student wellbeing.[42] Moreover, the hope for a civic university is that it is not only university staff and students that make the most of university green spaces, but members of the local community too.

This means that the management of university green spaces must recognise the wider places in which they're based - both in terms of how students experience the neighbourhoods in which they live, and in terms of how local communities are able to make the most of the universities on their doorsteps.

One concept that can be helpful here is the idea of 'green corridors' – where universities could consider how their green spaces fit within a wider landscape of green space provision. Ensuring that different green spaces connect can improve towns and cities as habitats for biodiversity, but also provide more opportunities for the general public to access green spaces as part of their everyday lives.[43]

The importance of thinking beyond the campus is particularly acute when considering the inequalities that have been referenced throughout this paper. The distribution of green space in the UK is highly unequal. The distribution of tree cover in the UK is highly unequal. And the exposure to the impacts of climate change is highly unequal.[44]

University green spaces therefore take on renewed strategic importance – distributed within towns and cities across the UK – and there is a question about whether or not they can play a role in supporting the health and wellbeing of communities that would otherwise have limited access to these key resources.

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[42] Lemyre, et al. (2023) Neighbourhood greenspaces and mental wellbeing among university students in England during the Covid-19 pandemic: an online survey under lockdown. Cities & Health 8(2): 155-170.
[43] Forest Research (2024) Urban green networks, corridors and linkages. Forest Research, https://www.forestresearch.gov.uk/tools-and-resources/fthr/urban-regeneration-and-greenspace-partnership/planning-integrated-landscapes/urban-green-networks-corridors-and-linkages/
[44] Environment Agency, Chief Scientist's Group (2021) The state of the environment: The urban environment. Environment Agency.

Critical attention has already been paid to the inequalities that exist in the UK education system, with students at top private schools having access to 10 times as much outdoor space as those who attend state schools.[45] Universities could take the lead in demonstrating what a civic approach to these challenges might look like. Universities could play a key role in the realisation of restorative urban environments that support the health and wellbeing of students, staff, and local communities.[46]

[45] Horton, H., et al. (2024) Revealed: Students at top private schools have 10 times more green space that stat pupils. The Guardian, 16th June.
[46] Bornioli, A. and Subiza-Pérez (2023) Restorative urban environments for healthy cities: a theoretical model for the study of restorative experiences in urban built settings. Landscape Research 48(1): 152-163.

3. IDENTIFYING FRAMEWORK

The types of green space a university is responsible for can be opaque to the general public. One step towards making university green spaces more civic, is to be transparent and public about the range of green space facilities a university might manage – and that the general public are able to access and utilise. This framework identifies some of the most common university green spaces.

The way that each type of green space can support the health and wellbeing of students, staff, and local communities will vary – but there is scope for all to contribute towards these goals.

TABLE 1. FRAMEWORK FOR IDENTIFYING UNIVERSITY GREEN SPACES

Type	Description	Example
Lawns	Manicured lawns in-front of university buildings. Students at Liverpool Hope were found to prefer the campus' manicured gardens lawns over the more naturalistic spaces available on campus (Speake, et al. 2013).	Liverpool Hope, Hope Park campus 
Playing Fields	Places designed to play sport, often set up for football, rugby, cricket, hockey, or athletics. Kings College London's sports grounds are managed by 'King's Sport & Wellness', making explicit the link between physical activity, health and wellbeing.	Kings College London, New Maldon Sports Ground 
Botanical gardens	Horticultural and biological research spaces that are often open to the public. The University of Leicester Botanical Garden is free to the public. This blog reflects on how the Garden can become 'an integral part of the university's civic strategy and future'.	The University of Leicester Botanic Garden and Attenborough Arboretum, Leicester 

Type	Description	Example
Community gardens and allotments	Green spaces for cultivating fruit, vegetables and flowers at a small scale. Many universities now have allotments for their students. The University of Essex Green Thumbs student society looks after the campus allotment, and has discussed the mental health and wellbeing benefits of gardening.	University of Essex campus allotment 
Farms	Universities often own tracts of farmland. These can be for agricultural and research purposes. There are opportunities to think about how these can be integrated into wellbeing plans. For example, universities might consider how their farmland could incorporate therapeutic Care Farming practices.	University of Reading Crop Research Unit 
Parkland and woodland	University campuses are often located in extensive parkland or woodland. Lancaster University hosts a weekly Wellbeing Woodland Walk around their campus grounds led by their Engagement and Wellbeing Manager.	Lancaster University Woodland Walk 

4.ACCESSIBILITY AND STEWARDSHIP

The demonstrable impact of green spaces on health and wellbeing has informed a lot of work on the principles of good management of green spaces. These frameworks identify the dimensions of green space needed to maximise their impact on health and wellbeing. They illustrate the importance of managing green spaces with the explicit intention of increasing health and wellbeing.

FIGURE 1. HEALTHY ACADEMIC GREENSPACE FRAMEWORK (FOELLMER, ET AL. 2021).

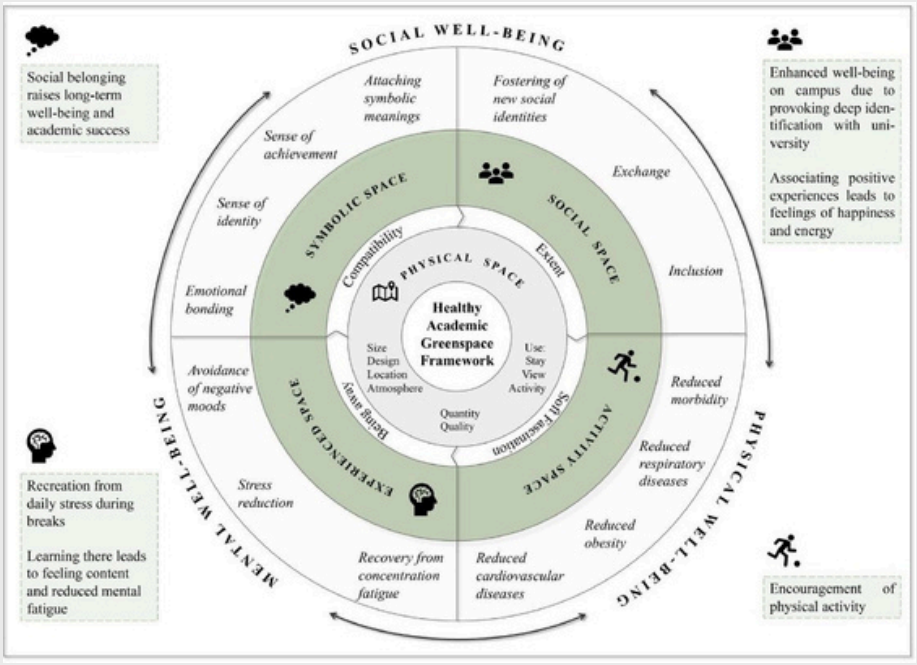

Figure 1 highlights the different dimensions of academic green space needed to support student's social well-being, mental well-being, and physical well-being. It builds from the design of the physical green space, through whether its characteristics include 'good extent', 'soft fascination', the feeling of 'being away' and 'compatibility', and towards the outcomes that might be achieved.

FIGURE 2. HEALTHY PARKS FRAMEWORK (GRIFFIN, ET AL. 2022).

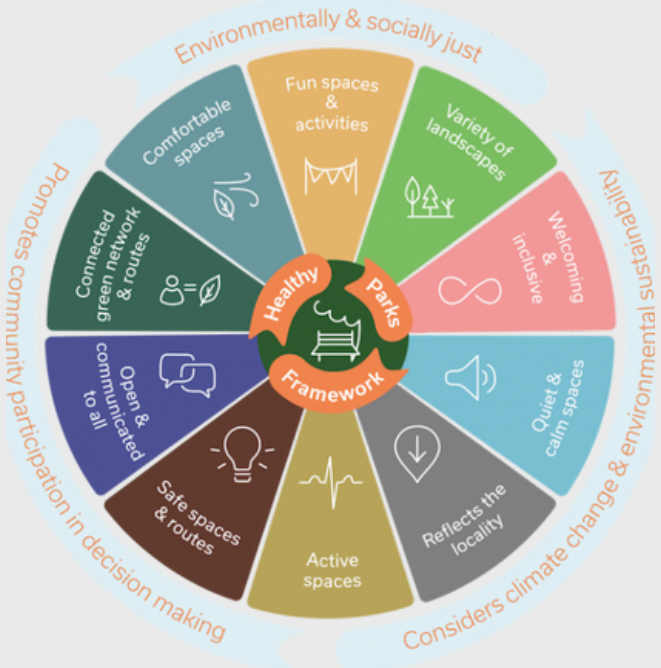

Figure 2 is concerned with urban parks in general, but many of the principles identified would be applicable to university green spaces. The framework is concerned with the different aspects of green space needed for them to be considered 'environmentally and socially just', promoting 'community participation in decision making', and consider 'climate change and environmental sustainability'.
These are helpful frameworks to apply to university green spaces. They highlight the different characteristics that might be planned for within the range of green spaces that universities are responsible for. Moreover they move beyond a sense that impact or value will be automatic – management and quality matter.

A key concept for university stakeholders and estate managers is place-keeping. Parks for London define this as the 'long-term and flexible management of green and open spaces to ensure they can be enjoyed by all users now and in the future'. The idea of place-keeping focuses on the ongoing management and maintenance of green spaces to ensure our parks and green spaces meet the needs of a city's many and varied citizens.[47]

Place-keeping involves: partnership, funding, design and management, governance, policy, evaluation, and coordination.[48]

The frameworks above help shift the conceptualisation of university green spaces in a more civic direction, so the health and wellbeing benefits can be made available to more people. Achieving this will require a lot of work from people with a vested interest in making universities the best places that they can be – from estate teams directly responsible for a university's green spaces, through to professional service staff who may be able to influence day-to-day management, and to academics and students as key advocates for making a university's green spaces more accessible.

Below are five critical questions for university estates teams, senior leaders, professional services staff, students and academics. These questions distil key learnings from the literature, and should prompt institutional reflection on how a university's current green space offering is managed. With a little work, a lot could be achieved to maximise the health and wellbeing benefits of a university's green spaces – not only for students and staff, but also the local community.

1) Can the green spaces be accessed by the general public?
This is the critical question for ensuring the health and wellbeing benefits documented above are not restricted solely to students, but shared with local communities too.
2) Are structured and inclusive activities organised in the space to encourage use?
The value of green spaces is not just as a passive backdrop, but because of the activities they support. Structured activities can invite people into a green space and create time and opportunities for them to volunteer, socialise, or be physically active.

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[47] Dempsey, N. (2023) Good Parks for London 2023: Place-keeping. Parks for London.
[48] Dempsey, et al. (2015) Partnership Handbook: A guide to good place-keeping. The place-keeping group.

Special attention should be given to ensuring a diverse range of people are able to participate.

3) Does the university manage a diverse range of green spaces?

Not all green spaces are alike, and some are better suited to specific kinds of activities. Having a diversity of green spaces will increase the range of health and wellbeing benefits a university can support.

4) Can existing green spaces and activities be better publicised?

It may be that the university already has abundant and accessible green spaces, but they might not feel accessible to the general public. A strong communication strategy might help raise awareness of the green infrastructures already available via the university.

5) Is the full value of the university's green spaces being documented for all stakeholders?

Evaluating and measuring the impact of university green spaces can support arguments for their protection and value. They can also identify areas for development and improvement. Value here is multi-dimensional – covering social, environment and economic contributions. It is also multi-scalar, thinking about value of students, staff, and local neighbours and communities.

5.THE CIVIC FUTURE OF UNIVERSITY GREEN SPACES

A greener and healthier future is possible in neighbourhoods, towns and cities across the UK. The evidence shows that access to green spaces is positively associated with better physical and mental health outcomes.

For universities, there are opportunities to play a critical role in providing engaging, accessible, and well-used green spaces for diverse communities. Not least because universities are already starting from an enviably strong start.

Universities' campus green spaces can be used for socialising and summer activities. Their playing fields can be focal points for community sport and fitness. Their botanical gardens can be places of restoration and encounters with nature. Their community gardens and allotments can grow food and flowers. And they also have students who care deeply about climate change, biodiversity and their local green spaces.

Leaning into these strengths, universities also have the institutional know-how for sharing knowledge and education. Accessible short-courses for the community on how to curate a pollinator-friendly garden, or grow herbs in a window-box, or become a citizen scientist monitoring wildlife could become a routine part of how universities facilitate engagement with green space.

There is a future where universities become known as green places, where it is possible for everyone – students, staff, neighbouring communities – to be physically active, socialise, grow food, or experience respite away from heat and air pollution. This future could lead to the alleviation of mental health and wellbeing challenges for large areas of the country that do not currently have easy or routine access to green spaces.

This future is not far away. Other comparable institutions, such as the NHS, have already created a wealth of resources and templates for how to mobilise estates for the benefit of health and wellbeing. Moreover, because the evidence base is so strong, there is an abundance of guidance and many sector experts that can guide the development of civic green space strategies.

The challenge for universities is to recognise their green spaces' value as important health and wellbeing assets for students, staff, and local communities. For some estates, this might not require much of a shift in practice. For others, it will require a deep evolution and reframing of how their green spaces are valued and managed.

This evidence brief provides an overview of the evidence and mechanisms for how university green spaces can lead to improved health and wellbeing outcomes. It also provides some first steps for understanding the breadth of green spaces that universities are responsible for, and some critical questions to guide reflection on how civic a university's current green space offering is.

The positive impact that green spaces can have on health and wellbeing is clear, and should mean the management of green space is considered vital as universities realise their civic potential.

REFERENCES

Alcock, I., et al. (2013) Longitudinal effects on mental health of moving to green and less green urban areas. Environmental Science and Technology, 48(2): 1247-1255.

Alford, S. (2023) NHS Green Social Prescribing Toolkit. National Academy for Social Prescribing.

Alves, et al. (2022) An exploration of how biophilic attributes on campuses might support student connectedness to nature, others, and self. Frontiers in Psychology: 793175.

Angstmann, et al. (2022) Reductions in student self-reported perceived stress after a one-hour campus farm tour. College Student Journal 56(3): 305-220.

Bardhan, et al. (2023) Time in nature is associated with higher levels of positive mood: Evidence from the 2023 NatureDose student survey. Journal of Environmental Psychology 90: 102083.

Baur (2022) Campus community gardens and student health: A case study of a campus garden and student wellbeing. Journal of American College Health 70(2): 377-384.

Bloch, S. (2019) Shade. Places Journal, April 2019.

Bodicoat, D. H., et al. (2017) The association between neighbourhood greenspace and type 2 diabetes in a large cross-sectional study. BMJ Open, 4(12): 1-8.

Bornioli, A. and Subiza-Pérez (2023) Restorative urban environments for healthy cities: a theoretical model fo the study of restorative experiences in urban built settings. Landscape Research 48(1): 152-163.

Boyd (2022) Between Library and Lectures: How can nature be integrated into university infrastructure to improve students' mental health. Frontiers in Psychology 13.

Communities and Local Government Committee (2017) Public Parks: Seventh Report of Session 2016-17. House of Commons, 11 February 2017.

Coventry, et al. (2021) Nature-based outdoor activities for mental and physical health: Systematic review and meta-analysis. SSM – Population Health 16: 1000934.

Dempsey, et al. (2015) Partnership Handbook: A guide to good place-keeping. The place-keeping group.

Dempsey, N. (2023) Good Parks for London 2023: Place-keeping. Parks for London.

Ding, et al. (2023) Exploring the association between campus environment of higher education and student health: A systematic review of findings and measures. Urban Forestry and Urban Greening 91: 128168.

Environment Agency, Chief Scientist's Group (2021) The state of the environment: The urban environment. Environment Agency.

Foellmer J., et al. (2021) Academic greenspace and well-being -- can campus landscape be therapeutic? Evidence from a German university. Wellbeing, Space and Society 2: 100003.

Gascon, M., et al. (2016) Residential green spaces and mortality: A systemic review. Environment international, 86: 60-67.

Health Foundation (2024) Inequalities in access to green space.

Hertz, N. (2020) The Lonely Century: A Call to Reconnect. London: Hodder & Stoughton.

Hipp, J. A. et al. (2016) The relationship between perceived greenness and perceived restorativeness of university campuses and student-reported quality of life. Environment and Behaviour, 48(10): 1292-1308.

Holt, E. W. et al. (2019) Active and passive use of green space, health and wellbeing amongst university students. International Journal of Environmental Research and Public Health 16(3): 424.

Horton, H., et al. (2024) Revealed: Students at top private schools have 10 times more green space that stat pupils. The Guardian, 16th June.

Jabbar, et al. (2022) Assessing the role of urban green spaces for human well-being: A systematic review. GeoJournal 87: 4405-4423.

Jiminez, et al. (2021) Associations between nature exposure and health: a review of the evidence. International Journal of Environmental Research on Public Health 18(9): 4790.

Klinenberg, E. (2018) Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and The Decline of Civic Life. London: Penguin.

Lachowycz, K. and Jones, A. P. (2011) Greenspace and obesity: A systematic review of the evidence. Obesity Reviews, 12(5): 183-9.
Layton, J. and Latham, A. (2022) Social infrastructure and public life – notes on Finsbury Park, London. Urban Geography 43(5): 755-776.

Lemyre, et al. (2023) Neighbourhood greenspaces and mental wellbeing among university students in England during the Covid-19 pandemic: an online survey under lockdown. Cities & Health 8(2): 155-170.

Mell, I. and Whitten, M. (2022) Green space access is not equal in the UK – and the government isn't doing enough to change that. The Conversation, 25th February.

Mitchell, R. and Popham, F. (2008) Effect of exposure to natural environment on health inequalities: An observational population study. The Lancet, 372(9650): 1655-1660.

Patrick, R. (2022) Exploring the co-benefits of environmental volunteering for human and planetary health promotion. Health Promotion Journal of Australia 33(1): 57-67.

Pillemer, K., et al. (2010) Environmental Volunteering and Health Outcomes over a 20-year period. The Gerontologist 50(5): 594-602.

Puhakka (2021) University students' participation in outdoor recreation and the perceived well-being effects of nature. Journal of Outdoor Recreation and Tourism 36: 100425.

Randall, E. (2024) Online tool reveals UK tree cover inequity. Land Journal, 30 May 2024.

Reed, et al. (2019) Building Healthier Communities: The role of the NHS as an anchor institution. The Health Foundation.

Smith, J. (2023) Climate Change and Student Mental Health. UPP Foundation.
UK Government (2010) Health Lives, Healthy People: Our strategy for public health in England.

US Surgeon General (2023) Our Epidemic of Loneliness and Isolation: The US Surgeon General's Advisory on the Healing Effects of Social Connection and Community. US Public Health Service.

White, M. P., et al. (2013) Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. Association for Psychological Science, 24(6): 920-928.

Windhorst, E. and Williams, A. (2015) "It's like a different world": Natural places, post-secondary students and mental health. Health and Place 34: 241-250.

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