



greenminds

greenminds insight paper

Nature-Based Solutions in Plymouth Policy: Analysis and Action



Green Minds Model summary

The Green Minds Model aims to summarise the structure of the GM approach, to aid its transfer and replication to other urban areas and authorities.

Green Minds piloted new ways of implementing nature-based solutions within an urban environment. The project's central aim was to collaborate with stakeholders to recognise how humans, as part of nature, interact with nature in a complex system and to identify ways in which *systemic* change is brought about.

The model is presented as an integrated approach, where various nested elements are shown working together as a system. It reflects the particular challenges and scales of focus in urban areas - from individuals, to communities and neighbourhoods and at a citywide level. It focuses on particular leverage points for change (best practices) with regard to nature in cities, and is guided at its core by a set of underlying principles to inform practice.

At the centre of the model sits the system goal - *Urban Wilding. A set of guiding Principles have been created to inform the practice of Urban Wilding. These principles have emerged from our experiences designing and implementing Urban Wilding in Plymouth.

The eight Principles that have emerged from our programme of testing and development represent key leverage points to effect system change and to successfully integrate nature within urban place shaping. This includes exploring deeply held beliefs and values around our relationship to nature and to others, the creation of new organisational and digital infrastructures which empower citizens, and the development of new policy, planning and financial frameworks to support this.

Complex systems can behave differently at differing scales and so these are reflected too in the model to recognise the importance of understanding *who* needs to be engaged and *how*. This takes into account the need for multiple perspectives and the importance of equity (who participates), through an

inclusive process of engagement from individuals to groups and organisations, and at neighbourhood and citywide scales.

Finally, the model acknowledges the importance of an ongoing and iterative co-design process. This process recognises that resilience requires the ability to adapt as solutions emerge within a complex and constantly changing environment. It is delivered through a cyclical, action learning approach in which lessons learned influence the next cycle of implementation to ensure a progressive approach.

The model is brought to life through our suite of Insight Papers, Guides and Case Studies which aim to illustrate how the model was implemented and what we learnt.

Green Minds Urban Wilding Principles

The quality and quantity of nature has declined significantly in recent decades. Across the UK and Europe, nature recovery and restoration, rather than just preserving or conserving what remains, has become a high priority, as we have become more aware of society's dependence on nature[1].

We know that spaces that are more biodiverse can deliver multiple health and wellbeing benefits as well as other nature-based solutions such as improvements in water drainage, increased carbon sequestration, removal of air pollutants and increased pollination for food security[2]. 'Rewilding' has gained prominence as one approach to achieving such improvements in biodiversity, with a growing research body assessing its impact.

Urban (re)wilding, however, is still a new concept. We define Urban Wilding as 'any initiative, both human-aided and natural colonization, that aims to encourage biodiversity, ecosystem function and native species in urban settings'[3].

Urban Wilding is fundamentally different from wilding/rewilding/renaturing elsewhere. Cities and towns are dominated by human infrastructure and activity. Consequently, many natural ecosystem processes are significantly modified or constrained in urban areas. We rely upon ecosystem services for our health and wellbeing. Urban ecologies, which deliver these ecosystem services, are complex and poorly understood. However, we know that more biodiverse systems deliver more or better ecosystem services. We also know that we can mimic, or engineer, some specific ecosystem services such as storm water management. Whilst we don't know enough to design urban ecosystems to deliver all the services we need, we do know that more nature is good for people and urban living and that arranging it in certain ways can deliver certain specific benefits. We can't achieve this by doing nothing - positive interventions are required, which in turn demand enabling policy, community action and practical delivery mechanisms.

The Green Minds understanding of Urban Wilding recognises the need to shift from nature conservation to nature recovery - to focus on restoring much of what is rare or has gone and a recognition that we need to bring high quality Nature into places where people live.[4]

The Urban Wilding Principles below are designed as a set of prompts to help guide initiatives for nature to thrive in cities: to survive and reproduce, to expand, and to function as a system and so deliver more and better services to support urban environmental health, our economy, and human wellbeing.

*We have chosen to use the term 'wilding' instead of 'rewilding', as it better reflects the reality of nature in urban areas - to rewild implies a return to nature before urbanisation, which is not possible.

[1] Nature Recovery for Our Survival, Prosperity and Wellbeing: A Joint Statement by the Statutory Nature Conservation Bodies of the UK. jncc.gov.uk/our-role/the-uk/nature-recovery-joint-statement

[2] Dasgupta, P. (2021). The Economics of Biodiversity: the Dasgupta Review. London (HM Treasury); Maller, C. (2018) Healthy Urban Environments. Routledge

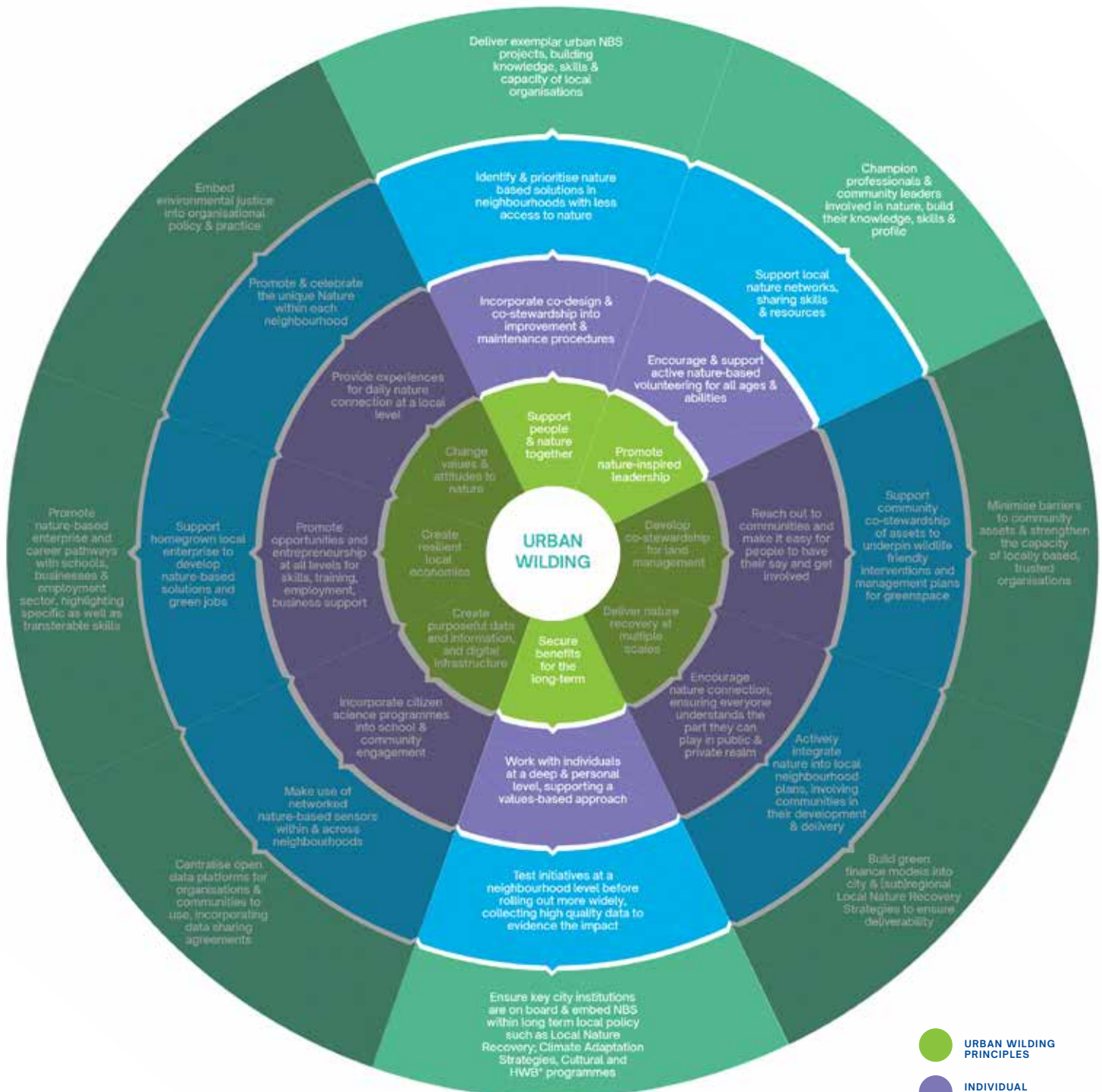
[3] Maller, C., Mumaw, L., & Cooke, B. (2019). Health and social benefits of living with 'wild' nature. Ch 9 in Rewilding. Pettorelli, N., Durant, S., and du Toit, J. (eds). Cambridge University Press

[4] Juniper, T. (2022) Tony Juniper: Green Paper - an opportunity for an integrated approach to Nature recovery - Natural England

greenmindsmodel

The model illustrates the three system levels at which the Urban Wilding principles are applied to drive action: the individual, with neighbourhoods, and within organisations.

Permeability, both within and between segments, reflects the need for adaptability through local learning gained through an action learning approach, in which lessons learned influence the next cycle of implementation.



Urban Wilding Principles

Support people and nature together

Promote a just transition to wilder cities through equitable access to nature, socially just policy and involvement in the co-creation and co-stewardship of nature-based solutions that are adapted to climate change, biodiverse and support nature connection.

Promote nature-inspired leadership

At all levels of management (individual, community/neighbourhood, city administration, business, etc) enable nature positive actions to enhance urban liveability through education, training, and policy.

Develop co-stewardship for land management

Democratise land management and ownership through the development of co-stewardship solutions with user communities, introducing inclusive and empowering processes for engagement, creating community assets, and utilising diverse governance structures.

Deliver nature recovery at multiple scales

Make the most of the local built environment and its scale, acknowledging that no space is too small to be valuable whilst at the same time recognizing that larger green spaces and high degrees of connectivity are key for nature recovery.

Secure benefits for the long-term

Develop integrated policy instruments that embed urban wilding in development practice, led by communities and advised and supported by public administrations to create resilient cities and a population connected to nature.

Create purposeful data and information supported by digital infrastructure

Develop new digital infrastructures to generate community-owned and insightful knowledge of urban nature to support nature connection, and nature-positive policy and practice.

Create resilient local economies

Promote and empower nature-related careers, cooperatives and social enterprise across all sectors, to create new jobs and new value in green and blue infrastructure.

Change values and attitudes to nature

Promote nature connection amongst citizens, to enhance individual and community wellbeing and to foster nature-positive choices.

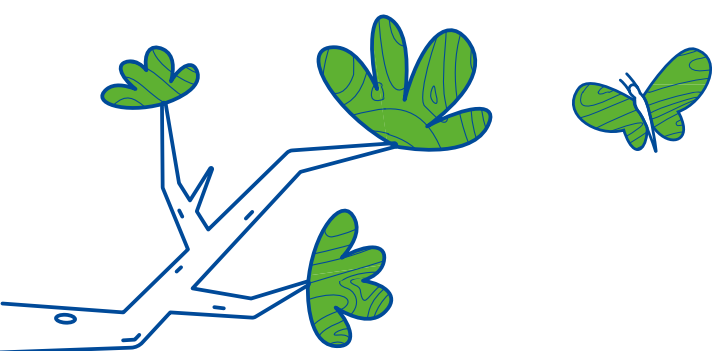


Introduction

Green Minds aims to put nature at the heart of decision making, and policy is a critical part of that. This means embedding nature-based solutions in all aspects of policy, practice, planning and finance.

We set out to analyse the status of nature within 12 key Plymouth policies at the beginning of Green Minds to identify where the project could have impact.

Nature provides a multitude of benefits for society and the economy, such as food and water, climate regulation, nutrient cycling, recreation, health and wellbeing, and social cohesion.^{1,2} However, these benefits are not linked solely to the presence or absence of natural spaces, but also to the quality of nature itself.³ This evidence is transforming perspectives on green spaces in urban areas as ‘something nice to have’ towards recognising the broader value of nature for the environment, society and the economy.⁴



From a city perspective, it is therefore imperative that nature is thoroughly represented and prioritised across all areas of planning and policy. Policy documents use evidence to set principles and a high-level framework for decision making in relation to issues that affect people and places. These documents map the future of the planning landscape across areas such as land use, transportation, housing, health and wellbeing, culture, and more. As such, to realise the full benefits of nature, it is essential that it is comprehensively featured and linked across all city policies.

This research serves as a case study to assess multiple policy documents across a city landscape to;

- 1 Understand how nature is currently represented and connected throughout Plymouth policy documents.
- 2 Identify gaps and opportunities for future policy reform.

The Green Minds partnership used this information to influence Plymouth policy and practice, during the course of the project.

‘There is clear evidence that interventions using the natural environment can deliver cost savings for health and health-related services and improve physical and mental health outcomes. So increasing the amount, and more crucially the quality, of green spaces and improving access to them, can be part of a cost-effective package to address health inequalities and improve health outcomes.’ - PLYMOUTH PLAN (HEA7)

1.Dasgupta, P. (2021) The Economics of Biodiversity: The Dasgupta Review. London: HM 2.Treasury Millenium Ecosystem Assessment (2005) Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC. 3.DLovell, Rebecca, Mathew White, B. Wheeler, T Taylor and L Elliot. (2020) ‘A rapid scoping review of health and wellbeing evidence for the Green Infrastructure Standards’, In For: Natural England, Department for the Environment, Food and Rural Affairs, Public Health England, and Ministry for Housing, Communities and Local Government,

England. University of Exeter Medical school.European Centre for Environment and Human Health.

4.Mell, I and M. Whitten (2021) ‘Access to nature in a post Covid-19 world: Opportunities for green infrastructure financing, distribution and equitability in urban planning’, International Journal of Environmental Research and Public Health, 18(4), pp. 1527.

What we did

We analysed 12 policy documents sourced from the Plymouth Plan 2014-2034 and the Plymouth and South West Devon Joint Local Plan 2014-2034.

We summarised the overall purpose of each policy and conducted a text keyword search for explicit links to nature and green or blue spaces in these documents. Findings were documented on a table and visualised using a radar map to show the frequency of words relating to nature that appeared in each of the analysed documents.

Plymouth policy documents:

Plymouth Plan 2014-2034	Plymouth and South West Devon Joint Local Plan 2014-2034	Local Transport Plan 2011-2026	Health and Wellbeing Strategy 2014
Safer Plymouth Partnership Plan 2018-2020	Plymouth Housing Plan 2018	Green Space Strategy 2008-2023	Delivering Economic Growth for the City of Plymouth 2019-2024
Plymouth's Children and Young People Partnership 2019-2020	Child Poverty Action Plan 2019-2022	Culture Plan: A Place Based Strategy for Plymouth 2021-2030	Plymouth Municipal Waste Strategy 2007-2030



What we found

Throughout the policy documents, links to nature were predominantly limited to documents within the same sector, such as transport or green space. **There were no mentions of nature in 33% of city-wide policy documents**, including those for health and wellbeing, housing, children and young people, or child poverty.

Green environment

Nature keywords linked to the green environment were more abundant than those linking to the blue environment, mainly through mentions of green corridors, recreation spaces, and as a means of mitigating climate change through promoting biodiversity. Within the Plymouth Plan, the Health and Wellbeing benefits of the Natural Environment (HEA7) is a key policy aiming to better integrate individuals and communities with their natural environment.

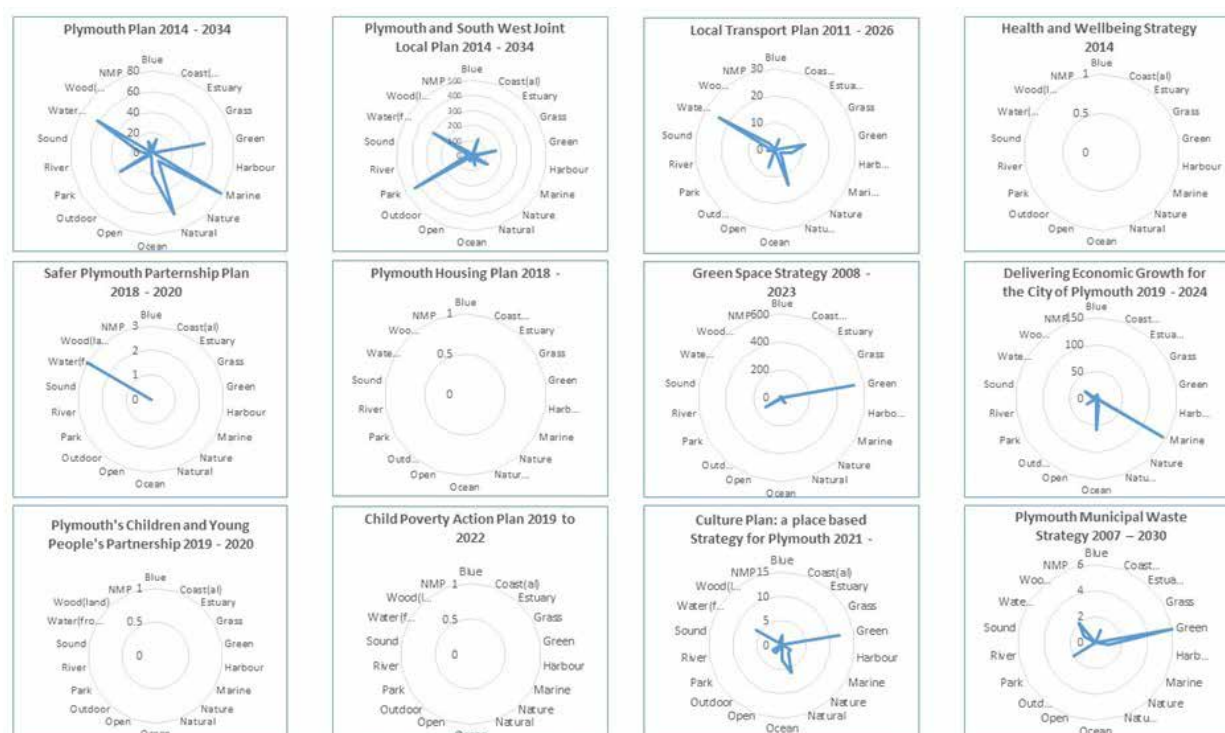
Blue environment

Notably, the Health and Wellbeing benefits of the Natural Environment policy makes no mention of Plymouth Sound or the Coast in aiding health and wellbeing benefits. Further, throughout the reviewed documents, nature terms linked with the blue environment were predominantly in reference to the blue environment as an investment asset and were most evident in economic documents. Whilst half of the documents repeated Plymouth's vision of being a waterfront city, assessment of the role of nature in supporting that ambition was limited.

Mental health and environmental quality

The mental health benefits of urban parks and the coast were also not represented in city policy. Additionally, none of the documents made a link between the quality of the environment and the associated social and economic benefits.

Radar map visualisations



Radar map visualising the frequency of words relating to nature. Note the numbers on the scale circle to denote the number of occurrences as they vary across the documents.

Using the analysis to influence policy and practice

Whilst the integration of the natural environment varies across policy documents, the analysis identified opportunities in city wide planning and policy to embed the role of nature into future iterations of Plymouth strategy documents on the themes of Health and Wellbeing, Housing, Children and Young People, and Child Poverty.

Noting the gaps identified through the policy analysis, the Green Minds delivery team capitalised on the fact that the lead Partner was the Local Planning Authority and used the strength of the multi-sector partnership team to influence policy and practice as the project developed.

Progress

- Since the time of this analysis, the work of Green Minds has played a role in influencing various policy documents and initiatives. These include:

- The Active to Thrive Plan, a Public Health led document, now makes explicit links between green and blue spaces and the health of children and young people.
- Inclusion of the Green Minds behaviour change work surrounding nature connection and stewardship in the Climate Emergency Action Plan 2021 and 2022.
- Advocating for Green Skills as a key theme within the Net Zero Action Plan to 2030.
- Supporting the inclusion of Environmental Justice into the organisational visions of both Arts University Plymouth and Real Ideas Organisation.
- Investing into the development of the Plymouth Local Nature Recovery Plan, nested within the Devon Local Nature Recovery Plan, a new Government legislative requirement coming out of the 2021 Environment Act.
- Creating opportunities for Green Finance, in particular through the development of the first UK Local Authority Habitat Banking Vehicle, responding to the UK's Biodiversity Net Gain legislation which came into effect in November 2023.



‘The city will ensure that the natural environment is fully considered and embedded in the delivery of the city’s vision for growth. The Natural Network will consist of a functional network of green and blue spaces that support a high quality of life for communities as well as providing an attractive environment for investment, space for nature to thrive and increased resilience to the impacts of climate change.’

Plymouth Plan (GRO6) - Plymouth Plan (HEA7)



“Green Minds is a great example of taking and adapting research-based approaches to fit the needs and circumstances of a particular situation. Then communicating the new approaches to a diverse audience.”

University of Plymouth researcher



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#GreenMindsPlymouth

This project is co-financed by the European Regional Development Fund through the Urban Innovative Actions Initiative.

Insight paper based on research by:

McGrath, E., Rees S., 2021. Policy Review – How Nature is represented and linked in Plymouth Policy.
A report by research staff at the Marine Social Science Unit, University of Plymouth, pp.1-56

