

The Social Benefit of Urban Parks

August 2023





Executive Summary

Urban Parks allow people who live in densely populated cities to easily experience green space. While urban parks are often commended for their ecological benefits like providing biodiversity and reducing air pollution, they also provide social benefits. This report introduces the idea of a new urban park in the west of Edinburgh - West Edinburgh Park - and discusses the social impact this could have for those who live beside the park, citizens of Edinburgh and beyond. Four main areas of benefit are identified, these include: education, health and wellbeing, inclusivity and sustainable communities. In each section the benefits are discussed in terms of previous evidence, how this would look in the West of Edinburgh, and how these benefits could be measured.

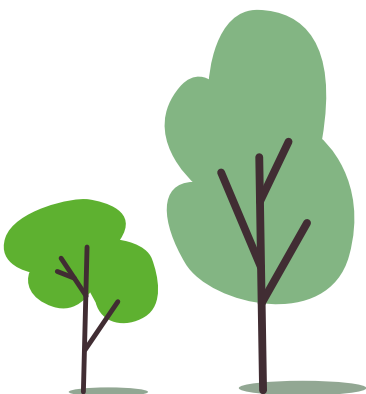




What is an Urban Park

The idea behind an Urban Park is to provide green and blue spaces to those who live in built up densely populated areas. The concept is not a new one, with London's Victoria Park, also known as the People's Park, opening over 175 years ago¹. In fact, across the world there have been various urban park developments which have transformed neighbourhoods. The High Line - a disused freight rail network in New York City - was set to be demolished, when some locals noticed beauty in the wild plants that had started to grow. This inspired them to advocate for the site and start Friends of the High Line, a charity with the hope of transforming the space into an urban park². This project displays how community involvement can inspire positive change in a neighbourhood, The High Line is now a greenway that stretches 1.45 miles, features over 500 different species of plants and trees, and attracts an estimated eight million visitors per year³. Brownfield sites are also often ideal locations for urban park transformations: the Westergasfabriek Culture Park in Amsterdam was developed on the site of an abandoned gas factory, and is now a culture hub for locals, and instead of polluting the neighbourhood, the biodiversity now helps with air quality and wildlife conservation⁴. Helix Park in Falkirk is a local example of how areas can be transformed to create greenways that connect communities, bringing them together⁵. The project which transformed 350 hectares of land now serves as a connector between 16 communities with nearly 30 km of pathways between them.

Urban parks are often praised for their ecological benefits, such as planting to improve air quality, habitats for wildlife and further mitigating the effects of pollution by providing temperature and flooding control within cities. It should be recognised however, that urban parks also provide numerous social benefits which aid health, community building, inclusivity, and education.



- ¹ Tower Hamlets Council, Victoria Park, <https://www.towerhamlets.gov.uk/ignl/leisure_and_culture/parks_and_open_spaces/victoria_park/victoria_park.aspx>.
- ² High Line, The Highline: History, (2023), <<https://www.thehighline.org/history/>>.
- ³ High Line, The Highline: History, (2023), <<https://www.thehighline.org/history/>>.
- ⁴ Gustafson, Porter & Bowman, Cultuurpark Westergasfabriek, <<https://www.gp-b.com/cultuurpark-westergasfabriek>>
- ⁵ The Helix, About The Helix, <<https://www.thehelix.co.uk/about-the-helix/>>.



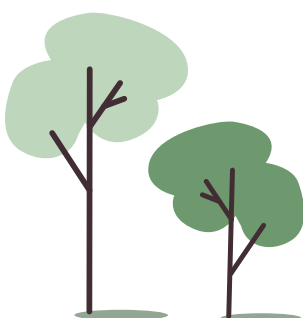
The Expansion of Edinburgh

Scotland has an ageing population and therefore as a whole, the number of people in the country is currently increasing, and is expected to continue to do so for the foreseeable future⁶.

As expected, the population of Edinburgh is also expanding, with - according to the 2017 North West Edinburgh Locality Improvement Plan - an estimated increase of 28% in only the western portion of the city by the year 2035⁷. To accommodate for this growing population, the western portion of the city currently has a total of 600 hectares of land identified for established, ongoing, and potential development, stretching from the Pentlands to the Firth of Forth. This expansive area of potential new housing and commercial development will create a new region of the city, an urban extension, with various different and diverse communities.

The West Edinburgh Park

As the expansion into the west of the city has attracted multiple developers, there is the unique opportunity to create a Green Blue Network. This would be formed by connecting all of the open green and blue spaces within and around the developments, which would in turn also link all of the neighbourhoods through this shared space. Edinburgh's City Plan for 2030 articulates the importance of the city's green blue network and provides a framework regarding new developments to ensure its protection and enhancement⁸. This new network has the potential to become a new urban park in Edinburgh and when linked with existing established green spaces in west Edinburgh, gives the opportunity to create over 400 hectares of joined up parkland and greenspace. The park would create a new north to south active travel route from the John Muir Way to the Pentlands, and have more than 20km of walking and cycling routes for all to enjoy.



⁶ National Records of Scotland, Projected Population of Scotland (2020-based), (2023), <<https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/population-projections-scotland/2020-based#:~:text=The%20population%20of%20Scotland%20is,2020%20baseline%20by%20around%202050>>

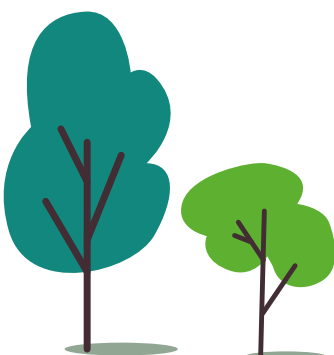
⁷ The City of Edinburgh Council, City Plan 2030 Proposed Plan, (2022).

⁸ The City of Edinburgh Council, City Plan 2030 Proposed Plan, (2022), page 22 paragraph 2.62.

The creation of the West Edinburgh Park ties in directly with the place based approach for planning which is currently identified in City Plan 2030, the National Planning Framework (NPF4) and the West Edinburgh Placemaking Framework and Masterplan. Place based approaches are implemented by identifying the local needs of an area, through intercommunication between communities, developers and shareholders, and then designing for the best possible quality of life⁹. The addition of the West Edinburgh Park would also support the delivery of the 20-minute walkable neighbourhood model, through this part of Edinburgh. The Scottish Government outlines twenty minute neighbourhoods as “A method of achieving connected and often compact neighbourhoods designed in such a way that people can meet the majority of their daily needs within a reasonable distance of their home preferably by sustainable and active travel methods”¹⁰. Through the linking of various neighbourhoods, provided by the West Edinburgh Park, locals would be able to travel sustainably through these communities, and have easy access to everything required for their daily lives.

The Social Impact of Urban Parks and the West Edinburgh Park

As previously mentioned urban parks are often known for their many environmental benefits, however what is less known is what they can do and provide for people. The social impact of green infrastructure and urban parks is immense, so much so that the creation of the West Edinburgh Park could aid education, inclusivity, health and wellbeing and sustainable communities.



⁹ OurPlace, Place Based Approaches, (2023), <<https://www.ourplace.scot/about-place/place-based-approaches>>.

¹⁰ Scottish Government, National Planning Framework 4, (2023), Annex F Glossary.

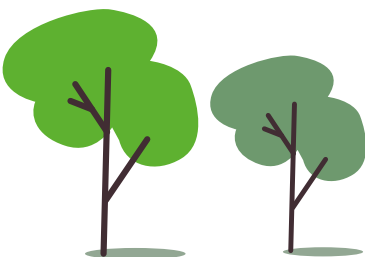


Education

Education, although often regarded as most favourable when sitting silently at a desk inside a classroom, has been shown to have numerous benefits for children and young people when conducted outdoors. Outdoor education does not simply mean taking the indoor educational tasks outside, but rather using the outdoors as a tool for learning. In fact, in 2010 the Scottish Government introduced outdoor learning into the national curriculum, stating that: “outdoor learning connects children and young people with the natural world, with our built heritage and our culture and society, and encourages lifelong involvement and activity in Scotland’s outdoors¹¹. NatureScot’s Learning in Local Greenspace project¹² helped to provide outdoor learning experiences to over 6000 pupils from 115 schools in some of the country’s most deprived areas. The project found that outdoor learning benefited both teachers and pupils; by the end of the project teachers reported their confidence had increased by 31%, and that they believed pupils were more engaged (23% increase) and had a better connection with nature (18% increase).

Promoting an interest and involvement in nature at a young age is essential, especially nowadays with the increasing reliance on technology, with the current generation of children being the first to have never experienced life without instant internet access. When children learn outdoors, this is often led by the child: they use their own imagination and initiative to discover new things and problem solve. Doing this outdoors helps them form bonds with their environment. David Attenborough explains why forming a connection with nature at a young age is so important: “If children don’t grow up knowing about nature and appreciating it, they will not understand it. And if they don’t understand it, they won’t protect it. And if they don’t protect it, who will?”.

The introduction of a new urban park would encourage children to learn outdoors, whether this was part of their school curriculum or in their free time. Although, as previously mentioned, the natural curriculum does promote outdoor education, with the increase of technological based learning this is not always taken advantage of.



¹¹ Learning and Teaching Scotland, Curriculum for excellence through outdoor learning, (2010)

¹² Munro, S. A. (NatureScot), Learning in Local Greenspace: an evaluation report, (2022), <<https://www.nature.scot/doc/naturescot-research-report-129-learning-local-greenspace-evaluation-report>>.



Research from the University of Stirling has shown that the length of time spent outdoors learning has decreased in recent years, with pupils spending an average of 30 minutes outdoors per week in 2014, but only 7 minutes in 2022¹³. This decline means children will not be able to develop these strong connections with nature, and experience the many other benefits of outdoor learning.

The outdoors can be extremely beneficial for early childhood development especially through outdoor play. Whether jumping in puddles, collecting sticks or swinging from monkey bars, these activities all help children to develop gross and fine motor skills, which are essential for advancing independence in later life. Studies have also shown how exposure to nature can change behaviour. When children are engaged in outdoor learning pupils are more cooperative and sociable, with results consistently highlighting a decrease in antisocial behaviour, and an increase in prosocial behaviours and concentration¹⁴.

These examples only scratch the surface on the impact the outdoors can have on learning and education. The introduction of the West Edinburgh Park would not only connect school grounds to large pieces of green and blue space that could be the perfect setting for an outdoor classroom, but it would also provide communities and the children who live there with a place to make their own discoveries and take learning beyond the classroom. Different measuring methods could be taken in the area to evaluate whether the introduction of the West Edinburgh Park helps in learning and education; attendance in local schools would be an indicator of engagement and motivation to learn, as well as the number of pupils continuing to stay on in the senior years. Additionally, as outdoor learning can improve academic attainment, utilising the sub-measures which examine expected levels of literacy, numeracy and SCQF qualifications as laid out by the Scottish Government in the National Improvement Framework for Education¹⁵ would provide an insight into whether pupils are achieving, or possibly exceeding, the expected levels.



¹³ Mannion, G., Ramjan, C., McNicol, S., Sowerby, M. & Lambert, P. (University of Stirling), Teaching, learning and play in the outdoors: a survey of provision in Scotland in 2022, <[¹⁴ Kylie A. Dankiw, Margarita D. Tsiros, Kaltharine L. Baldock & Saravana Kumar, 'The impacts of unstructured nature play on health in early childhood development: A systematic review', PLOS One, 15.2 \(2020\), 1_22.](https://www.nature.scot/doc/naturescot-research-report-1313-teaching-learning-and-play-outdoors-survey-provision-scotland-2022#:~:text=The%20survey%20showed%20that%20on,site%20provision%20in%20woodland%20locations.></p>
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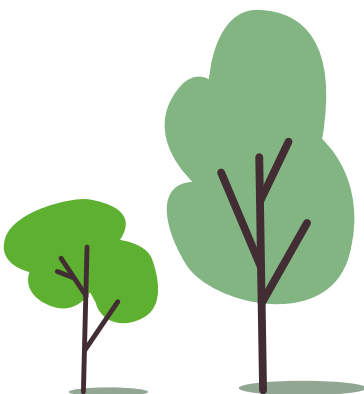
¹⁵ Scottish Government, Educational Attainment, <



Health and Wellbeing

When considering the outdoors and how it relates to health and wellbeing, normally the first thing that is considered is exercise. Research does show that living in closer proximity to greenspace increases the likelihood of exercising¹⁶, and of course exercising is shown to have positive effects on overall health by reducing risk of early death by up to 30% as well as helping with heart health, obesity, and even the prevention of some cancers¹⁷. It goes without saying then that if being close to green space helps you to get out and exercise, the West Edinburgh Park will be a tool to encourage every potential resident in the surrounding developments to get out and exercise, whether this is a high intensity activity like running, or more relaxed such as yoga or a daily walk. Even though it may not seem like much, a daily 10 minute walk can help with health; the NHS advises that this is a simple way to improve heart health, increase your stamina and to burn calories. However, it could be possible that nature has more health benefits than simply the motivation for exercise. Some research has actually shown that hospital patients who had a view of nature had a quicker postoperative recovery experience, with less reliance on pain medication than those who had a view of a brick wall¹⁸.

The impact nature and spending time outdoors has on mental health and wellbeing is just as, if not possibly more crucial than on physical health. The recent events of the Covid-19 pandemic highlighted how spending time outdoors affects our mental wellbeing. In order to reduce transmission of the virus, many governmental policies were implemented, including restricting time outdoors in public spaces, which meant unless you had access to a private garden, you were unable to have easy access to the outdoors.



¹⁶ Oliver T Mytton, Nick Townsend, Harry Rutter & Charlie Foster, 'Green space and physical activity: an observational study using Health Survey for England data, Health Place, 18.5 (2012), 1034_1041.

¹⁷ NHS, Benefits of exercise, (2021), <<https://www.nhs.uk/live-well/exercise/exercise-health-benefits/>>.

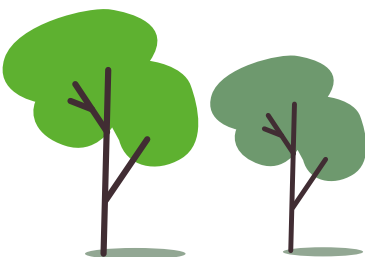
¹⁸ Ulrich, 'View through a window may influence recovery from surgery', Science, 224.4647 (1984), 420_421.



According to a 2021 report by Mental Health Foundation Scotland 45% of people said visiting nature helped them to cope during the pandemic¹⁹, whilst NatureScot also found that 73% of the people they surveyed said spending time outdoors helped them to destress and relax²⁰.

Using nature to feel relaxed is something that is widely practised throughout the world, with the concept of Shinrin-yoku or “forest bathing” originating in Japan in the 1980s²¹. This activity involves surrounding yourself with nature, and leaving all technologies and stress of urban life back in the city, focusing only on your connection to the natural world. It is true, urban life can often be extremely stressful, especially for particular age groups such as the elderly. Loud noises and busy roads can be difficult to navigate when senses like sight and hearing deteriorate with age, so having access to somewhere to escape the bustle and bask in nature, like the West Edinburgh Park, could be the key to relaxation.

In order to quantify the impact the West Edinburgh Park would have on the health and wellbeing of the locals who live around it, various measures could be conducted. Firstly, working alongside healthcare agencies like the NHS, and examining the number of people being seen and treated for mental health conditions such as anxiety and depression as well as physical health conditions like heart health and obesity. Conducting surveys on stress levels among park users could also be implemented to obtain a self-reported measure of health and wellbeing. Measures with these bodies as well as employers could also be taken to see the number of people off work on a long term basis, via doctor’s certificates and statutory sick pay. If these methods were used there could be reason to believe that the West Edinburgh Park provided benefits for health and wellbeing, and consequently public bodies such as the NHS may save money and resources due to a decrease in demand.



¹⁹ Mental Health Foundation Scotland, Nature:

How connecting with nature benefits our mental health, (2021).

²⁰ Stewart & Eccleston, Enjoying the Outdoors - Monitoring the impact of Coronavirus and social distancing - Wave 3 survey results (September 2021), (2022), <<https://www.nature.scot/doc/naturescot-research-report-1289-enjoying-outdoors-monitoring-impact-coronavirus-and-social>>.

²¹ Travel Japan, Forest Bathing in Japan (Shinrin-yoku), <<https://www.japan.travel/en/guide/forest-bathing/>>



Inclusivity

Unlike the educational and health benefits of green and blue spaces, it may be more difficult to recognise how urban parks, and nature can help to promote inclusivity. This may be due to the fact that in many cities access to good quality green spaces can actually be exclusive, with more deprived areas often having minimal access. This is reflected by the research, with the Scottish Government reporting that adults who lived in deprived areas were the most likely (18%) to have not visited any greenspace whatsoever in 2017, compared to those who lived in the least deprived areas (5%)²². Although the immediate housing connected to the West Edinburgh Park will be new builds, the City of Edinburgh Council's 2030 City Plan proposes a policy for a minimum of 35% of affordable housing in new developments²³, aligning with the first target listed under the United Nations' 11th Sustainable Development Goal (Make cities and human settlements inclusive, safe, resilient and sustainable): ensuring access for all to adequate safe and affordable housing²⁴. Additionally, due to the location and size of the proposed West Edinburgh Park, it would service not only the immediate communities that surround it but also wider Edinburgh via public transport links. This would hopefully encourage many people to visit the park, no matter their background, and experience the benefits for themselves. As mentioned in the health section, the park would serve as an excellent location for exercise, unlike a gym, you would not require a paid membership to visit the park, meaning no matter one's income, anyone can benefit from this area.



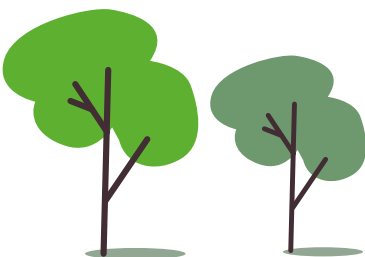
²² Rural and Environment Science and Analytical Services (Scottish Government), Quality greenspace knowledge account, (2020).

²³ The City of Edinburgh Council, City Plan 2030 Proposed Plan, (2022).

²⁴ United Nations General Assembly, Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development, (2017), (Section 11.1).

Of course inclusivity by nature is multifaceted and extends beyond income, urban parks also have the potential to promote inclusivity in terms of gender, age and accessibility. Although public green space when left completely natural can provide a beautiful backdrop, it is not necessarily always inclusive. Identifying access barriers, including pathways, seating, bathrooms and transport links, is key to ensuring any park is designed to be inclusive for everyone. If not considering the experience someone will have for their entire visit, accessible infrastructure may actually not have as inclusive of an effect as originally intended. For example, the Outdoor Accessibility Guidance published by Paths for All and Sensory Trust highlights how many parks are often designed with accessible pathways for wheelchair users, but unfortunately these routes often only show a small portion of what the “regular” one does, which could make people who require the accessible route feel isolated and unwelcomed²⁵. Designing with people of all abilities in mind, and engaging with all groups is essential to creating an inclusive park; the West Edinburgh Park would attempt to make areas as inclusive as possible for everyone, including items such as tactile paving, wheelchair accessible paths and play areas, as well as braille signage to ensure people are and also feel included when visiting the park.

When thinking about inclusivity, safety is another key priority. In a recent survey 60% of women stated that they do not feel safe exercising outdoors alone²⁶. According to the Royal Institution of Chartered Surveyors 97% of young women in the UK have suffered sexual harassment in public spaces, and calls for a reevaluation of how public spaces, including parks, are designed in order to challenge this male-bias²⁷. The charity Make Space for Girls works in partnership with teenage girls to aid developers in the designing of new outdoor spaces. By voicing the concerns of this demographic, outdoor spaces can be made significantly more inclusive. With new designs possibly being more open and welcoming for example with no dark corners, women and girls could feel more safe and comfortable to visit and have the same positive experiences as their male counterparts.



²⁵ Paths for All & Sensory Trust, Outdoor Accessibility Guidance: Supporting inclusive outdoor access in the UK, (2023).

²⁶ Sustainable Scotland (The Scotsman Podcast), Impactful placemaking - what it is and why Scotland needs it, (2023), <<https://www.scotsman.com/business/consumer/impactful-place-making-what-it-is-and-why-scotland-needs-it-4036552>>.

²⁷ Karen Day, Spatial equality: challenging ‘default-male’ design, (2023), <<https://ww3.rics.org/uk/en/modus/built-environment/urbanisation/spatial-equality.html>>.



Finally, urban parks can also be beneficial regarding neurodiversity, and provide an inclusive safe space for this group to explore. It is estimated that 1 in 10 people in Scotland are neurodivergent²⁸, and in order to be inclusive to such a large subsection of the population, the creation of new outdoor spaces must also be designed with this in mind. Nature provides an all sensory experience, and conditions such as Autism Spectrum Disorder (ASD) involve difficulties in sensory processing, meaning individuals can be hyper-sensitive or hypo-sensitive to sensory experiences²⁹. Engaging in the natural environment can benefit those with ASD, by allowing them to explore their senses, however, if in an environment which is unregulated this could become overwhelming. An urban park, such as the West Edinburgh Park could provide specifically designed spaces such as sensory gardens to ensure a calm environment for sensory exploration. Additionally, green and blue space has also been shown to help people with Attention-Deficit Hyperactivity Disorder (ADHD), with children who take walks in nature become more concentrated afterwards³⁰.

As a whole, one of the most important elements to assuring that a new urban park would be as inclusive as possible is to involve groups of people who require accessibility, or who currently experience exclusion in public spaces in the development of the park.



²⁸ Skills Development Scotland, Neurodiversity in Digital Technology Summary Report, (2020).

²⁹ Hadeer Barakat, Ali F. Bakr & Zeyad El-Sayad, 'Nature as a healer for autistic children', *International Journal of Environmental Science & Sustainable Development*, 3.1, (2018). 2353_366.

³⁰ Andrea F. Taylor & Frances E. Kuo, 'Is contact with nature important for healthy child development? State of the evidence', (2006).

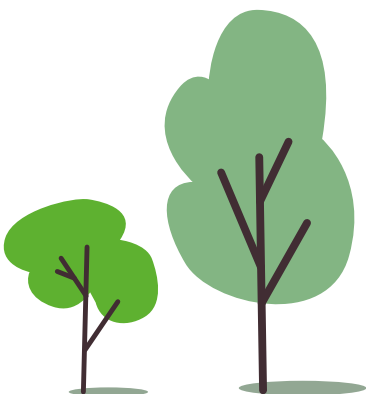


Sustainable Communities

The final area of benefit to consider is how an urban park can create a sustainable community that residents can take pride in being a part of. One of the prime examples that can be used to highlight this is the High Line in New York. As previously mentioned, this project was created because the community who lived there saw its potential; local involvement in the development and upkeep of community based projects transform unused spaces into somewhere people want to live. Moreover, when communities come together to protect their space, they can in turn make it a more sustainable place to live

One objective of the West Edinburgh Park is to create an urban park that will encourage the communities who live there to take pride in their local area and therefore help to look after and protect it by making it a sustainable place which can continue to provide all of its benefits for generations. A local example of how greenspace can contribute to the creation of a sustainable community is the creation of a community gardening group in north Edinburgh. Granton Community Gardeners is a charity created by Granton's local residents, in 2010 locals decided they wanted to transform a small patch of grass that was not being used for anything by planting vegetables and flowers.

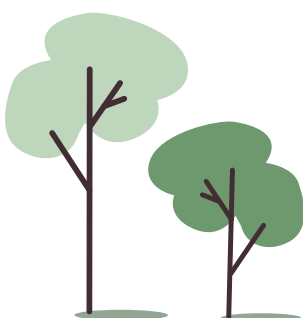
This helped locals to quickly form friendships with neighbours they had never met because of their common interest in improving their local area, and soon the idea began to spread, with more small patches of green space being converted into allotment areas. In the winter, instead of gardening, locals used the food they had grown to host community meals for anyone who wanted to join, and this has only continued to grow. Now the charity host weekly community meals, plan and deliver gardening courses, and also have established a large community garden, which features over 30 fruit trees, with the help of 200 locals³¹. This is a perfect example of how projects like these can not only help with bringing a community together to make it more sustainable, but also create inclusivity by allowing everyone in the community to have access to fresh food through the community meals.



³¹ Granton Community Gardeners, Story so far, <<https://www.grantoncommunitygardeners.org/story-so-far>>.



The project also could be linked to education and health and wellbeing, by teaching people how to garden and prepare fresh food, whilst also encouraging a more healthy lifestyle in terms of eating fresh fruit and vegetables. The size of the West Edinburgh Park would allow for similar community led projects, whether it be allotments, contributing to Edible Edinburgh's Sustainable Food City Plan³² which includes urban food growing as one of their principle missions, or the creation of any other community groups where people share a common interest. Introducing this into the West Edinburgh Park would allow residents from within the same or the different surrounding neighbourhoods to connect and form friendships. Allowing people to take part in their local community and form these connections are key in making it a desirable place to live, making them want to continue to live in that community throughout the various stages of their life. It is more difficult to measure whether the West Edinburgh Park has an impact on sustainable community development, primarily the number and attendance of community groups could be measured, as well as qualitative accounts through surveys on how people who use the park feel about their community. Another measure could be taken to see how long residents remain in the same postcode area; this would highlight how people, even if moving to a new home, want to stay engaged with that community.



³² Edible Edinburgh, Edinburgh Sustainable Food City Plan, <<https://edible-edinburgh.org/about-us/our-city-food-plan/>>.



Conclusion

It is evident that the social impact of urban parks, and nature in general is extensive. Green spaces help us to develop and learn from infancy, encouraging children to connect with nature, allowing them to socialise in a free environment and take leadership in their own learning. Urban parks also serve as a location for exercise and relaxation, allowing for hassle free immediate access to stay fit and look after your body and mind. They also serve as an escape to the busy urban cityscapes, where people can forget about their daily stresses and take time to relax and restore. Unfortunately outdoor spaces are not always inclusive, but urban parks have the ability to bring people together by implementing inclusive designs. Working with people of different backgrounds and abilities throughout every stage of development could allow urban parks to bring people from different groups together and let them share the same experience of enjoying the outdoors. Finally urban parks also act as hubs for community building. Everyone wants to take pride in where they live, an urban park creates the unique opportunity for people to engage in groups with the idea of restoring and protecting their neighbourhood, making it a desirable place where people can grow and evolve with the location. Overall, the introduction of the West Edinburgh Park would provide numerous new neighbourhoods, as well as existing communities with all of these benefits for years to come.





Elements Edinburgh

This report was authored by Catriona Taylor and commissioned by Crosswind Developments, the company responsible for Elements Edinburgh. The Elements Edinburgh ambition is to take an industrial brownfield site and create a sustainable new community that people are proud to call home, a community which inspires people and enriches its environment to build a better future for all. The West Edinburgh park is a vital element of this, allowing communities to grow together in a unique green space, with a focus on health and wellbeing and inclusion, that offers distinctive experiences to those who live and visit there, and allowing them to make connections with their natural environment.

Acknowledgements

In writing this report over my 12 week Entrepreneurial Scotland Saltire Scholar internship period with Crosswind Developments, I was able to meet and discuss these topics with extremely knowledgeable people, who helped me to better understand the topic and the benefits green infrastructure can provide. I would like to thank Carly Grace of Fife Council, Professor Catharine Ward Thompson of Edinburgh University, Johanna Boyd of Planning Aid Scotland, Fran Van Dijk of SEPA, Pauline Silverman of Volans and Chris Oswald of the Equality and Human Rights Commission for providing me with insight into their particular specialties. I would also like to thank the whole team at Crosswind Developments for supporting me throughout my internship allowing me to take the lead on this project.

