An Action Plan

to increase green space
and enhance wildlife
in domestic gardens
across Manchester

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MANCHESTER

The city of Manchester has a population of 514,000 people. The city forms the administrative, commercial, financial, transport and cultural centre of Greater Manchester.

Manchester City Council aspires to create a liveable, clean, safe and attractive city. The many and varied green spaces in Manchester play an essential role in delivering this aspiration. Green spaces in Manchester include:

- **one hundred and sixty public parks**
- **forty two allotment sites**
- **five river valleys *(Irwell, Irk, Medlock, Mersey and Bolin)***
- **three canals *(Bridgewater, Rochdale, Ashton)***
- **street trees**
- **woodlands**
- **cemeteries**
- **brownfield land**
- **private gardens**

THE BENEFITS OF GREEN SPACES

Urban green spaces comprise physical components such as trees, grasses, and water bodies. The composition and arrangement of these physical components determine the important natural processes that take place in green spaces, which can:

- **cool the air**
- **improve air and water quality**
- **absorb rainfall**
- **support wildlife**
- **provide a setting for recreational activities**

These natural processes that occur in green spaces can provide many benefits to people, which include:

- **fewer incidents of heat stroke during heat waves**
- **fewer incidents of respiratory problems during smog events**
- **reduced flood risk**
- **increased contact with nature**
- **using water bodies for fishing and green spaces for physical exercise**

By measuring the physical components of green spaces it is possible to estimate the natural processes taking place in them. Consequently, it is possible to estimate the benefits that they provide to people and to the city as a whole.

BACKGROUND

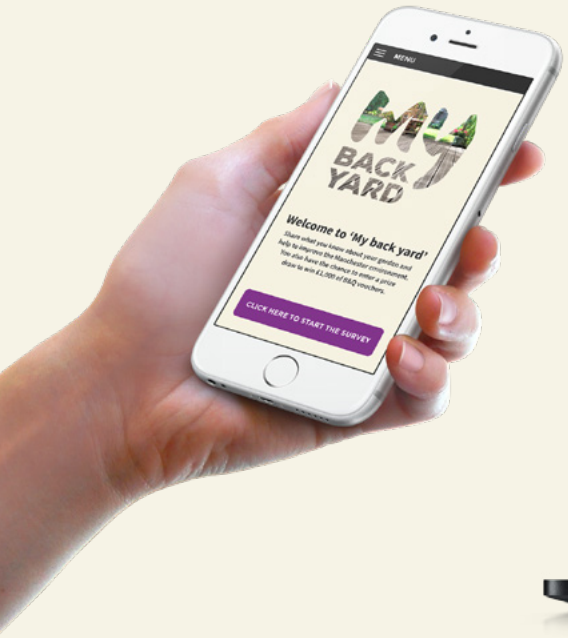
Individually a domestic garden may appear insignificant. Collectively domestic gardens make up a significant proportion of the green space within a city.

In Manchester, one fifth of the land area is domestic gardens, which could contribute around one third of the city's green space. Previously, it was not known whether each domestic garden is entirely covered by green space, or whether it is fully or partly paved. So, the actual amount of green space that domestic gardens contribute to the city's overall green space remains unclear.

The information used in Manchester Green and Blue Infrastructure Strategy assumes that all domestic gardens are wholly green space. This assumption over-estimates the amount of green space in gardens because some gardens are at least partly paved.

Over-estimating the amount of green space in gardens has implications for the future planning of the city. For example, over-estimating the amount of green space may lead to:

- **inaccurate simulations about the city's ability to cope with extreme weather**
- **misidentification of areas that need public green spaces**
- **misguided action on the ground**
- **residents undervaluing their domestic gardens**



PROJECT APPROACH

My Back Yard was a two year project that took place between 2016 and 2017. The project developed a new understanding of the benefits that domestic gardens provide to residents in Manchester. There were four consecutive stages in the project approach.

The first stage involved an online survey to gather information from Manchester residents on how much green space exists in their gardens. Information on how people value their gardens was also collected. Over 1,000 people took part in the survey.

During the second stage, the information gathered from the online survey was validated against detailed aerial images. Furthermore, aerial images were used to extend and complement the survey information. This process resulted in a robust estimate of the amount of green space in gardens.

In the third stage, the amount of green spaces in gardens was used in models that estimate the natural processes that take place within gardens. The natural processes investigated were cooling the city, and absorbing rainfall. These estimates indicated benefits relating to reduced risks from heat waves and flooding.

The final stage of the project involved incorporating this new information into an action plan to improve the benefits provided by gardens. Four project partners took part in three rounds of discussions, negotiations, and consensus building. These resulted in a co-developed action plan.

EVIDENCE ON THE AMOUNT OF GREEN SPACE IN GARDENS

Domestic gardens can cover a significant proportion of the total area of each ward. Highlight findings on the proportion of domestic gardens to total ward area include:

- **The maximum proportion of domestic gardens to total ward area is 47%**
- **The minimum proportion of domestic gardens to total ward area is 0.5%**
- **The average proportion of domestic gardens to total ward area is between 22% and 26%**

The actual green space within domestic gardens is less than expected:

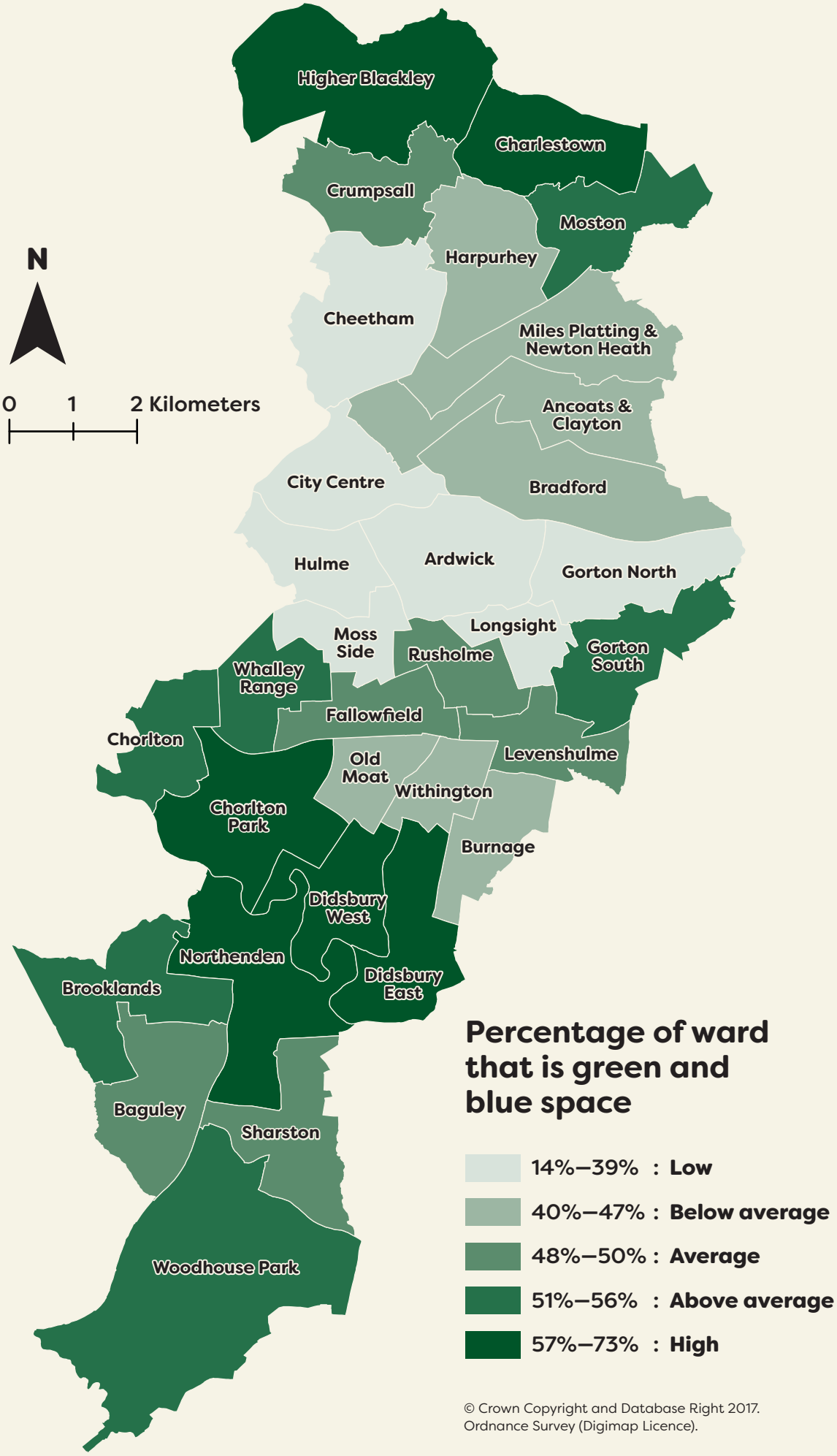
- **The total area of domestic gardens in Manchester is 24 square kilometres**
- **The total area of domestic garden green space in Manchester is 12 square kilometres**

The findings of the My Back Yard project demonstrate that gardens are not completely green space. This affects the total estimate of green and blue space cover across Manchester:

- **Green and blue spaces cover 49% of the area of Manchester**
- **It was previously estimated that Manchester's green and blue spaces covered 58% of the city**

Less green space in domestic gardens means that the potential benefits they provide to people are reduced. The key findings indicate that:

- **Due to less green space in Manchester than previously estimated, surface temperatures in some wards during the hottest days of the year could be up to 4°C hotter**
- **Due to less green space in Manchester than previously estimated, the amount of rainfall absorbed during the wettest days of the year may be up to 6% less**



Percentage of ward that is green and blue space

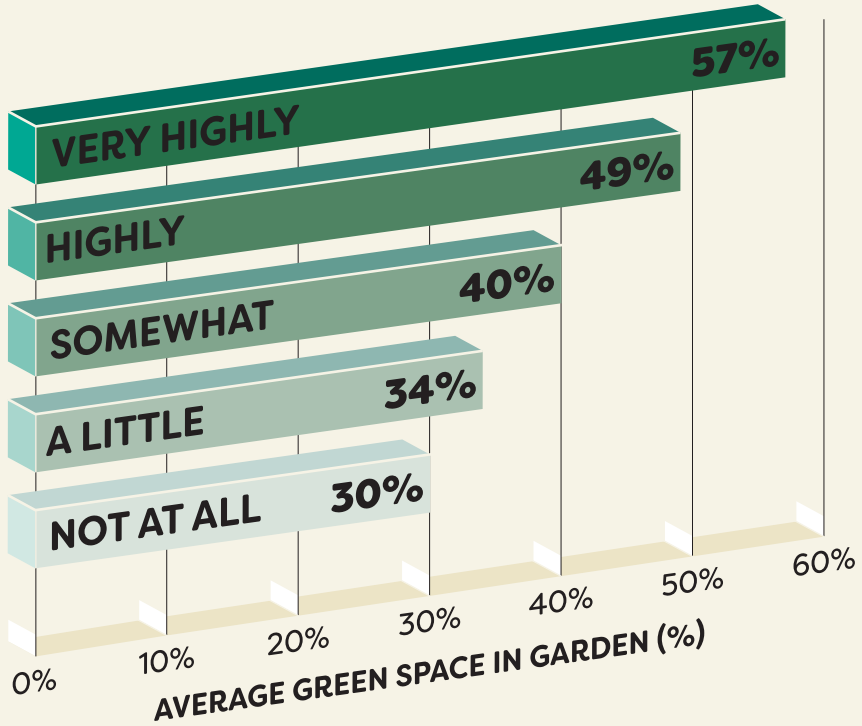
- 14%–39% : **Low**
- 40%–47% : **Below average**
- 48%–50% : **Average**
- 51%–56% : **Above average**
- 57%–73% : **High**

EVIDENCE ON HOW PEOPLE VALUE THEIR GARDENS

Over 1,000 people from across Manchester responded to the survey. People value their gardens highly and for many different reasons. Some key findings from the My Back Yard survey include:

- 97% of respondents said they value their garden
- The more green space there is in a garden, the more residents value that garden
- Gardens with around 60% green space are valued the most
- Older age groups value their garden more than younger age groups
- Older age groups tend to have more green space in their gardens than younger age groups
- Domestic gardens of detached houses are 80% green space on average
- Domestic gardens of terraced houses are 40% green space on average
- The garden was a key factor in the decision to rent or buy property for 66% of the respondents
- Tenants in the private rented sector said the garden was not a key factor in their decision to rent

HOW MUCH MANCHESTER RESIDENTS VALUE THEIR GARDENS



PLEDGES TO IMPROVE GREEN SPACE AND WILDLIFE IN GARDENS

Increasing the amount of green space and wildlife in gardens could increase the benefits that gardens provide to people. Respondents to the My Back Yard survey pledged their support for actions to improve green space and wildlife in their gardens. The key pledges are:

252 respondents pledged to plant a variety of plant types in their garden to improve wildlife

228 respondents pledged to use drought resistant plants in their garden and to collect water

150 respondents pledged to plant trees for shade and to improve air quality

119 respondents pledged to replace the hard surfaces in their garden with green space

PROJECT PARTNERS

The action plan that follows has been co-developed between four partners. Each project partner has an interest in gardens. The project partners can also influence planning policy and practical projects in green spaces across Manchester. The project partners and co-owners of the action plan are:

Manchester City Council

Manchester City Council is the local authority for the city of Manchester. Key priorities of the City Council include economic growth and creating attractive, safe and clean neighbourhoods. These priorities are pursued through a range of strategies, public services, and through the work of the Manchester (local enterprise) Partnership and other stakeholders.

Lancashire Wildlife Trust

The Wildlife Trust for Lancashire, Manchester and North Merseyside (Lancashire Wildlife Trust) is a registered charity and a non-profit company. Key priorities of the Lancashire Wildlife Trust include protecting and enhancing wildlife and engaging people with it. These priorities are pursued through a range of nature conservation projects and public engagement campaigns.

Manchester City of Trees

City of Trees is a growing movement initiated by the Community Forest Trust and the Oglesby Charitable Trust. The ambitious charity aims to: plant three million trees, bring back 2,000 hectares of woodland back into use for the community, and connect people to nature — within a generation. **www.cityoftrees.org.uk**

Southway Housing Trust

Southway Housing Trust (Manchester) Limited is a registered charitable housing association and a registered non-profit company. The purpose of the Southway Housing Trust is to provide affordable, decent and secure homes, and desirable, attractive and safe neighbourhoods. The Trust pursues this purpose through engaging with tenants and other stakeholders in providing high quality housing.

ACTION PLAN

This action plan has been co-developed by the four project partners. It brings together and complements existing activities that the project partners undertake to improve green space in gardens. The action plan also creates the groundwork for future garden projects.

The aim of this action plan is to encourage a cultural change in the way that people appreciate the benefits of their gardens. This aim will be achieved by (a) working in partnership; (b) pooling delivery mechanisms; and, (c) delivering the actions for improving green space and wildlife in gardens.

The actions for improving green space and wildlife in gardens, and related delivery mechanisms agreed by the partners, were classified under the following categories:

Actions for improving green space and wildlife in gardens:

1. **Promote actions that increase green space and wildlife in gardens**
2. **Undertake on the ground garden related projects**
3. **Engage in garden related policy development**
4. **Undertake research on gardens**
5. **Provide training and practical skills relating to gardens**
6. **Promote the value of garden**

Delivery mechanisms:

- **A. Citizen science**
- **B. Data collection**
- **C. Events**
- **D. Information packs**
- **E. Lobbying**
- **F. Meetings**
- **G. On the ground new and existing projects**
- **H. Public promotion**

MANCHESTER CITY COUNCIL
ACTIONS TO IMPROVE GREEN SPACE AND WILDLIFE IN GARDENS

Wards	Actions to improve gardens	Delivery mechanism	Partners	Timescale
All wards	Promote actions to improve wildlife in gardens	Britain in Bloom campaign	MCC, RHS	2017–2020
All wards	Promote best practice relating to gardens	Britain in Bloom awards, Grow Wild awards	MCR GI Group	2017–2020
All wards	Promote the value of gardens	Greening Grey Britain and Britain in Bloom campaigns, Grow Wild and My Wild City projects, Cultural Gardener, FGs, ASs	MCC, RPs, NT, RHS, LWT	2017–2020
All wards	Promote the value of garden trees in RPs housing estates	Commitment to plant 1,500 trees per year	MCC, RPs, residents	2017–2020
All wards, Wythenshawe	Promote the value of gardens	Community Greening projects, Food Growing project, Real Food Wythenshawe project	MCC, HCGC, NT, RPs	2017–2018
All wards	Promote MBY project outputs and outcomes	Internal and external meetings and lobbying	MCR GI Group, MMU	2018–2020
All wards	Protect, conserve, remediate existing and void gardens	Establish RPs green infrastructure group	MCC, RPs	2017–2020
All wards	Protect, conserve, remediate existing and void gardens	External meetings and lobbying RPs	MCC, RPs	2017–2020
All wards	Create appropriate new gardens in new developments	External meetings and lobbying RPs	MCC, RPs	2017–2020
All wards, Gorton	Create appropriate new gardens in new developments	Master planning, Northern Gateway Framework, Eastlands Framework, Grow Green Gorton project	MCC, RPs, developers	2017–2020
All wards	Research on multiple values of garden	Ongoing collaborative green infrastructure research	Universities, MCR GI Group	2017–2020
All wards, Hulme	Influence policy on gardens	Include garden activities in ward plans, Hulme ESS project	Councillors, local groups	2017–2018
All wards	Influence policy on gardens	Update GI strategy in light of garden data	MCC	2017–2020
All wards	Influence policy on gardens	Add garden section in updated GI strategy	MCC	2017–2020

MBY: My Back Yard; **RPs:** Registered Housing Providers; **MCC:** Manchester City Council; **RHS:** Royal Horticultural Society; **MCR GI Group:** Manchester Green Infrastructure Group; **NT:** National Trust; **LWT:** Lancashire Wildlife Trust; **HCGC:** Hulme Community Garden Centre; **MMU:** Manchester Metropolitan University; **FGs:** Friends of Groups; **ASs:** Allotment Societies

LANCASHIRE WILDLIFE TRUST
ACTIONS TO IMPROVE GREEN SPACE AND WILDLIFE IN GARDENS

Lancashire, Manchester & N Merseyside

Wards	Actions to improve gardens	Delivery mechanism	Partners	Timescale
All wards	Promote actions to improve wildlife in gardens	LWT website, social media, promotion materials	LWT	2018
All wards	Promote actions to improve wildlife in gardens	Guidance, info & resource pack (hard pack)	LWT	2017–2018
All wards	Promote actions to improve wildlife in gardens	Guidance, info & resource pack (online pack)	LWT	2017
All wards	Promote the value of indicator species in gardens	Species recording campaign	LWT	2017
City Centre	Promote the value of biodiversity and gardens in particular	Festival on gardens and biodiversity organisation	LWT, MCC	2018
City Centre	Promote actions to improve wildlife in gardens	Festival on gardens and biodiversity workshops	LWT, MCC	2018
All wards	Citizen science mapping of actions to improve wildlife in gardens	LWT website new interactive map tool	LWT	2018
All wards	Training wildlife identification and recording in gardens	Species recording campaign	LWT	2018
Targeted wards	Research on spatial mapping of the connectivity of garden corridors	GIS analysis to identify garden corridors	LWT, students, universities	2018
Targeted wards	Research on wildlife and other values of garden corridors	Student projects, partner projects	LWT, students, universities	2017

LWT: Lancashire Wildlife Trust; **MCC:** Manchester City Council

CITY OF TREES
ACTIONS TO IMPROVE GREEN SPACE AND WILDLIFE IN GARDENS

Wards	Actions to improve gardens	Delivery mechanism	Partners	Timescale
All wards	Promote the multiple values of garden trees	COT website and social media	COT	Ongoing
All wards	Promote the value of heritage trees in gardens	GM Tree heritage project	COT	2015–2018
All wards	Promote the value of trees in school grounds	Trees for learning project	COT	2016–2020
All wards	Promote the value of garden trees in RP housing estates	Guidance and info pack collaboratively with RPs	COT, SWT	2018
All wards	Promote the value of garden trees to households	Ad hoc projects and COT website	COT, SWT	Ongoing
All wards	Promote the value of green infrastructure and gardens in particular	Conference with SWT	COT	2018
All wards	Training on planting skills relating to garden trees	Woodland planting	COT	Ongoing
Wythenshawe	Training on management skills relating to garden trees	Woodland management	COT	Ongoing
City Centre	Training on practical skills relating to garden trees	Green streets project, potential partnership with other charities	COT	Ongoing
City Centre	Develop ecological links between garden trees and street trees	Green streets project	COT	Ongoing
City Centre	Develop ecological links corporate garden trees and street trees	Corporate green projects	COT	Ongoing
All wards	Influence policy on garden trees	GM Tree and woodland strategy	COT	2018–2019

COT: City of Trees; **SWT:** Southway Housing Trust;
GM: Greater Manchester; **RPs:** Registered Housing Providers

SOUTHWAY HOUSING TRUST
ACTIONS TO IMPROVE GREEN SPACE AND WILDLIFE IN GARDENS

Wards	Actions to improve gardens	Delivery mechanism	Partners	Timescale
BR, CP, DE, DW, MB, WT, FL	Promote the value of gardens	Wild City project social media, facebook, twitter	SWT	2017–2020
BR, CP, DE, DW, MB, WT, FL	Promote the value of gardens	Wild City project, Southway Stories, Newsletter	SWT	2017–2020
BR, CP, DE, DW, MB, WT, FL	Promote the value of gardens	Wild City project, internal communications to staff	SWT	2017–2020
BR, CP, DE, DW, MB, WT, FL	Promote the value of gardens	Link to garden competition entries (if applicable)	SWT	2017–2020
GM	Promote MBY project outputs and outcomes to RPs	Internal and external meetings	SWT, MMU	2018
GM	Promote the value of wildlife in gardens	Internal and external meetings	SWT, LWT	2018
BR, CP, DE, DW, MB, WT, FL	Protect, conserve, remediate existing and void gardens	Internal meetings and processes	SWT	2017–2020
GM, CHS	Create appropriate new gardens in new developments	Internal meetings and processes	SWT	Ongoing
BR, CP, DE, DW, MB, WT, FL	Review tree stock in gardens and link to Wild City Project	Internal and external meetings	SWT, COT	2017–2020

BR: Burnage; **CP:** Chorlton Park; **DE:** Didsbury East, **DW:** Didsbury West; **MB:** Mersey Bank; **WT:** Withington; **FL:** Fallowfield; **GM:** Greater Manchester; **CHS:** Cheshire; **MBY:** My Back Yard; **SWT:** Southway Housing Trust; **MMU:** Manchester Metropolitan University; **LWT:** Lancashire Wildlife Trust; **COT:** City of Trees

ACTION PLAN IN LOCAL POLICY CONTEXT

In Manchester there is no specific planning policy for domestic gardens. However, domestic gardens are included in the Manchester Green and Blue Infrastructure Strategy. The My Back Yard action plan contributes directly to this Strategy.

The Manchester Green and Blue Infrastructure Strategy in turn is a complementing strategic objective for the Manchester Strategy and for the Climate Change Strategy. So, the My Back Yard action plan also contributes to these two strategic policies:

Manchester Core Strategy

The Core Strategy is the key policy within Manchester City Council's spatial development framework. The Core Strategy includes a spatial policy on green infrastructure, which identifies and supports its multifunctional contributions to the city. Private gardens are acknowledged within the strategy as parts of green infrastructure. However, the Core Strategy lacks a specific policy on private gardens.

Our Manchester

Our Manchester, also known as the Manchester Strategy, is the city's framework for economic, social and environmental development. Within the Manchester Strategy the multiple contributions of green spaces to the liveability of the city and the well-being of its residents are recognised. The Green and Blue Infrastructure Strategy is listed as a complementing strategic objective.

→ Manchester Climate Change Strategy

The Manchester Climate Change Strategy focuses on delivering Manchester City Council's climate commitments. The roles of green spaces in helping the city to adapt to climate change, but also to reduce the city's emissions, are acknowledged. This strategy does not cover domestic gardens, but it makes explicit reference to the Manchester Green and Blue Infrastructure Strategy as a complementing strategic objective.

→ Manchester Green and Blue Infrastructure Strategy

The purpose of the Manchester Green and Blue Infrastructure Strategy is to provide a framework for making green spaces and water bodies integral parts of the city's future growth. Protecting and enhancing existing domestic gardens is a specific headline action within the strategy. Creating domestic gardens by embedding green space as part of new residential developments is also a key action.

ACTION PLAN DELIVERY AND REPORTING

The My Back Yard action plan will be delivered through the Manchester Green Infrastructure Strategy Group. This group is an informal partnership of public, private, and charitable sector stakeholders in delivering the Manchester Green and Blue Infrastructure Strategy. All four project partners are members of this group.

The Manchester Green Infrastructure Strategy Group meets four times in a year. During these meetings, the group review progress in the delivery of the Manchester Green and Blue Infrastructure Strategy. Group members also update each other on planned activities and identify opportunities for collaboration.

The My Back Yard action plan will become a permanent item on the agenda of the meetings of the Manchester Green Infrastructure Strategy Group. At these meetings the project partners will review and report progress on delivering the actions for improving green space in gardens. Opportunities to collaborate with additional stakeholders in gardens will also be identified during these meetings.

Resources for delivering the action plan will be sought collaboratively and individually by project partners. As appropriate funding opportunities arise, project partners may engage additional stakeholders in bid development. The project partners may seek resources from:

- **Heritage Lottery Fund**
- **Department for Environment Food and Rural Affairs (Defra)**
- **Private sector**
- **Section 106 agreements**
- **Project partners' operational resources**
- **Staff or volunteer time**

FINAL MESSAGES

Private gardens are an important component of Manchester, making up around one fifth of the total area of the city.

There is less green space in domestic gardens than previously estimated. As a result, gardens provide fewer benefits to people and to the city than assumed in the past.

Local policy on domestic gardens needs to take into account the new estimate of the amount of green space in wards. This new and refined estimate needs incorporating in local planning policy.

Increasing the green space and wildlife in gardens increases the potential benefits that gardens can provide. The action plan provides a framework for improving green space and wildlife in gardens.

Private rented tenants do not consider gardens as important as owner-occupiers or social rented tenants. Also, older age groups value their gardens more than younger age groups.

There is a need to engage private rented tenants and younger age groups with their gardens. Public campaigns to encourage engagement with the benefits of gardens are needed.

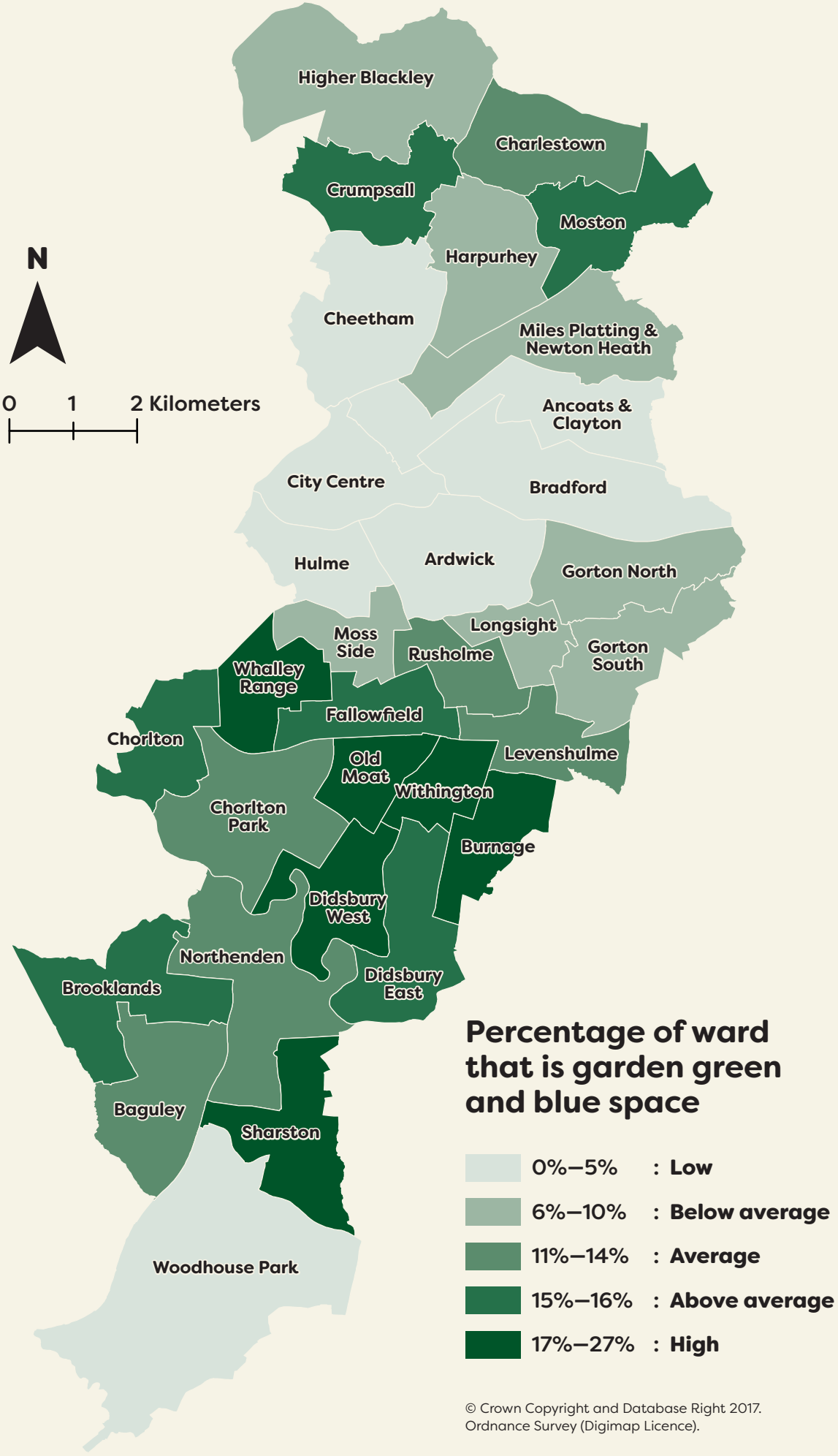
This action plan contributes to publicising the outcomes of the project. However, additional sharing of the findings and lobbying decision makers is needed to have a measurable impact on gardens.

Finally, additional resources are needed to support actions for improving green space and wildlife in gardens. Innovative pooling of resources from private, public and charitable sources is necessary.

INFORMATION FOR DECISION MAKERS

The information gathered by the project was developed into map datasets. The following map datasets are available to decision makers:

- **Percentage of ward that is gardens**
- **Percentage of ward that is garden green space *(vegetation and water)***
- **Percentage of ward that is non-green space *(buildings, bare soil, paved and impervious surfaces)***
- **Average garden size**
- **Amount of green space in an average garden *(vegetation and water)***
- **Amount of non-green space in an average garden *(buildings, bare soil, paved and impervious surfaces)***
- **Land surface composition of an average garden**
- **Percentage of green space cover in Manchester**
- **Cooling potential of green space in Manchester *(plus simulations)***
- **Rainfall absorption of green space in Manchester *(plus simulations)***



PROJECT TEAM

Dr Gina Cavan is Senior Lecturer in GIS and Climate, in the School of Science and the Environment at Manchester Metropolitan University. Her research focuses on urban ecosystem services of green infrastructure and climate resilience.

Dr Claire Smith is Honorary Research Fellow in Climate Change Adaptation in the Department of Geography at the University of Leicester, where she is a member of the Centre for Landscape and Climate Research. She has significant expertise in urban meteorology and climatology.

Dr Konstantinos Tzoulas is Senior Lecturer in Environmental Management in the School of Science and the Environment at Manchester Metropolitan University. His research focuses on green infrastructure planning, ecosystem services, and human health and well-being.

Fraser Baker is a postgraduate researcher in the School of Science and the Environment at Manchester Metropolitan University. His research interests focus upon applying remote sensing and GIS for urban ecosystem services assessment.

Dave Barlow holds a strategic role within the city's Policy, Partnerships and Research Team, and leads on all aspects of green infrastructure and biodiversity. He has worked for Manchester City Council for over thirty years, specialising in urban ecology and nature conservation.

James Hall is a Senior Project Office at Lancashire Wildlife Trust. He manages a range of nature conservation projects and public engagement campaigns, which aim to protect and enhance wildlife, and engage and educate people about wildlife.

Philippa Reece is the Environment Manager at Southway Housing Trust and has 14 years' experience of managing a variety of Green Infrastructure in an urban setting. Philippa is also a Green Flag Judge and has been a guest lecturer at Manchester Metropolitan University.

Pete Stringer is the Technical and Green Infrastructure Planning Manager for City of Trees. Pete's responsibilities include green infrastructure demonstration projects and public realm tree planting projects.

Tom Butlin is the GIS Coordinator and web developer at The Mersey Forest. His specialisms include green infrastructure mapping and the development of online mapping tools.

The My Back Yard project was conducted by:

Manchester Metropolitan University

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in collaboration with:

MANCHESTER CITY COUNCIL

Manchester City of Trees

Southway Housing Trust

The Wildlife Trusts Lancashire, Manchester & N Merseyside

The Mersey Forest more from trees

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