



# City of Trees

## Making Trees Count-

### Using data to develop a strategy for Greater Manchester's Trees and Woodlands

Bryan Cosgrove  
City of Trees



# What is a City of Trees?

City of Trees is an innovative and exciting movement set to re-invigorate Greater Manchester's landscape by transforming underused, unloved woodland and planting a tree for every person who lives there, within a generation.

City of trees is a movement, bringing together the public, private and third sectors, and the people of Greater Manchester.



# Over 100 Partners & Growing all the Time



Manchester  
City of Trees

GROWING MORE TREES  
FOR GREATER MANCHESTER



CAPITALCENTRIC



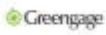
ALLIED LONDON

patagonia

ARUP



SIEMENS



MILLS & REEVE



DS.EMOTION



OMI



RSK



BDP.



GILLESPIES



JACOBS



ask



TRILOGY



creative concern



Watershed



Urban&Civic



Turley



# THE GOAL



GROWING MORE TREES  
FOR GREATER MANCHESTER

# 3m

trees, planted across  
the city region over  
the next two decades

# 1.5%

of land deemed as  
ready for planting,  
converted to woodland

# 2,000

hectares of currently  
unmanaged woodland  
brought into productive,  
beneficial state

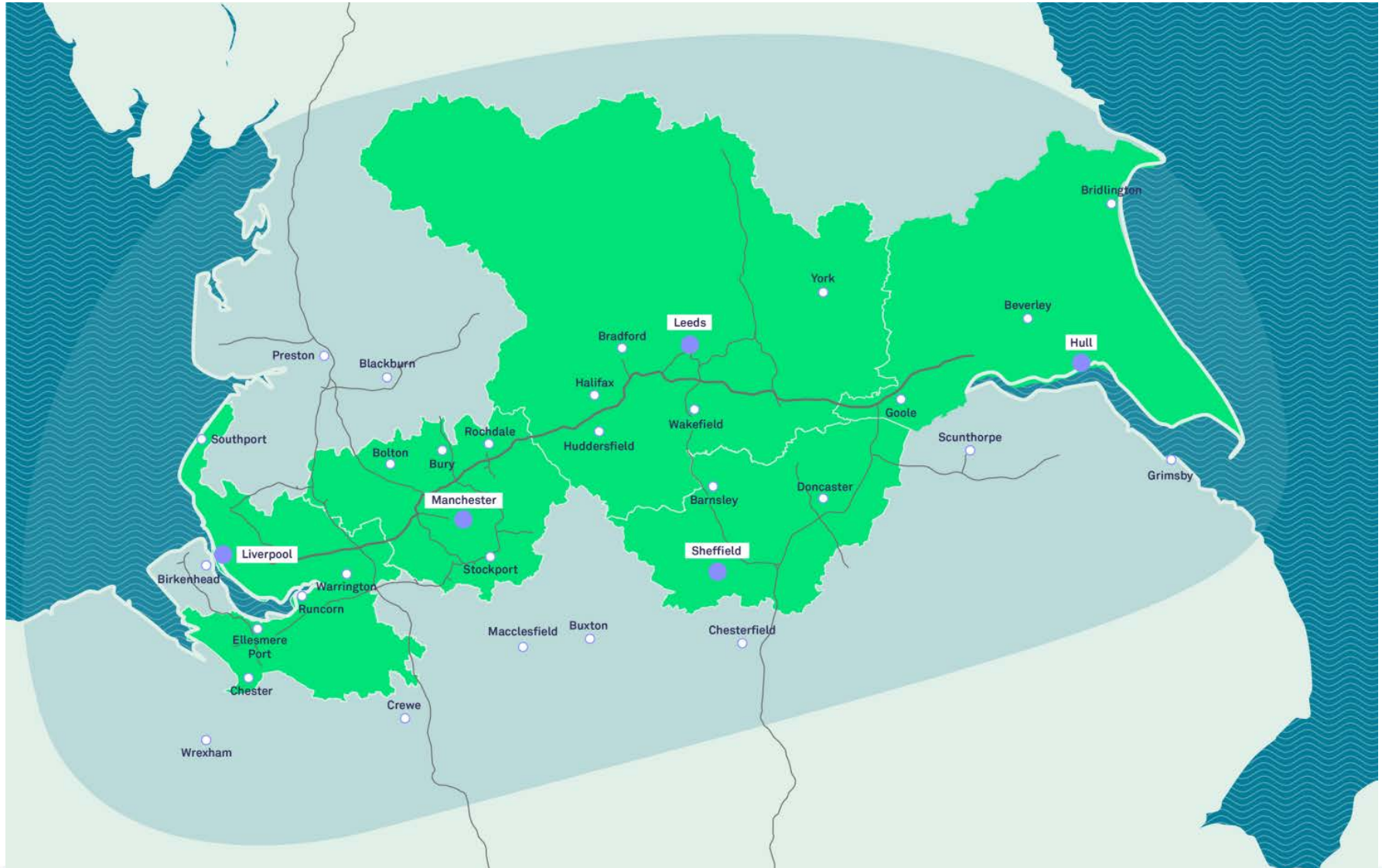




Manchester  
City of Trees

# A new Northern Forest

GROWING MORE TREES  
FOR GREATER MANCHESTER





Blackpool

Kirkham

Preston

Great Harwood

Padiham

Burnley

Warton Aerodrome

Lytham

Blackburn

Accrington

Oswaldtwistle

Hebden Bridge

Bamber Bridge

Todmorden

Leyland

Darwen

Rawtenstall

Bacup

Ripponden

Southport

Chorley

ROCHDALE

BURY

BOLTON

OLDHAM

WIGAN

SALFORD

MANCHESTER

TAMESIDE

RAF Woodvale

Ormskirk

Skelmersdale

Crosby

Kirkby

Ashton

New Brighton

St Helens

Newton-le-Willow

Moreton

Liverpool

Huyton

Whiston

Warrington

Lymm Dam

Stretton

TRAFFORD

STOCKPORT

New Ferry

Liverpool John Lennon Airport

Widnes

Runcom

Frodsham

Northwich

M6

Wilmslow

Bollington

Whaley Bridge

New Mills

Macclesfield

Buxton

Peak District National Park

Seafield Airfield

Ellesmere Port

Seafield Airfield

M55

Oxenhope

Brigh

Elland

Hudders

Meltham

Holmfir

Ripponden

Hudders

Meltham

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

Holmfir

# Policy and Influence

## Locally...

We are building relationships to unlock strategic support for both trees and woods across Greater Manchester and have the strong support of Andy Burnham, Mayor.



We are part of a number of strategic groups including the [Low Carbon Hub](#), Natural Capital Group and Urban Pioneer, Catchment partnerships, GM Wetlands partnership, Greater Sport Activity Network and Natural Course.

We also co-ordinate the [Greater Manchester Forests Partnership](#) - a partnership of 10 local authorities and DEFRA to discuss and plan at a strategic level the development of trees and woodlands across the City region.

## Delivering key agendas...

As well as delivering a wide number of community projects on the ground we also strive to ensure our work meets the key priorities of the region including air quality; health and wellbeing; flooding; climate change and resilience; low carbon; sustainable travel and skills and employment.



Donate to City of Trees



September marks the start of conker season. The conker is the seed of the horse chestnut tree. #SaturdayStats...  
<https://t.co/wPhClbs9Oj> — 1 day 22 hours ago



Sign up for e-news





This  
Man

Our vision is  
the world to

# Greater Manchester Natural Capital Investment Plan

EXECUTIVE SUMMARY — JANUARY 2019

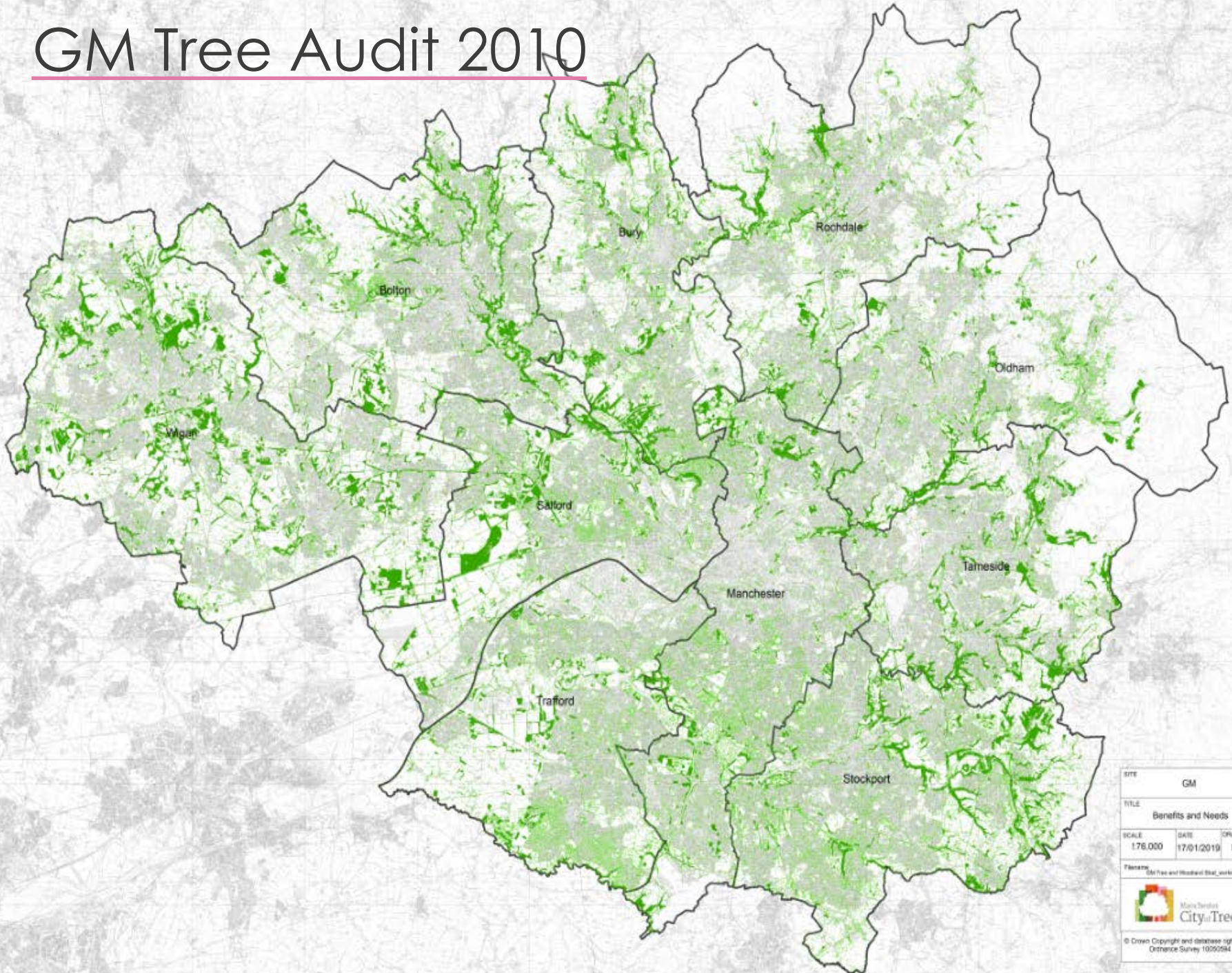
eftec, Environmental Finance and Countryside  
to  
Greater Manchester Combined Authority (GMCA)

places in





# GM Tree Audit 2010



SITE			GM		
TITLE			Benefits and Needs		
SCALE	DATE	DRAWN BY			
1:76,000	17/01/2019	BC			
Filename: GM Tree and Woodland Data_working					
			Mancunian City of Trees		
© Crown Copyright and database right 2018 Ordnance Survey 10002984					



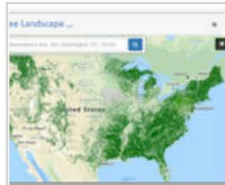
i-Tree is a combination  
of science and free tools  
that:

**Quantifies** the benefits and  
values of trees around the  
world.

Aids in tree and forest  
management and **advocacy**.

Shows potential **risks** to tree  
and forest health.

## i-Tree Tools



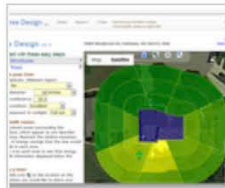
### i-Tree Landscape

Rapidly assess human and forest population information; threats to help prioritize areas for tree planting; protection.



### i-Tree Canopy

Easily estimate tree canopy and benefits using aerial photographs.



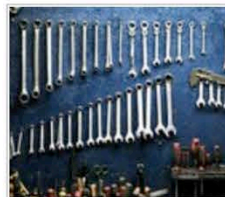
### i-Tree Design

Parcel level analysis of current and future tree benefits.



### i-Tree Eco

Flagship tool that quantifies the structure of, threats to, and benefits and values provided by forest populations globally.

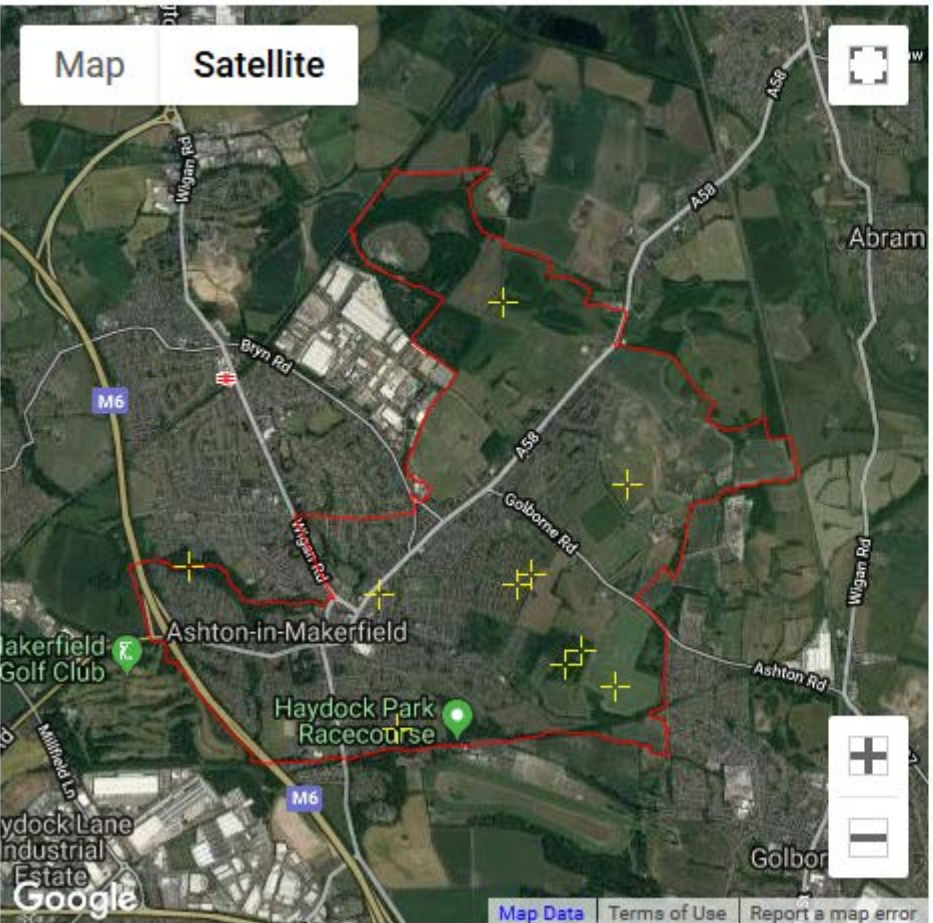


### More tools...

See all the i-Tree tools, past and present, listed here.



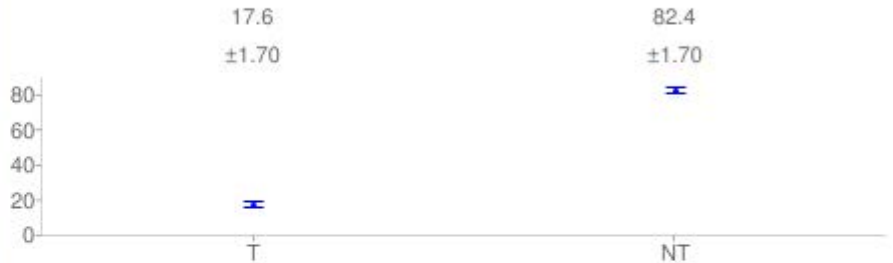
- How It Works
- Report
- Export
- Start Over
- Exit



# i-Tree Canopy v6.1

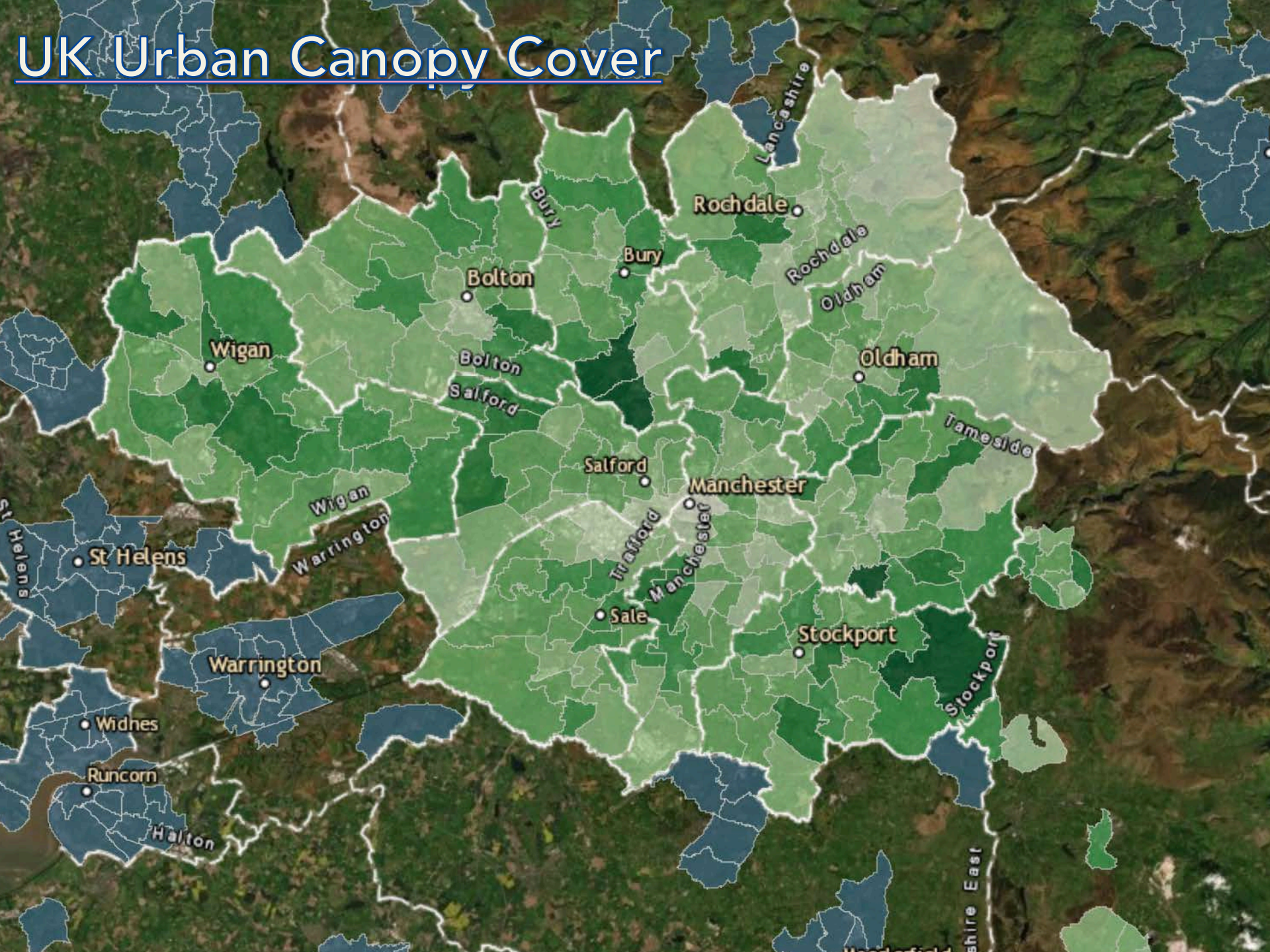


Percent Cover (±SE)

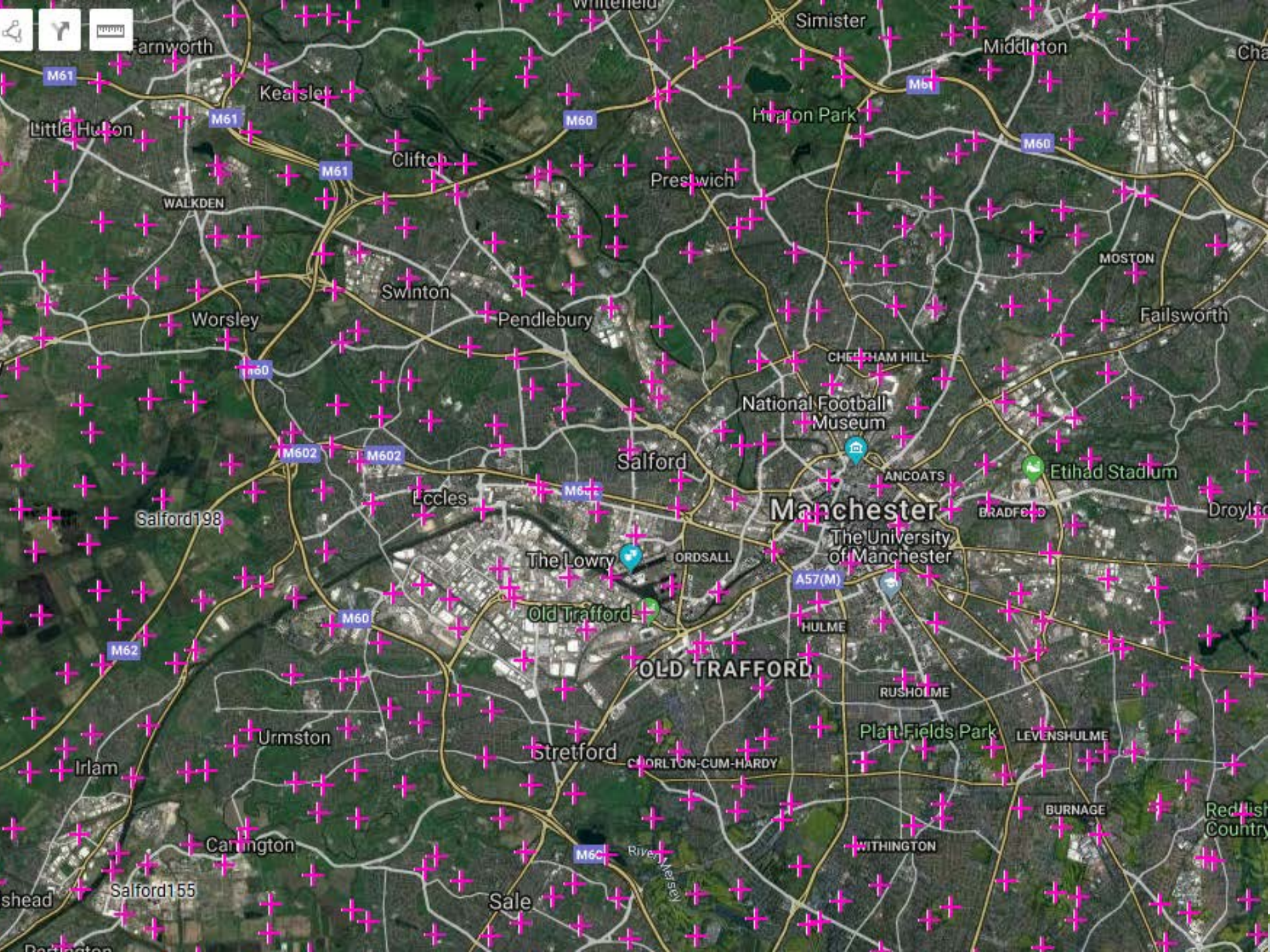


Id	Cover Class	Latitude	Longitude
1	Tree	53.49020	-2.65085
2	Non-Tree	53.48924	-2.62262
3	Non-Tree	53.48189	-2.63296
4	Tree	53.50364	-2.62384
5	Non-Tree	53.49443	-2.61317
6	Tree	53.48518	-2.61854
7	Non-Tree	53.48409	-2.61430
8	Non-Tree	53.48592	-2.61721
9	Non-Tree	53.48877	-2.63445
10	Non-Tree	53.48976	-2.62145

# UK Urban Canopy Cover

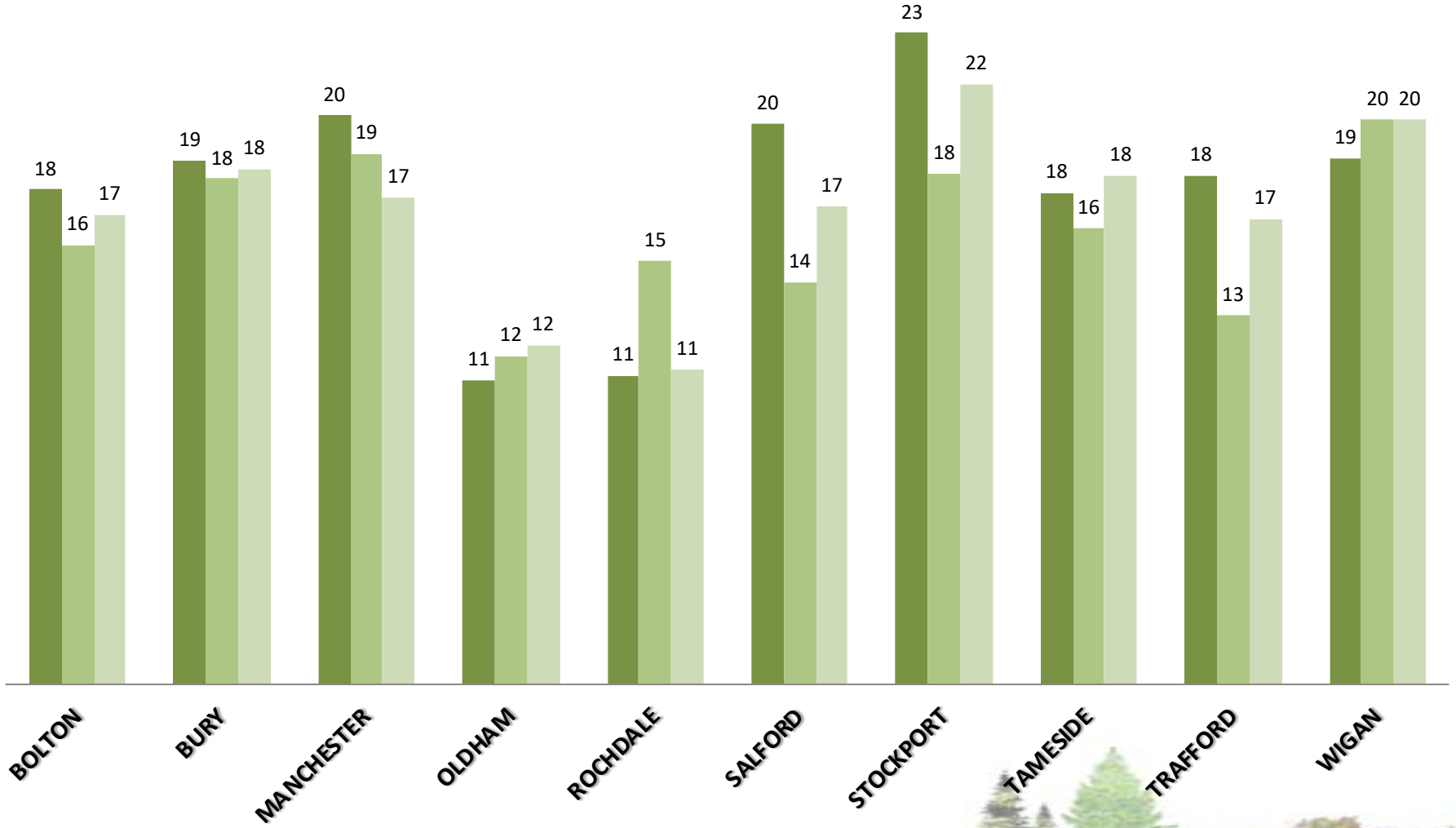






# GM Canopy Assessments

■ GMTA %   ■ iTree Eco %   ■ iTree Canopy %



There are an estimated **11,321,386 trees** in Greater Manchester, which equates to just **15.7%** tree canopy cover.



Manchester  
**City of Trees**

**#AllOurTrees**



STATISTIC #4

The most common species of trees in Greater Manchester are **Hawthorn**, **Sycamore** and **English Oak**.



Manchester  
City of Trees

**#AllOurTrees**

STATISTIC #5

Trees in Greater Manchester  
remove **847 tonnes** of pollutants  
from our air each year.



Manchester  
City of Trees

**#AllOurTrees**

STATISTIC #7

Trees intercept **1,644,415m<sup>3</sup>** of stormwater runoff per year in Greater Manchester.



Manchester  
City of Trees

**#AllOurTrees**

Greater Manchester's trees sequester **56,530 tonnes** of carbon each year.

The current carbon storage of all trees is **1,573,013 tonnes.**



Manchester  
**City of Trees**

**#AllOurTrees**

## STATISTIC #1

The total annual economic value of air pollution filtration, stormwater attenuation and carbon sequestration in Greater Manchester's trees is **£33,298,891.**



Manchester  
City of Trees

**#AllOurTrees**

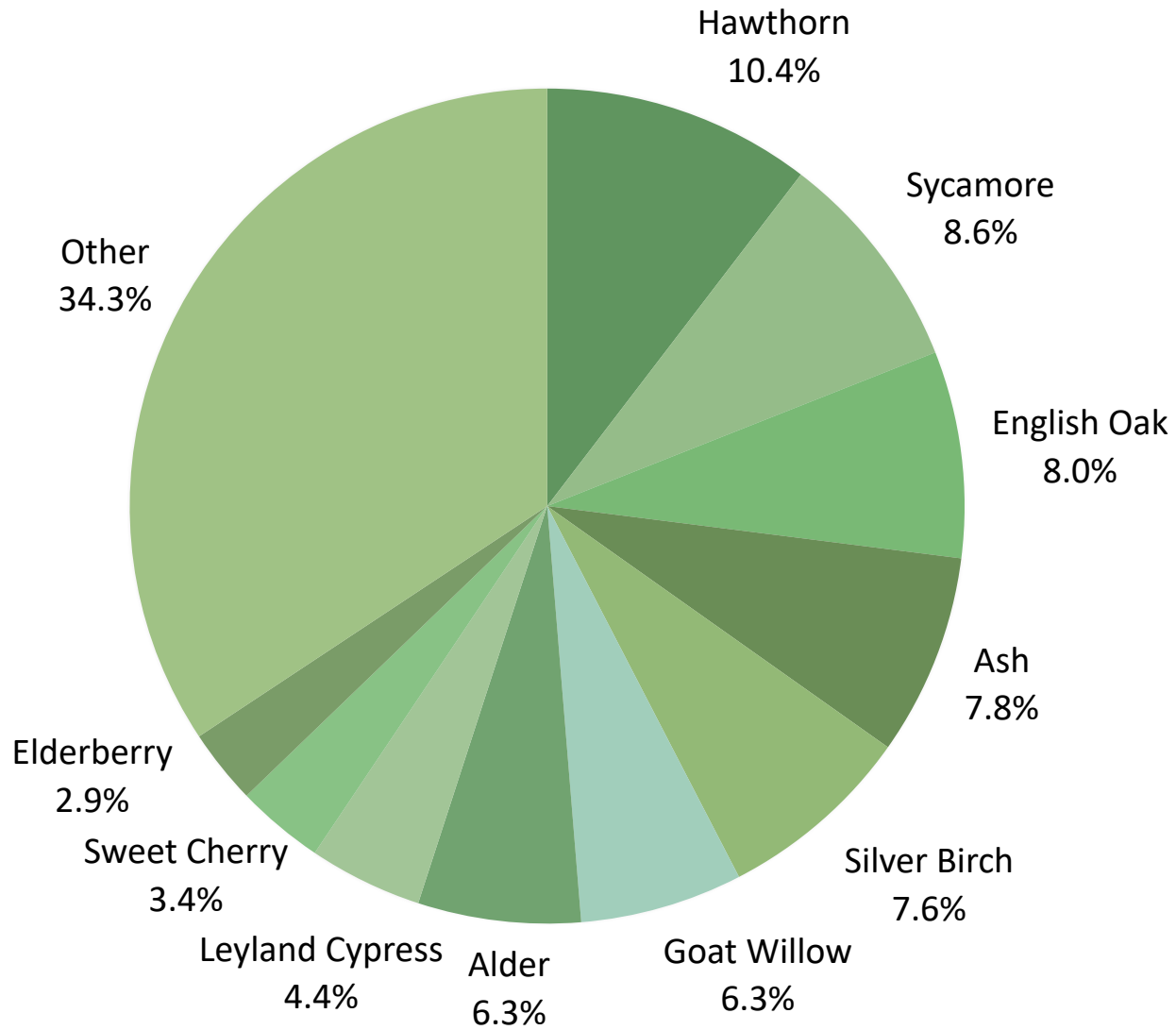
STATISTIC #8

Approx. **1 million trees** are in danger of being lost in Greater Manchester due to pests and diseases such as Ash Dieback and Horse Chestnut Bleeding Canker.



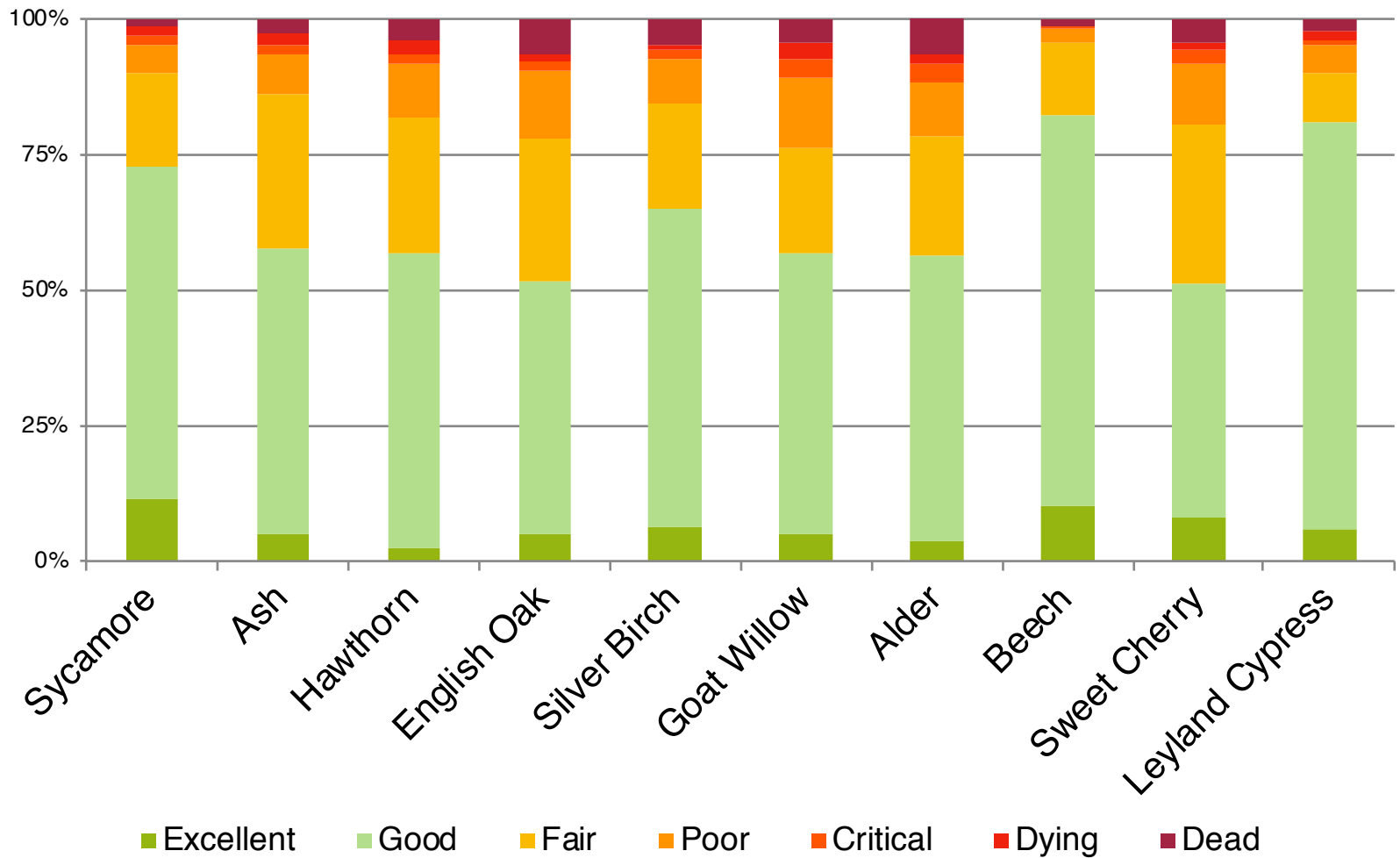
Manchester  
City of Trees

**#AllOurTrees**



Species	% Population	% Leaf Area	Dominance Value
Sycamore	8.6	16.9	25.5
Ash	7.8	8.8	16.6
Hawthorn	10.4	5.6	16
English Oak	8	7.8	15.7
Silver Birch	7.6	6	13.6
Goat Willow	6.3	5.6	12
Alder	6.3	4.7	11
Beech	2.8	7.7	10.5





# All Our Trees

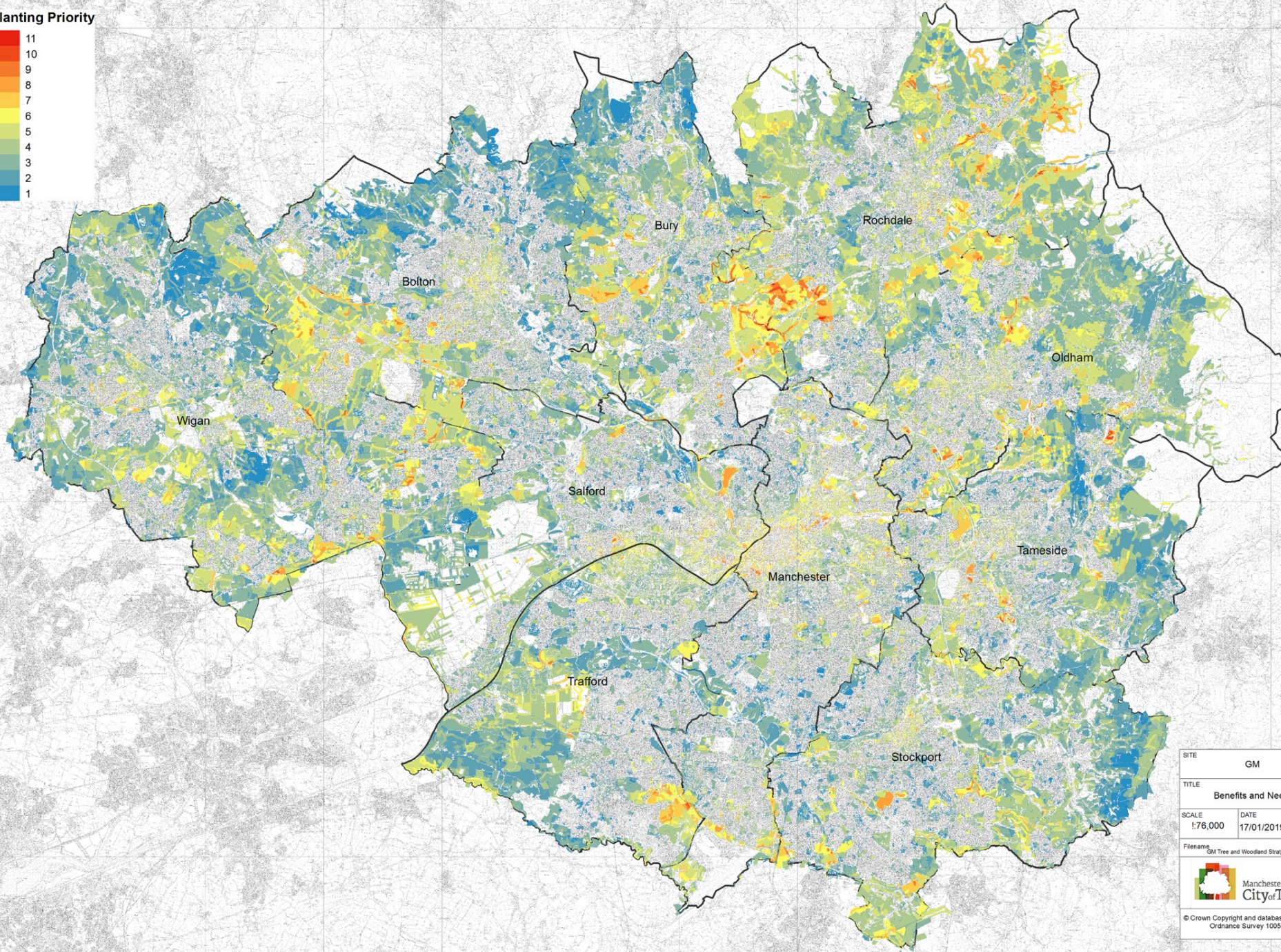
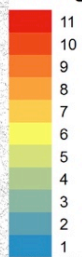
## Greater Manchester's Tree and Woodland Strategy

### Contents

Summary .....	3
Document History.....	4
Acknowledgements .....	5
Foreword.....	6
A Tree and Woodland Strategy for GM - Background and Introduction .....	7
0.1 Importance of trees.....	7
0.2 Vision for Greater Manchester .....	8
0.3 Why do we need a plan?.....	9
0.4 The Policy Context .....	10
Part 1 - Protecting and increasing the benefits from our trees - The strategy.....	11
1.1 Aims .....	11
1.2 Objectives.....	11
1.3 Principles .....	12
1.4 Delivering the strategy – Our collective action.....	12
1.5 Funding – how can we fund all our trees?.....	14
1.6 Monitoring this strategy – how will we know if we are succeeding .....	15
1.7 Final Message .....	16
Part 2 – Greater Manchester's Trees – The Evidence Base .....	17
1. Why are trees so important?.....	17
2. Manchester's Urban Forest .....	20
2.1. A little history .....	20
2.2. Distribution of GM's Trees .....	20
2.3. What are our trees doing for us?.....	24
Part 3 - Where do we need more trees? .....	35
3.1 Background.....	35
3.2 The maps.....	35
3.3 Methodology.....	50
Part 4 - Guidance and Standards - Getting more from our trees .....	51
4.1. How we value our Trees and Woodlands.....	51



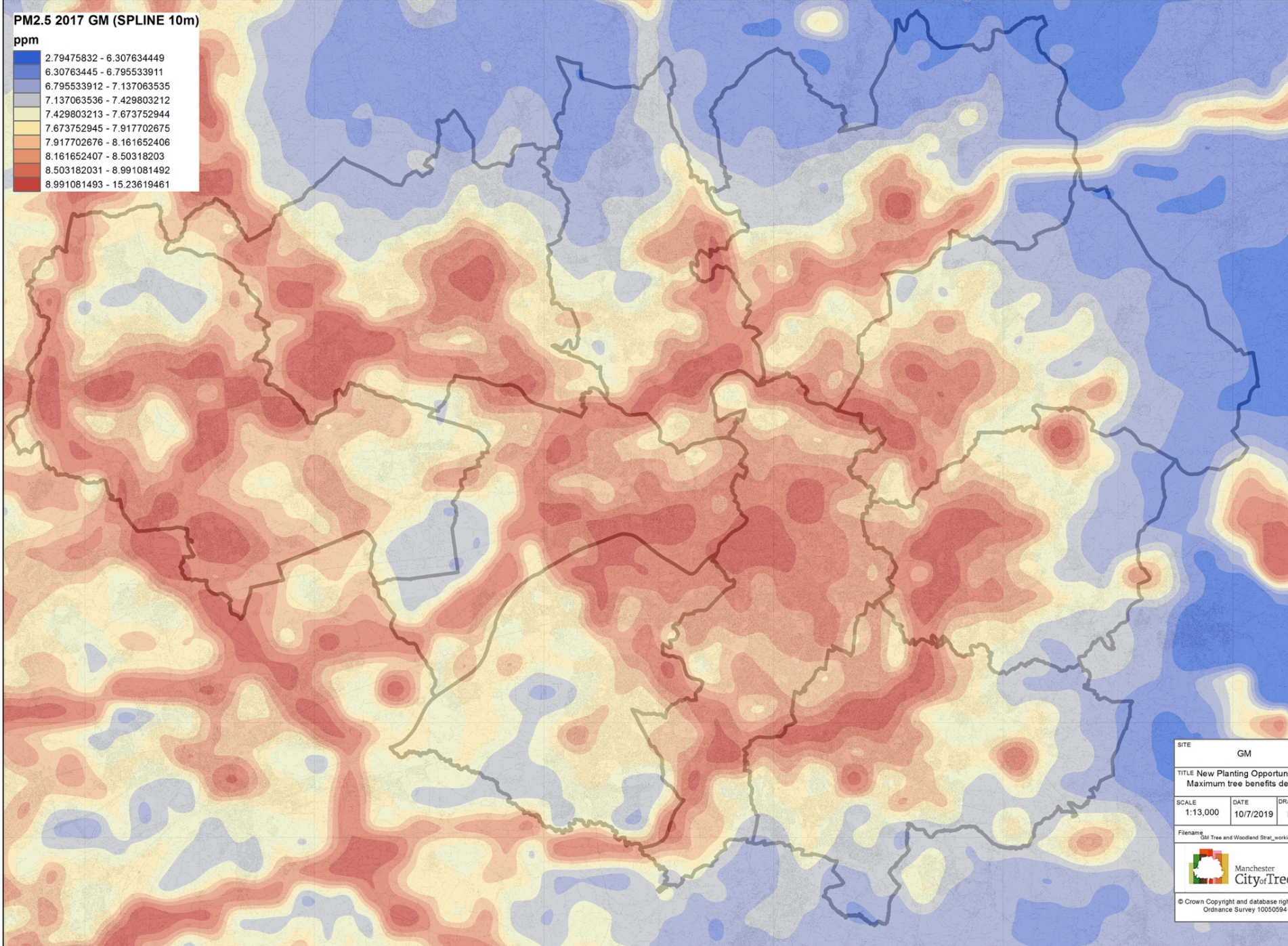
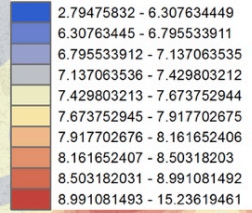
Planting Priority



SITE	GM
TITLE	Benefits and Needs
SCALE	1:76,000
DATE	17/01/2015
Filename	GM Tree and Woodland Strat
	
© Crown Copyright and database Ordnance Survey 1005	

PM2.5 2017 GM (SPLINE 10m)




ppm

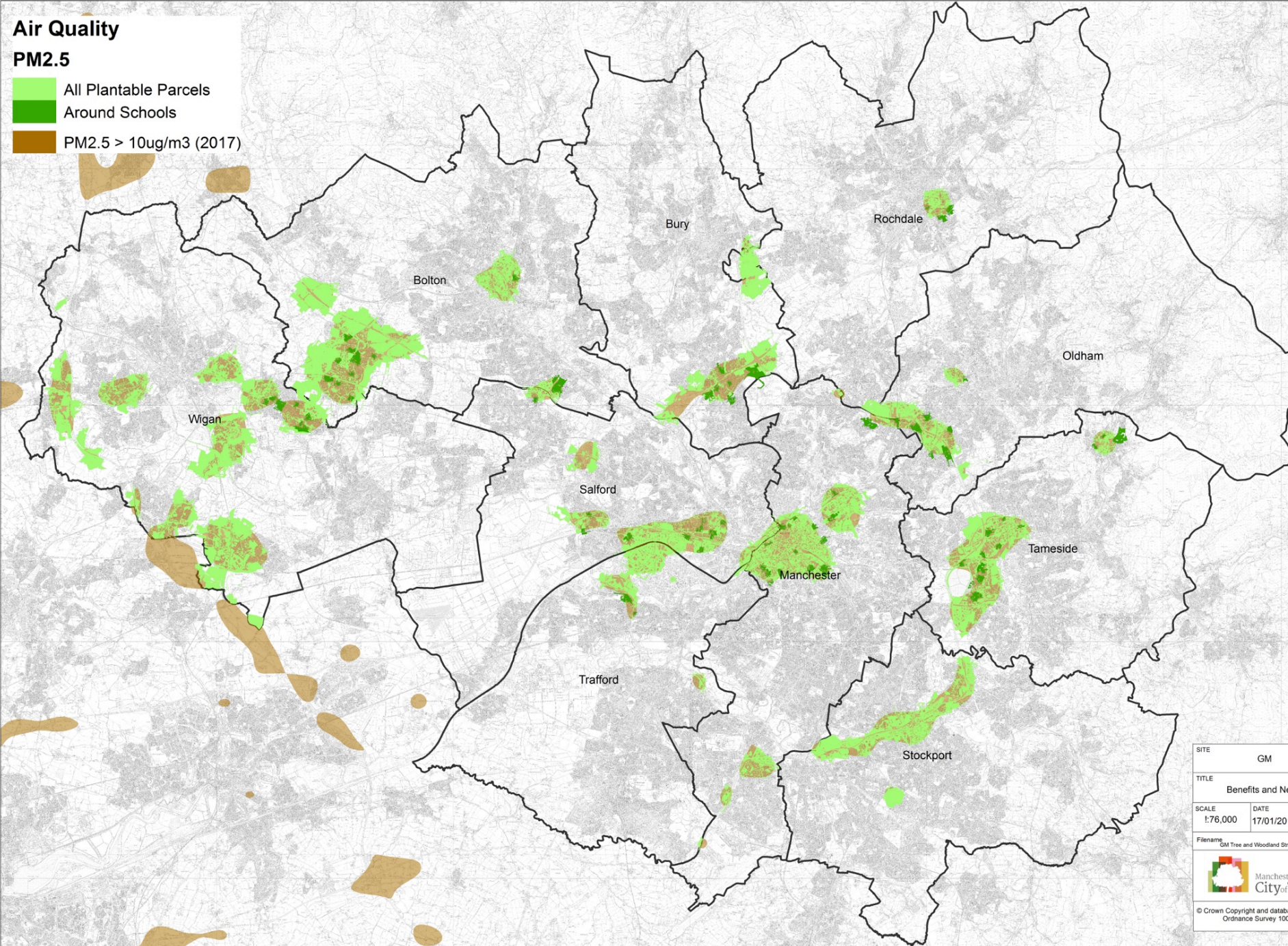


SITE	GM	
TITLE	New Planting Opportunities Maximum tree benefits de	
SCALE	DATE	DR
1:13,000	10/7/2019	
Filename	GM Tree and Woodland Strat_work	
© Crown Copyright and database right Ordnance Survey 1000594		

# Air Quality

## PM2.5

-  All Plantable Parcels
-  Around Schools
-  PM2.5 > 10ug/m3 (2017)



SITE	GM
TITLE	Benefits and Need
SCALE	1:76,000
DATE	17/01/2019
Filename	GM Tree and Woodland Strat_w






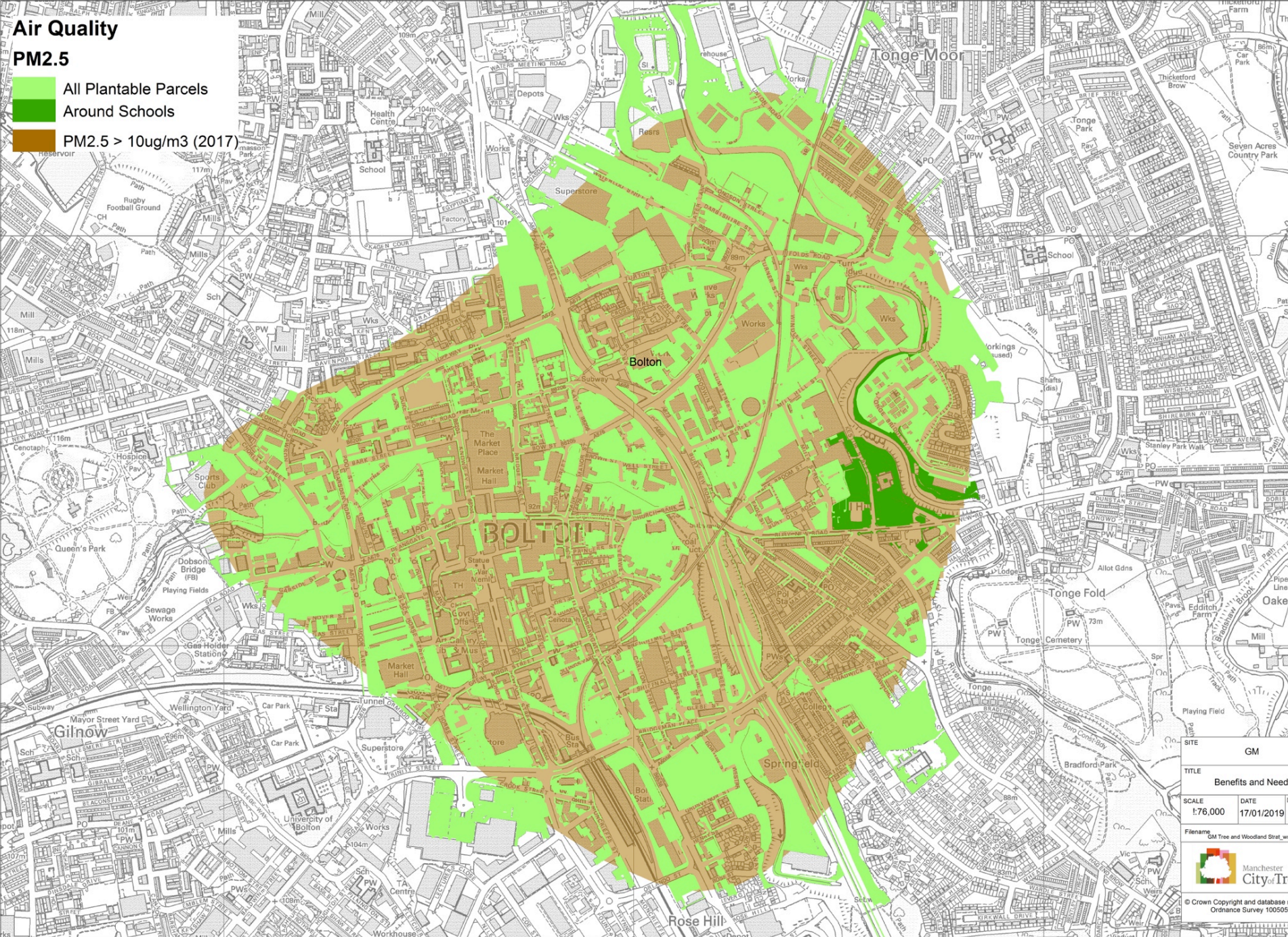
Manchester City of Trees

© Crown Copyright and database  
Ordnance Survey 100905

# Air Quality

## PM2.5

-  All Plantable Parcels
-  Around Schools
-  PM2.5 > 10ug/m3 (2017)



TITLE  
Benefits and Needs

SCALE  
1:76,000

DATE  
17/01/2019

Filename  
GM Tree and Woodland Strat\_w

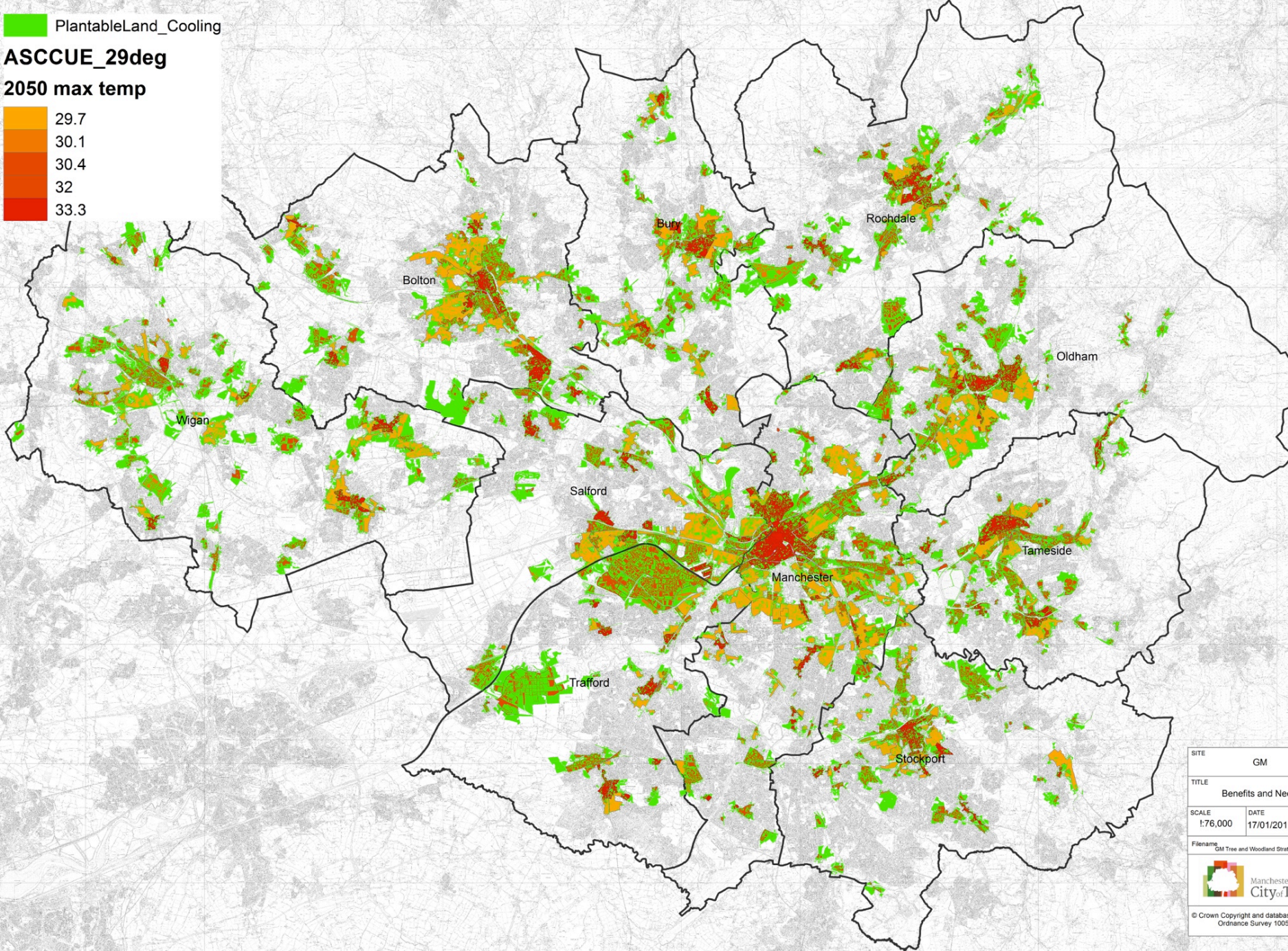
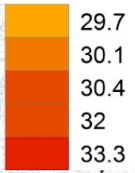
 Manchester City of Trees


© Crown Copyright and database Ordnance Survey 1000505

PlantableLand\_Cooling

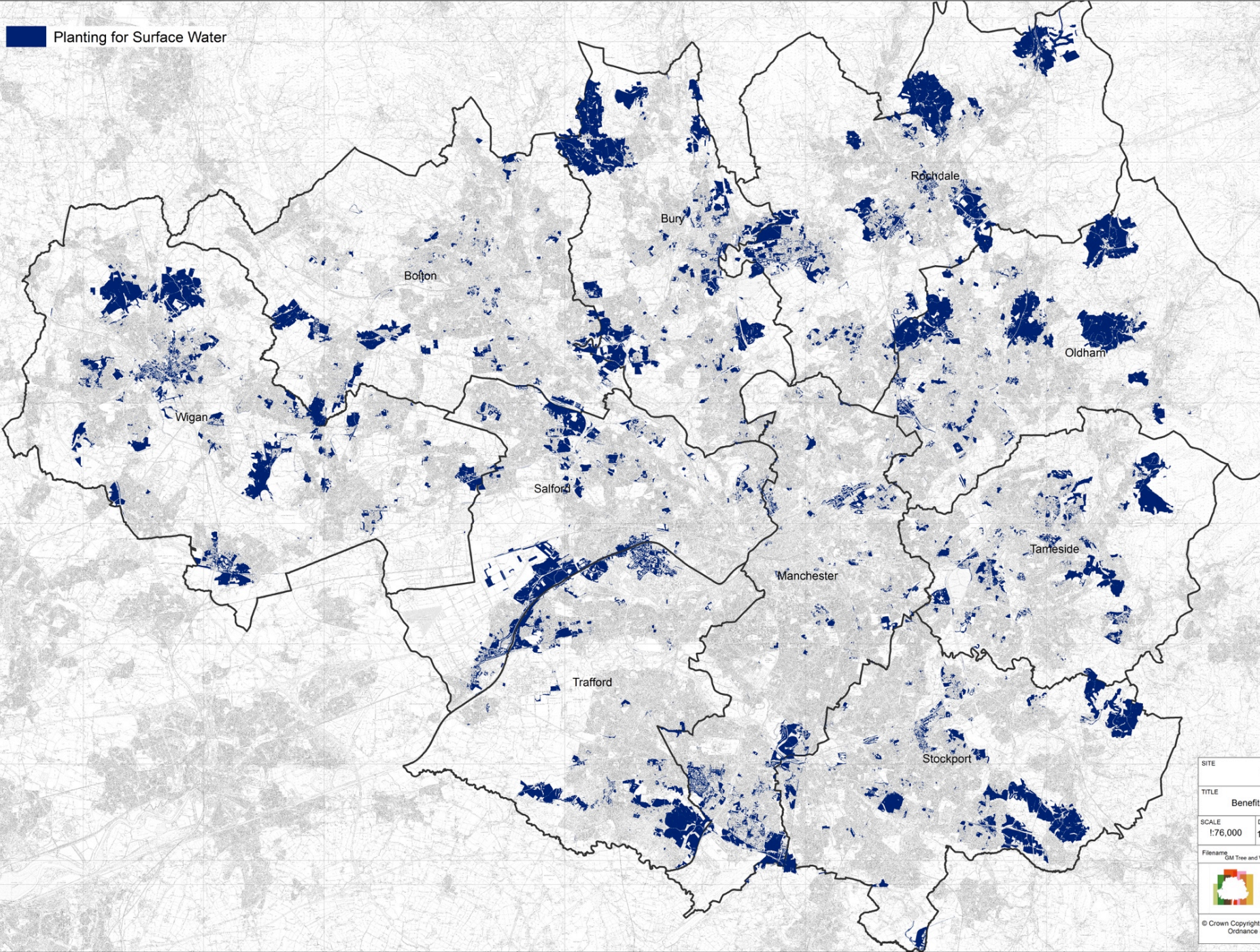
ASCCUE\_29deg

2050 max temp



SITE		GM	
TITLE			
Benefits and Needs			
SCALE	1:76,000	DATE	17/01/2019
Filename: GM Tree and Woodland Strat_...			
		Manchester City of Trees	
© Crown Copyright and database Ordnance Survey 10050...			

Planting for Surface Water



SITE GM

TITLE Benefits and

SCALE 1:76,000 DATE 17/01/10

Filename GM Tree and Woodland

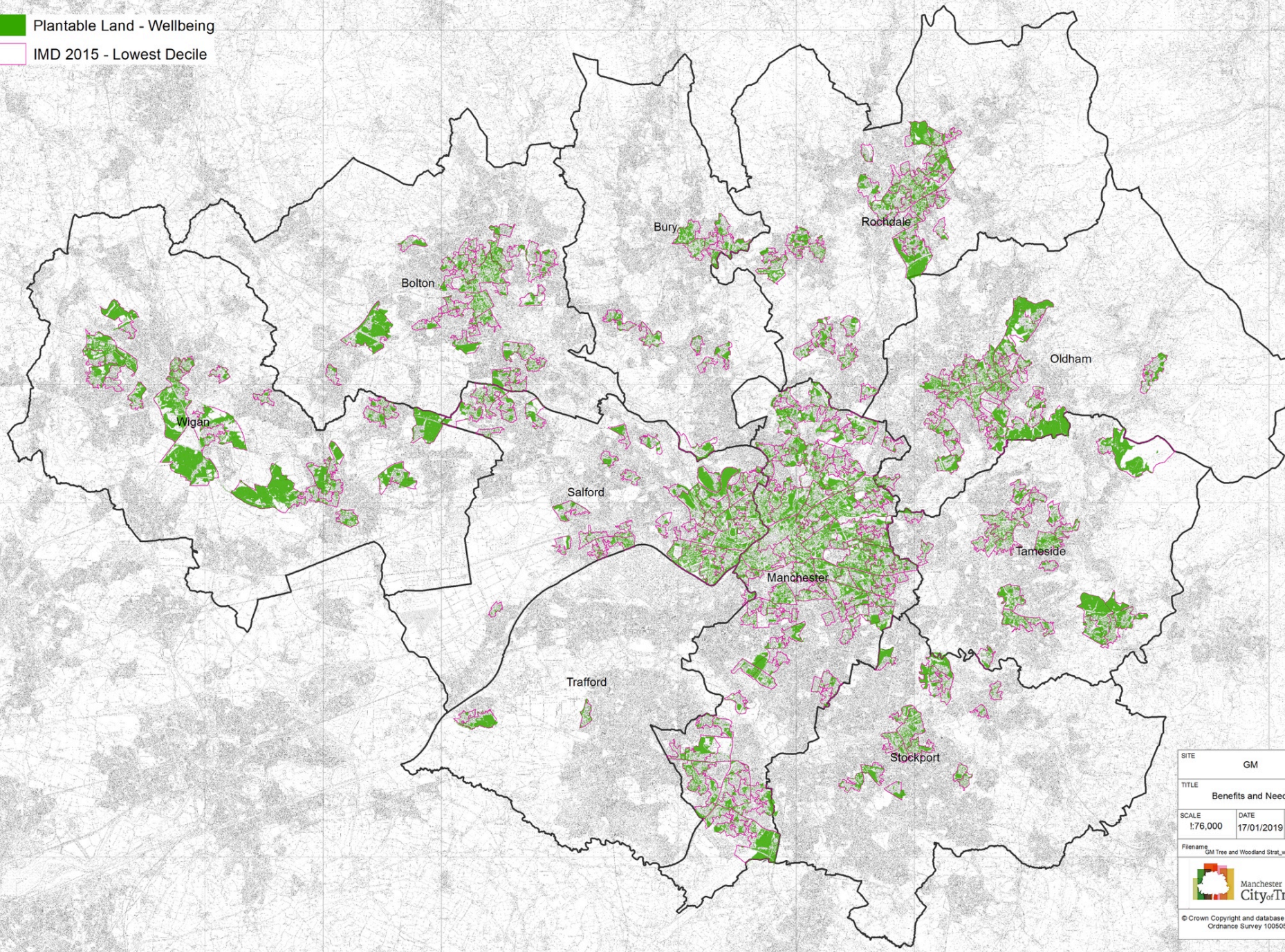


© Crown Copyright and data Ordnance Survey



Plantable Land - Wellbeing

IMD 2015 - Lowest Decile



SITE GM

TITLE Benefits and Needs

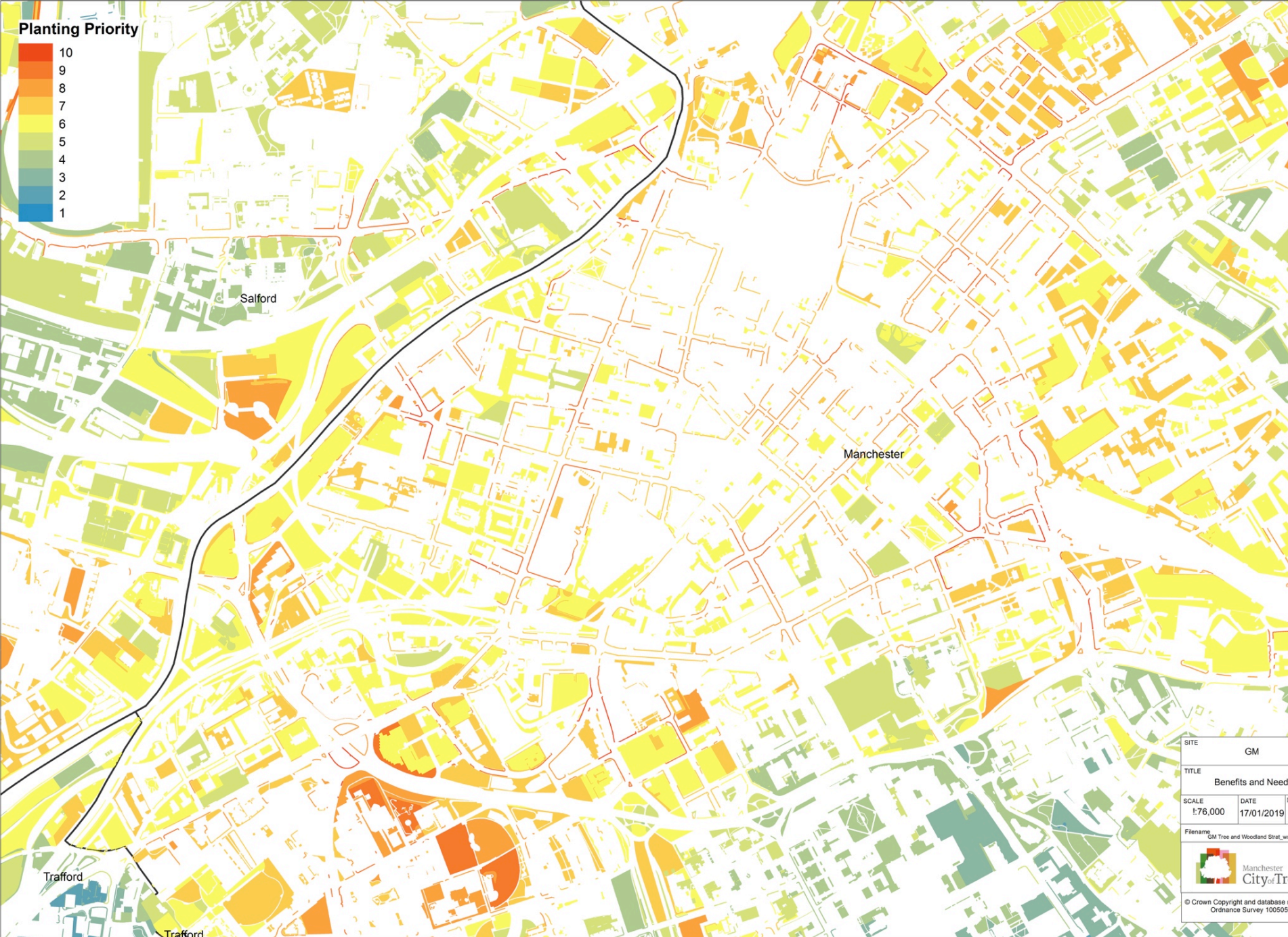
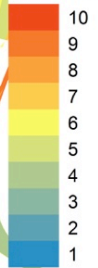
SCALE 1:76,000 DATE 17/01/2019

Filename: GM Tree and Woodland Strat\_w



© Crown Copyright and database Ordnance Survey 100050

**Planting Priority**



SITE	GM
TITLE	Benefits and Need
SCALE	DATE
1:76,000	17/01/2019
Filename:	GM Tree and Woodland Strat_w
	
© Crown Copyright and database Ordnance Survey 1000505	

# All Our Trees

## Greater Manchester's Tree and Woodland Strategy

### Contents

Summary .....	3
Document History.....	4
Acknowledgements .....	5
Foreword.....	6
A Tree and Woodland Strategy for GM - Background and Introduction .....	7
0.1 Importance of trees.....	7
0.2 Vision for Greater Manchester .....	8
0.3 Why do we need a plan?.....	9
0.4 The Policy Context .....	10
Part 1 - Protecting and increasing the benefits from our trees - The strategy.....	11
1.1 Aims .....	11
1.2 Objectives.....	11
1.3 Principles .....	12
1.4 Delivering the strategy – Our collective action.....	12
1.5 Funding – how can we fund all our trees?.....	14
1.6 Monitoring this strategy – how will we know if we are succeeding .....	15
1.7 Final Message .....	16
Part 2 – Greater Manchester's Trees – The Evidence Base .....	17
1. Why are trees so important?.....	17
2. Manchester's Urban Forest .....	20
2.1. A little history .....	20
2.2. Distribution of GM's Trees .....	20
2.3. What are our trees doing for us?.....	24
Part 3 - Where do we need more trees? .....	35
3.1 Background.....	35
3.2 The maps.....	35
3.3 Methodology.....	50
Part 4 - Guidance and Standards - Getting more from our trees .....	51
4.1. How we value our Trees and Woodlands.....	51



# Thank you



[bryan@cityoftrees.org.uk](mailto:bryan@cityoftrees.org.uk)