

Greater Manchester's Outline Business Case to tackle Nitrogen Dioxide Exceedances at the Roadside

Analysis of Distributional Impacts Appendix A Map Book



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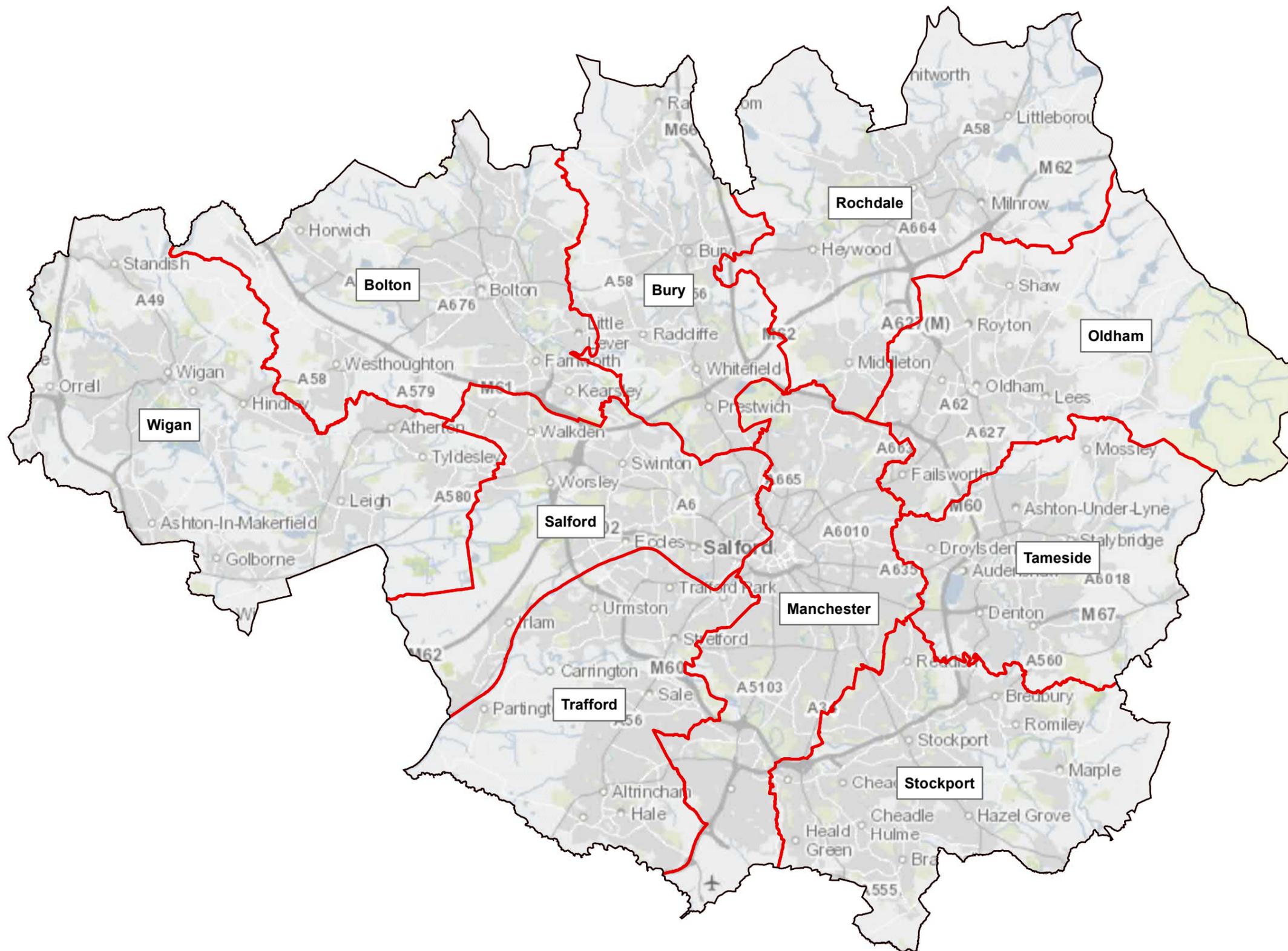
Version Status:	DRAFT FOR APPROVAL	Prepared by:	Transport for Greater Manchester on behalf of the 10 Local Authorities of Greater Manchester
Authorised by: Date:	Simon Warburton 28 th February 2019		



FIGURE 1

Legend

-  Greater Manchester Boundary
-  Local Authority Boundary



0	24/10/2018	Initial Issue	LK	BK	EK	EK
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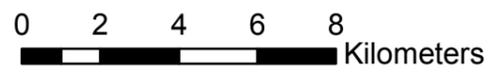


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Greater Manchester and Council Boundaries

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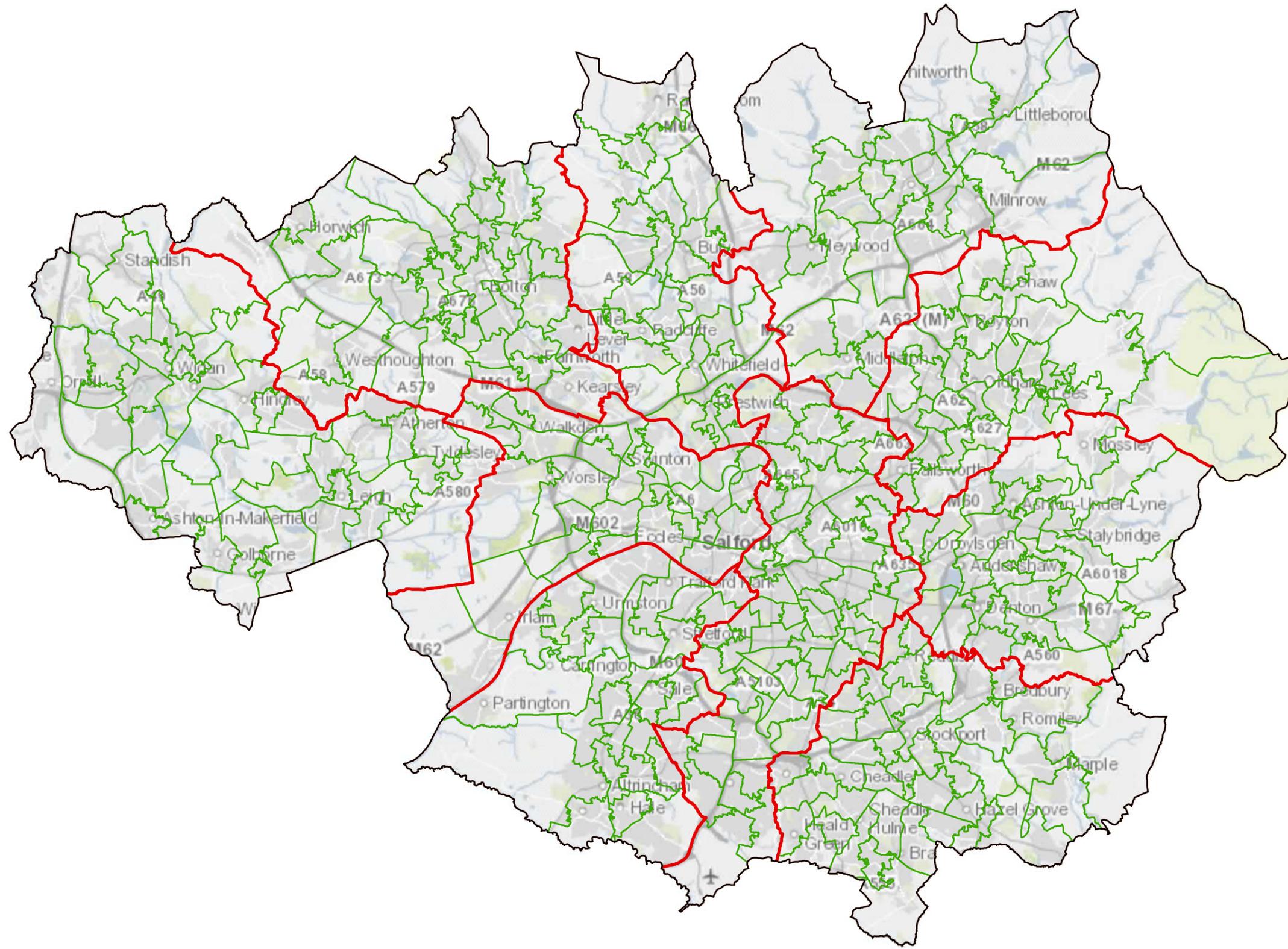
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FIGURE 3

- Legend
- Greater Manchester Boundary
 - Local Authority Boundary
 - Greater Manchester MSOA Boundary



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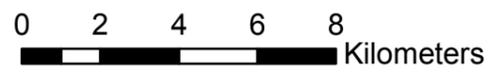


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Project
 Greater Manchester Clean Air Plan

Drawing Title
 Greater Manchester Middle Super Output Areas (MSOAs)

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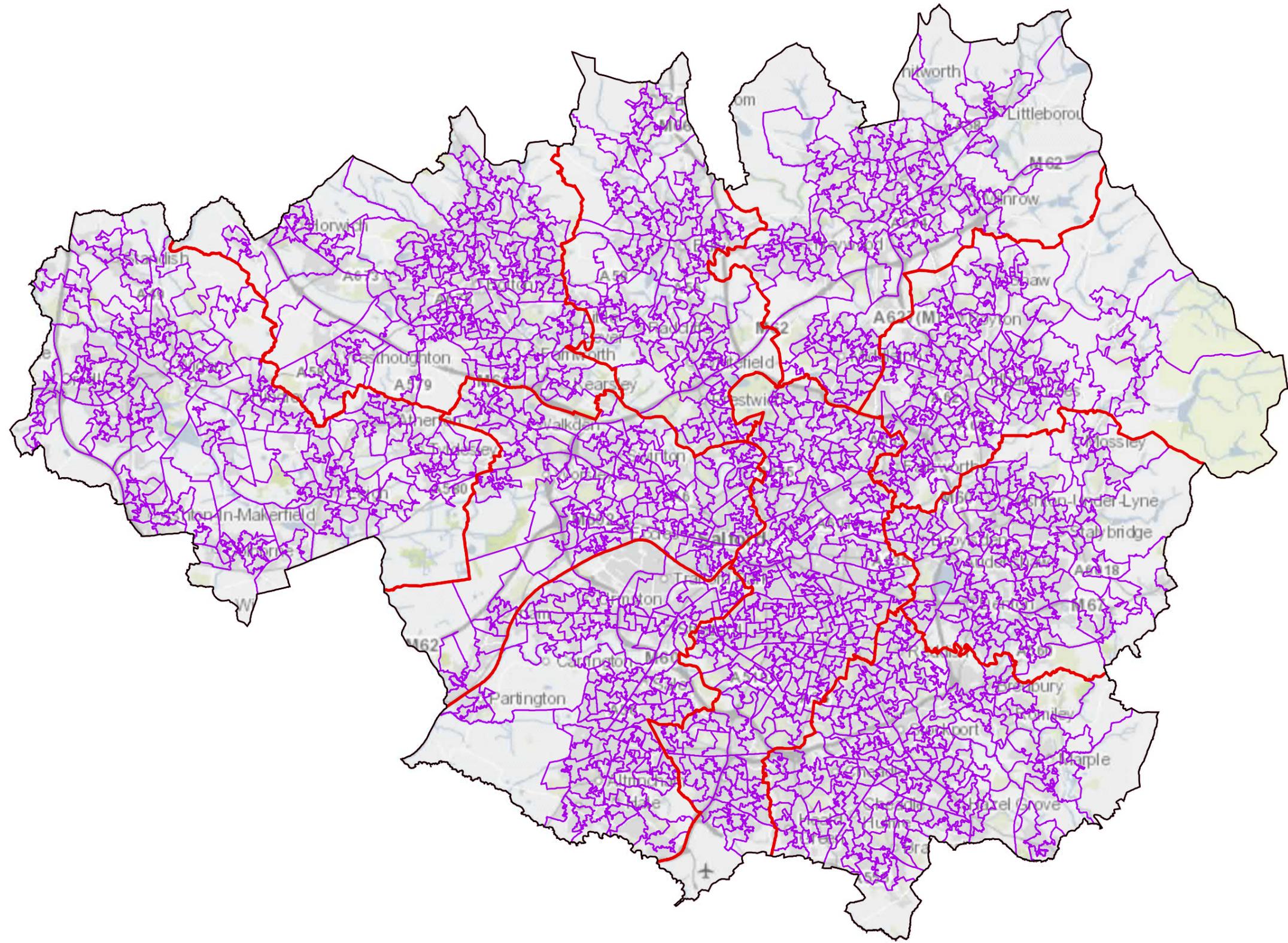
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FIGURE 4

- Legend
- Greater Manchester Boundary
 - Local Authority Boundary
 - Greater Manchester LSOA Boundary



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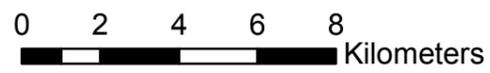


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Project
 Greater Manchester Clean Air Plan

Drawing Title
 Greater Manchester Lower Super Output Areas (LSOAs)

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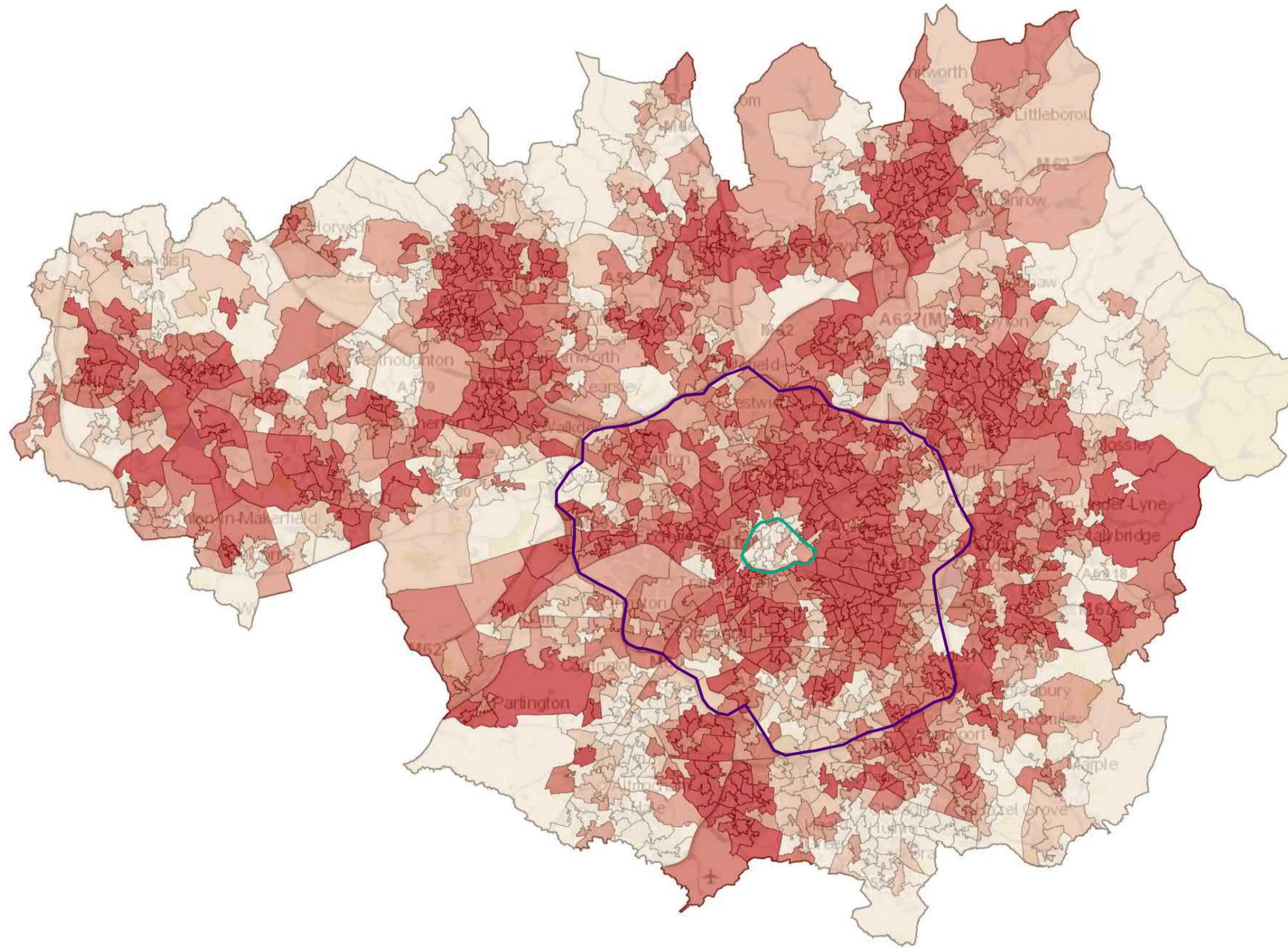
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FIGURE 5

- Legend**
- Greater Manchester Boundary
 - Inner Ring Road
 - M60
- Income Deprivation Quintiles**
- 1= 0-20% (most deprived)
 - 2= 20-40%
 - 3= 40-60%
 - 4= 60-80%
 - 5= 80-100% (least deprived)



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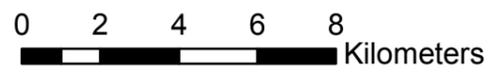


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Income Deprivation by Quintile
 Based on the distribution across England and Wales

Scale @ A3	1:180,000	DO NOT SCALE
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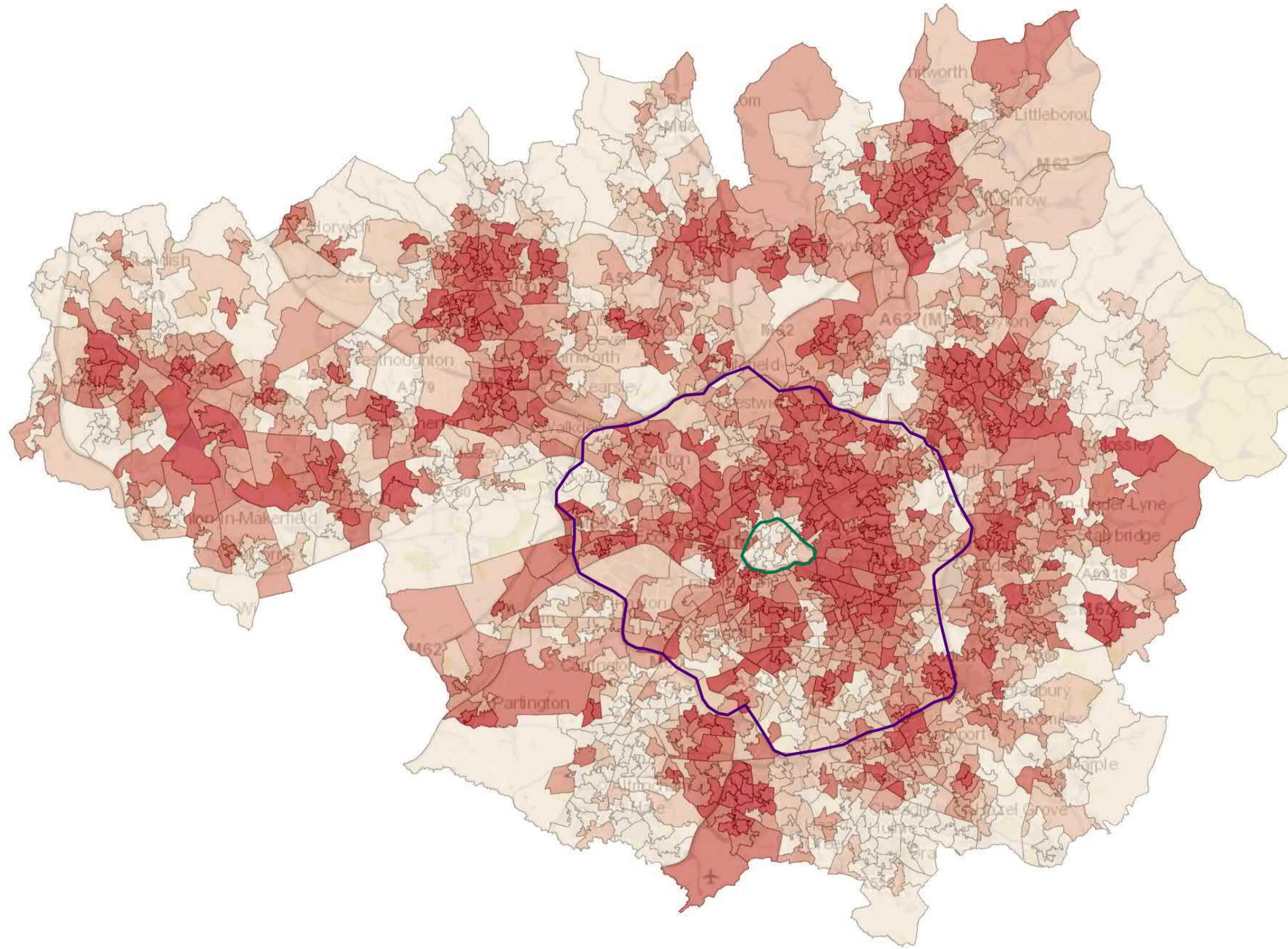
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FIGURE 6

- Legend**
- Greater Manchester Boundary
 - Inner Ring Road
 - M60
- Income Deprivation Quintiles**
- 1= 0-20% (most deprived)
 - 2= 20-40%
 - 3= 40-60%
 - 4= 60-80%
 - 5= 80-100% (least deprived)



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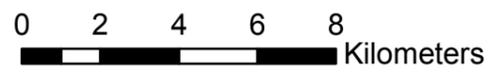


Client
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Project
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Drawing Title
 Income Deprivation by Quintile
 Based on the distribution across Greater Manchester

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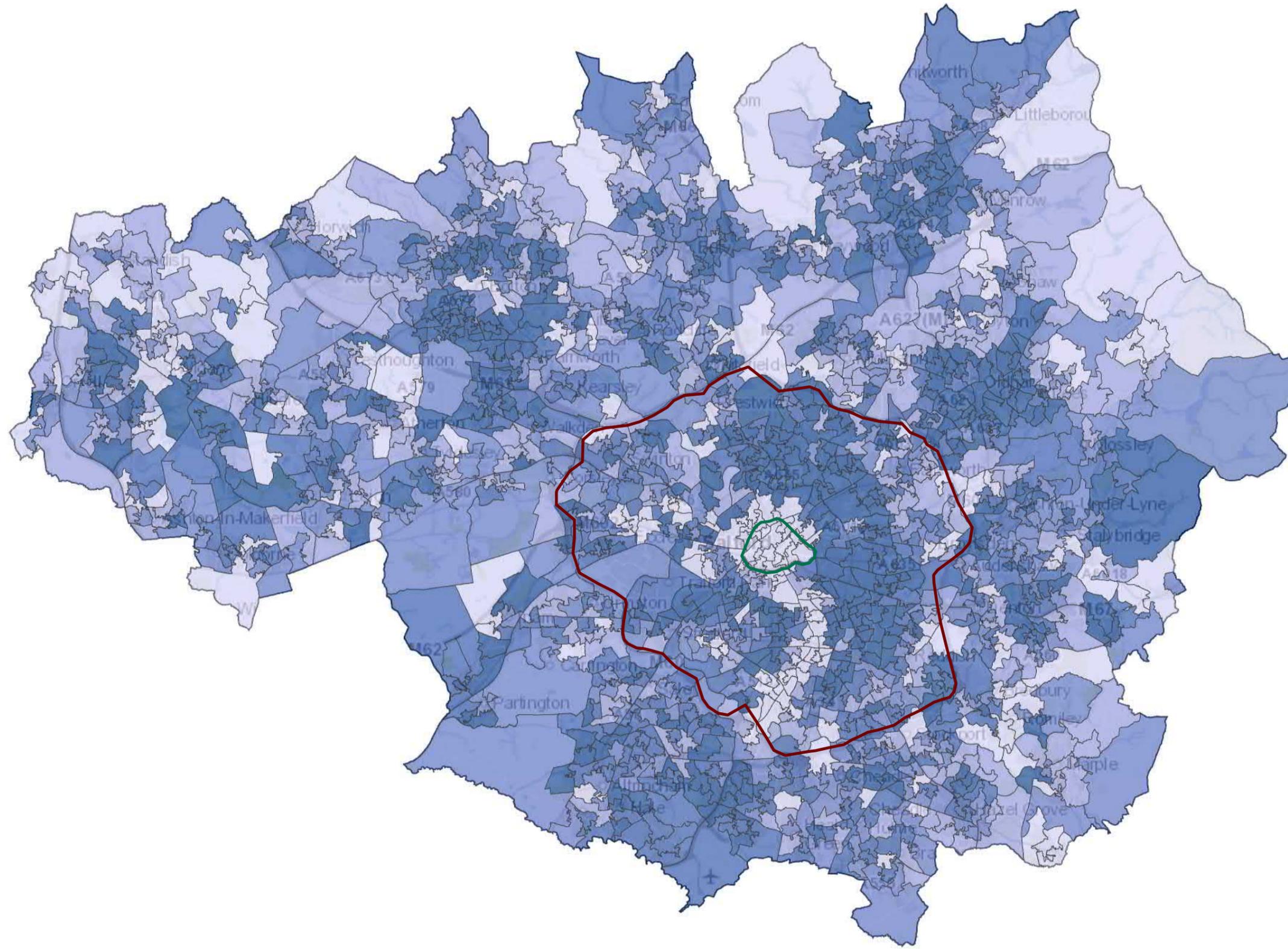
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FIGURE 7

- Legend**
- Greater Manchester Boundary
 - Inner Ring Road
 - M60
- Under 16 Quintiles**
- 1= 0-20% (most under 16s)
 - 2= 20-40%
 - 3= 40-60%
 - 4= 60-80%
 - 5=80-100% (least under 16s)



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

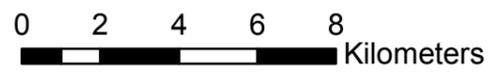


Client
 Transport for Greater Manchester

Project
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Drawing Title
 Proportion of Under 16s by Quintile
 Based on the distribution across Greater Manchester

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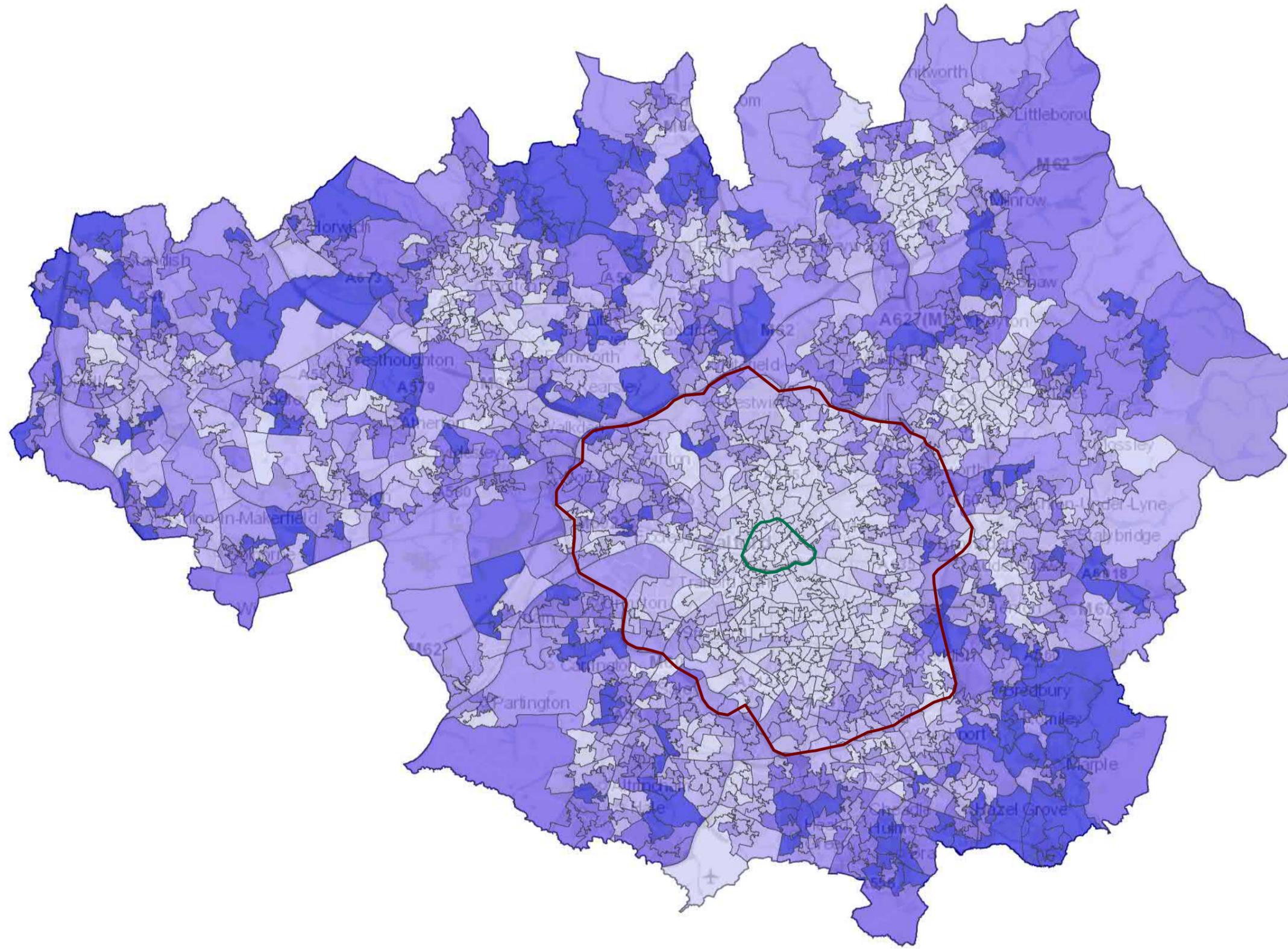
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FIGURE 8

- Legend**
- Greater Manchester Boundary
 - Inner Ring Road
 - M60
- Over 65 Quintiles**
- 1= 0-20% (most over 65s)
 - 2= 20-40%
 - 3= 40-60%
 - 4= 60-80%
 - 5= 80-100% (least under 65s)



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

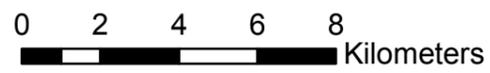


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Drawing Title **Proportion of Over 65s by Quintile Based on the distribution across England and Wales**

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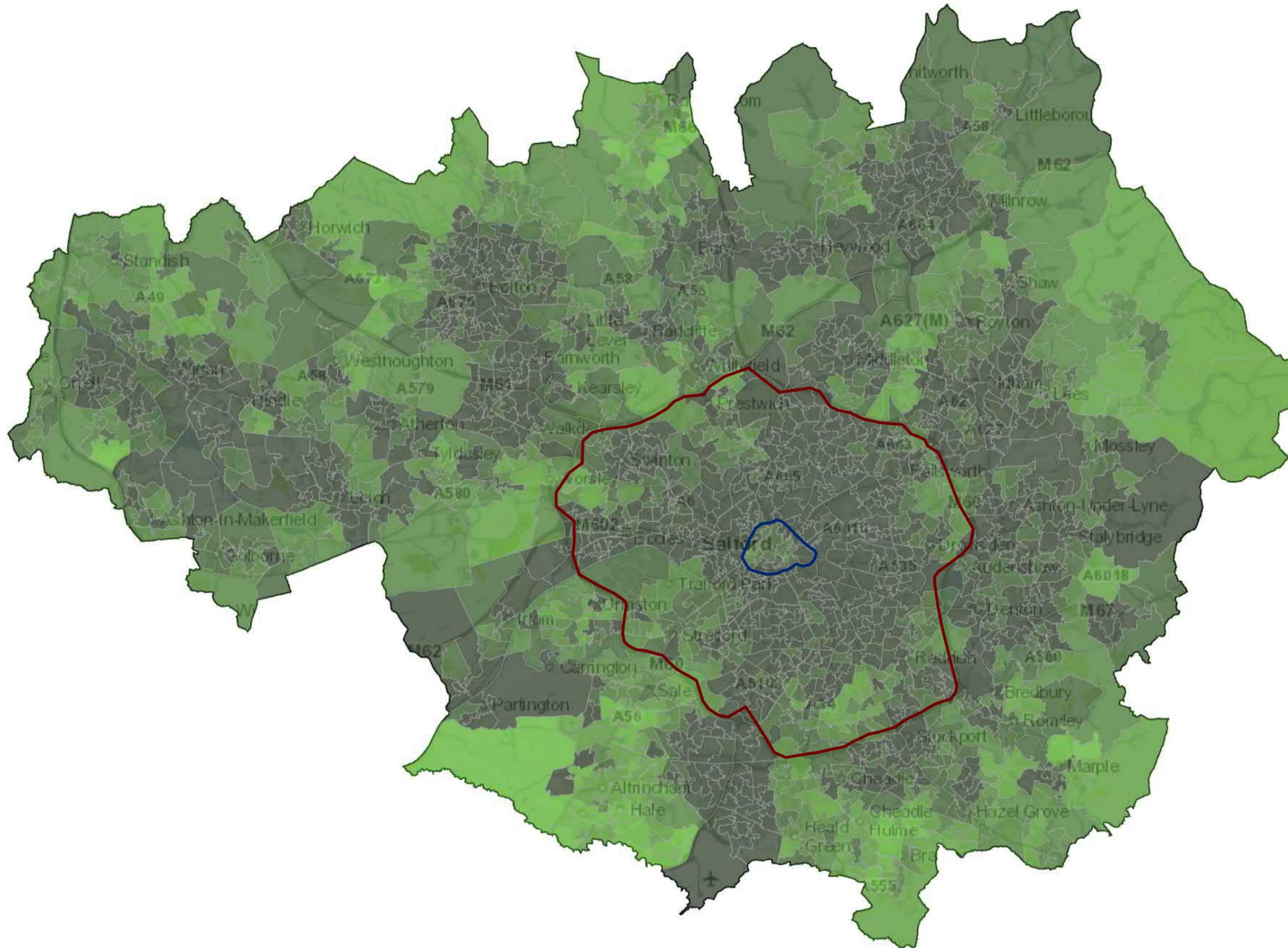
FIGURE 9

Legend

- Greater Manchester Boundary
- Inner Ring Road
- M60

Health Deprivation Quintiles

- 1= 0-20% (most deprived)
- 2= 20-40%
- 3= 40-60%
- 4= 60-80%
- 5= 80-100% (least deprived)



0	14/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

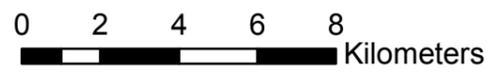


Client
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Project
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Drawing Title
 Health Deprivation by Quintile
 Based on the distribution across England and Wales

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FIGURE 10

Legend

Greater Manchester Boundary

Inner Ring Road

M60

Female Population Quintiles

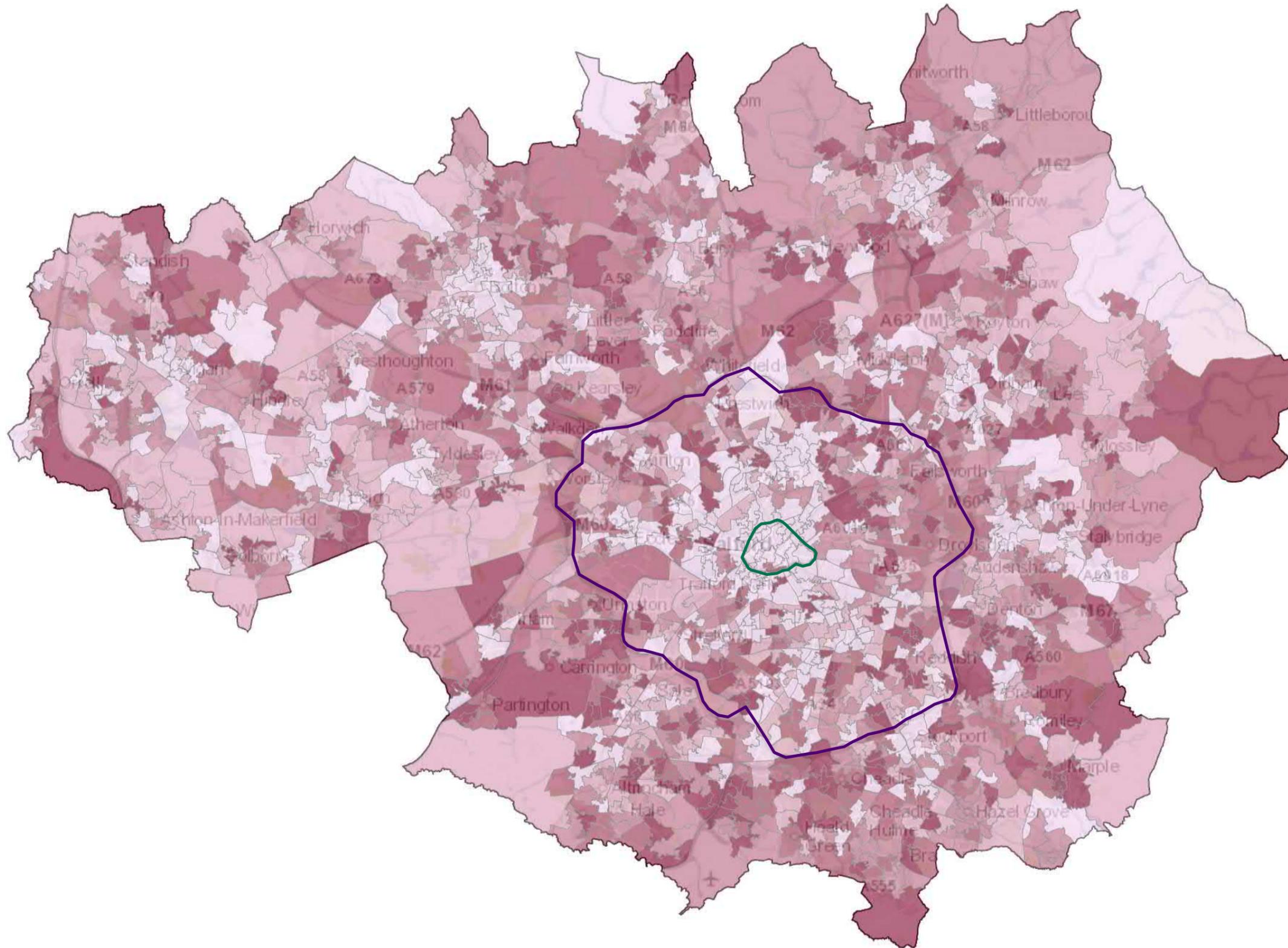
1= 0-20% (most females)

2= 20-40%

3= 40-60%

4= 60-80%

5= 80-100% (least females)



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

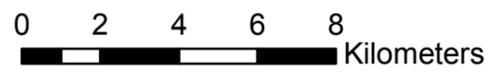


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Drawing Title
 Proportion of Females by Quintile
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FIGURE 11

Legend

Greater Manchester Boundary

Inner Ring Road

M60

BAME Population Quintiles

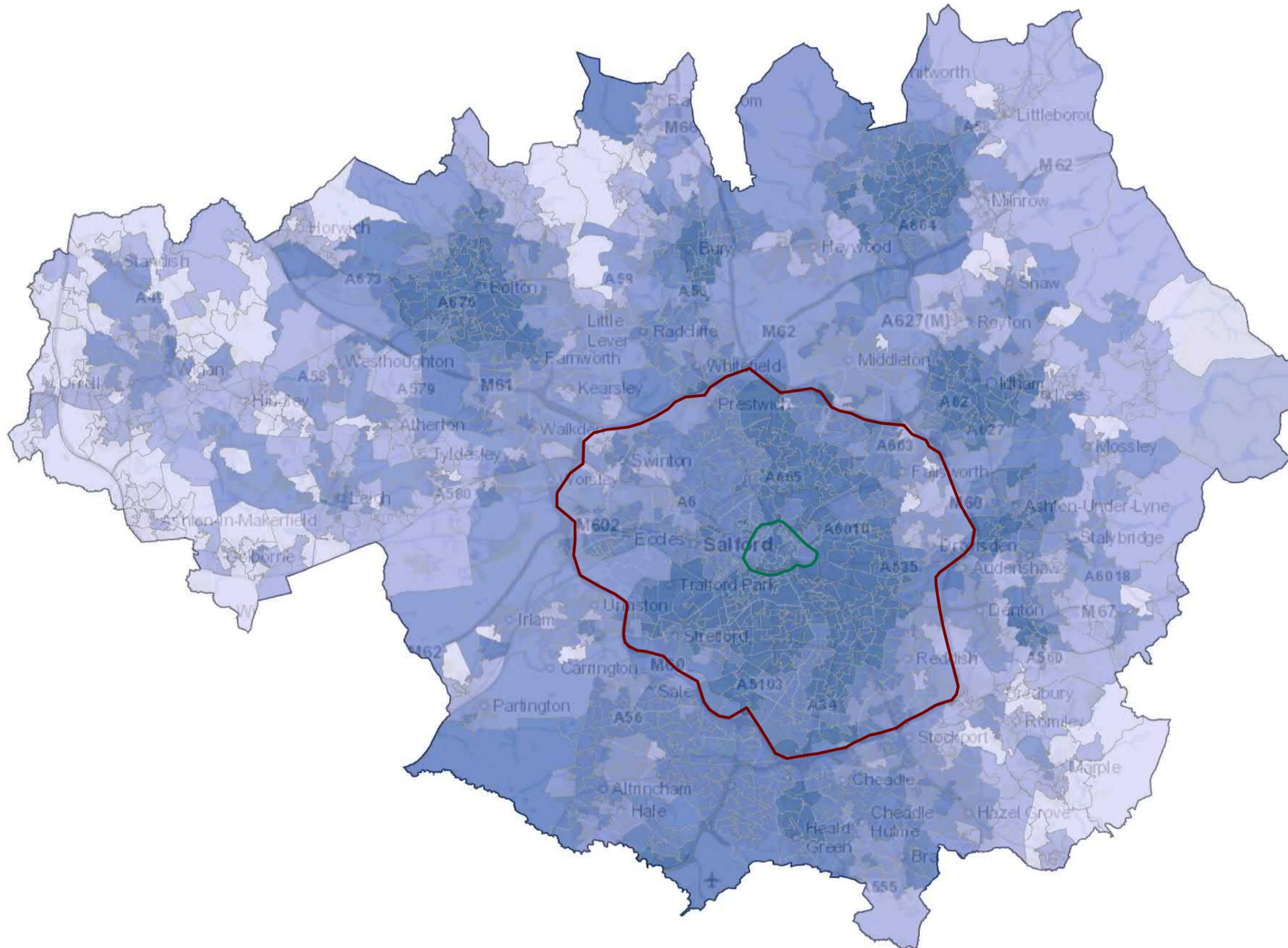
1= 0-20% (most BAME population)

2= 20-40%

3= 40-60%

4= 60-80%

5= 80-100% (least BAME population)



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

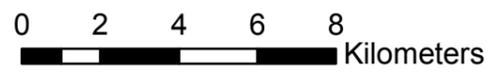


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Project
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Drawing Title
 Proportion of Black, Asian and Minority Ethnic (BAME) residents by Quintile Based on the distribution across England and Wales

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FIGURE 12

Legend

Greater Manchester Boundary

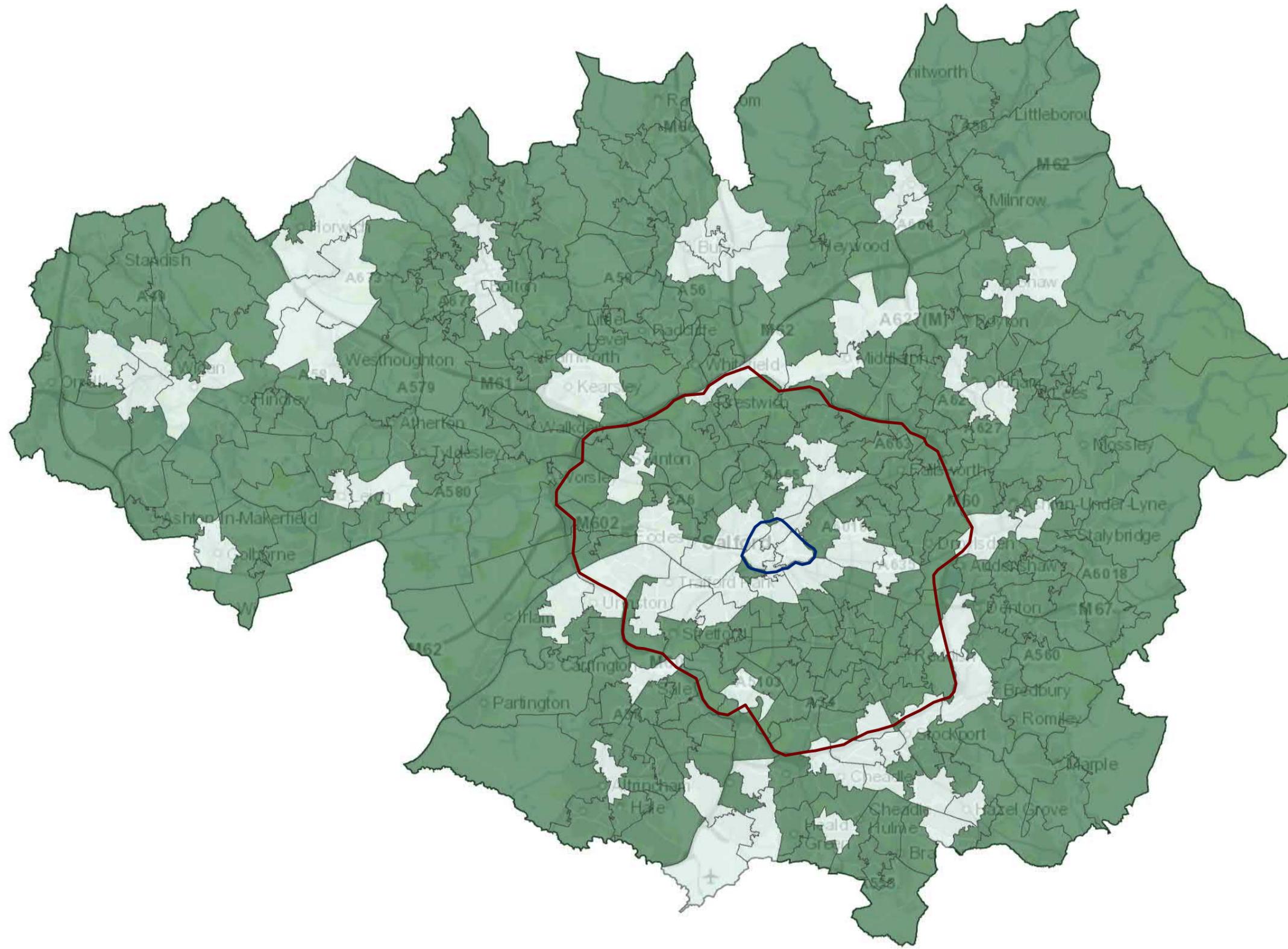
Inner Ring Road

M60

SME Quintiles

1= 0-20% (most SMEs)

5= 80-100% (least SMEs)



NOTE: The distribution of SME's has been mapped based on the distribution across England and Wales. Based on this distribution, there are no LSOAs in quintiles 2,3 or 4 and therefore these are not shown on the map.



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

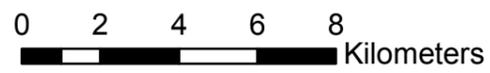


Client
Transport for Greater Manchester

Project
Greater Manchester Clean Air Plan

Drawing Title
Proportion of Small and Medium-sized Enterprises (SMEs) by Quintile Based on the distribution across England and Wales

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FIGURE 13

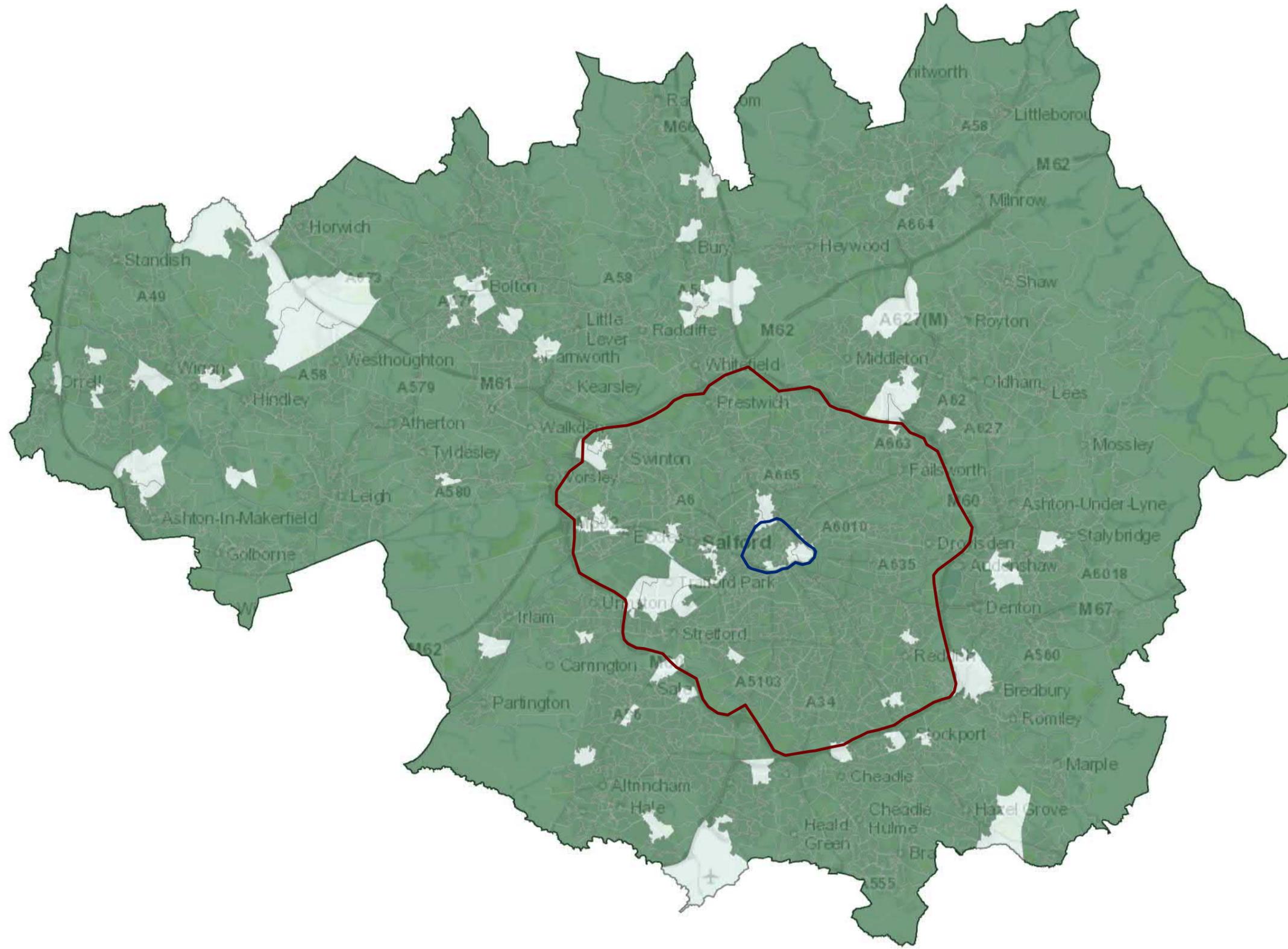
Legend

- Greater Manchester Boundary
- Inner Ring Road
- M60

Non-compliant LGV Quintiles

- 1= 0-20% (most)
- 5= 80-100% (least)

NOTE: The distribution of non compliant LGV's has been mapped based on the distribution across England and Wales. Based on this distribution, there are no LSOAs in quintiles 2,3 or 4 and therefore these are not shown on the map



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

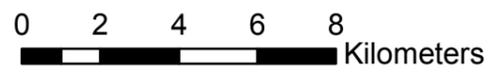


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Project
Greater Manchester Clean Air Plan

Drawing Title
Non-Compliant LGVs Mapped by Quintile
Based on the Proportion of Non-Compliant LGVs in Greater Manchester

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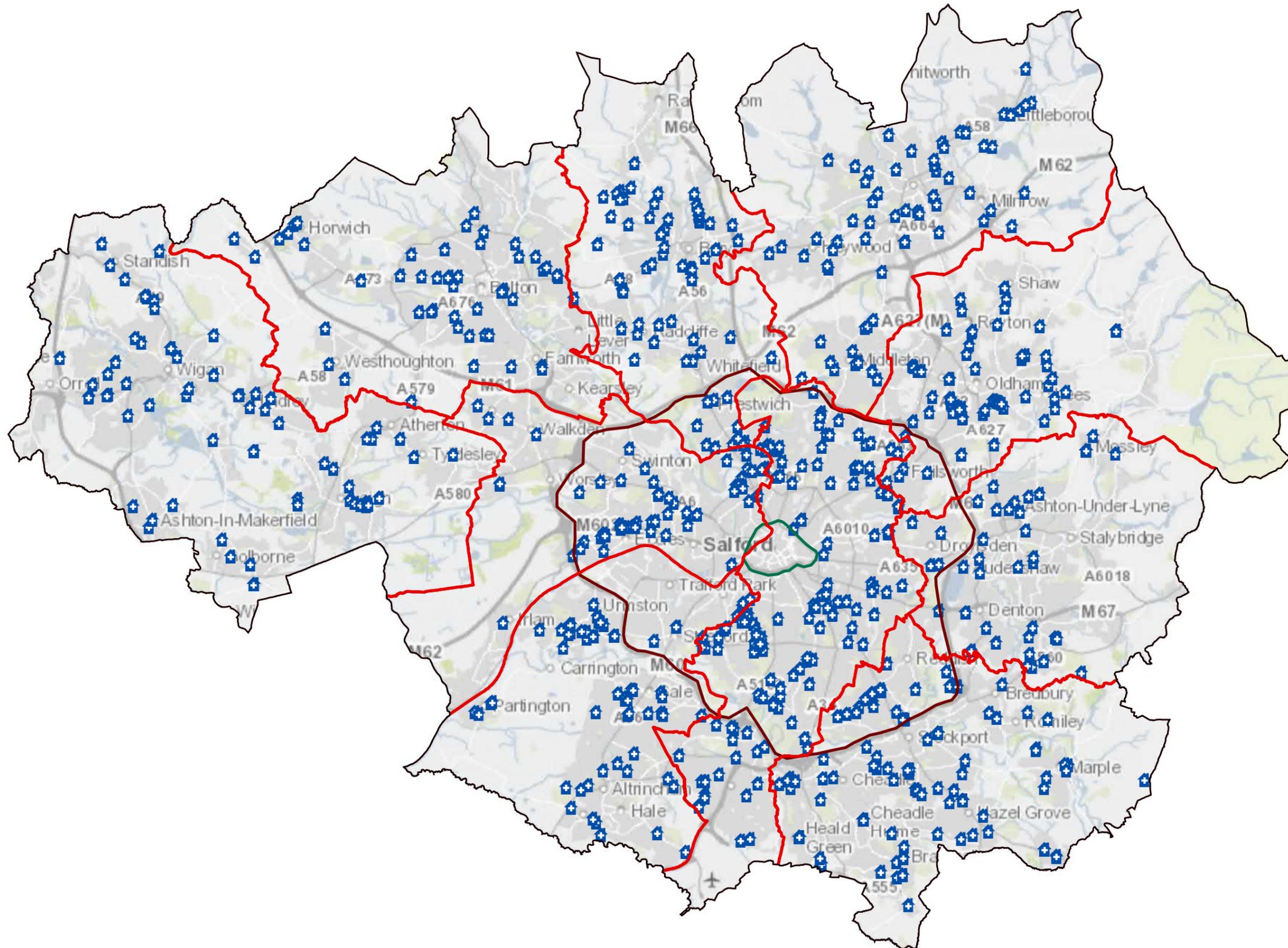
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FIGURE 17



Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Care/Nursing Home



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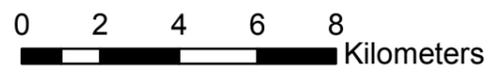


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Drawing Title
 Locations of care/nursing homes in Greater Manchester

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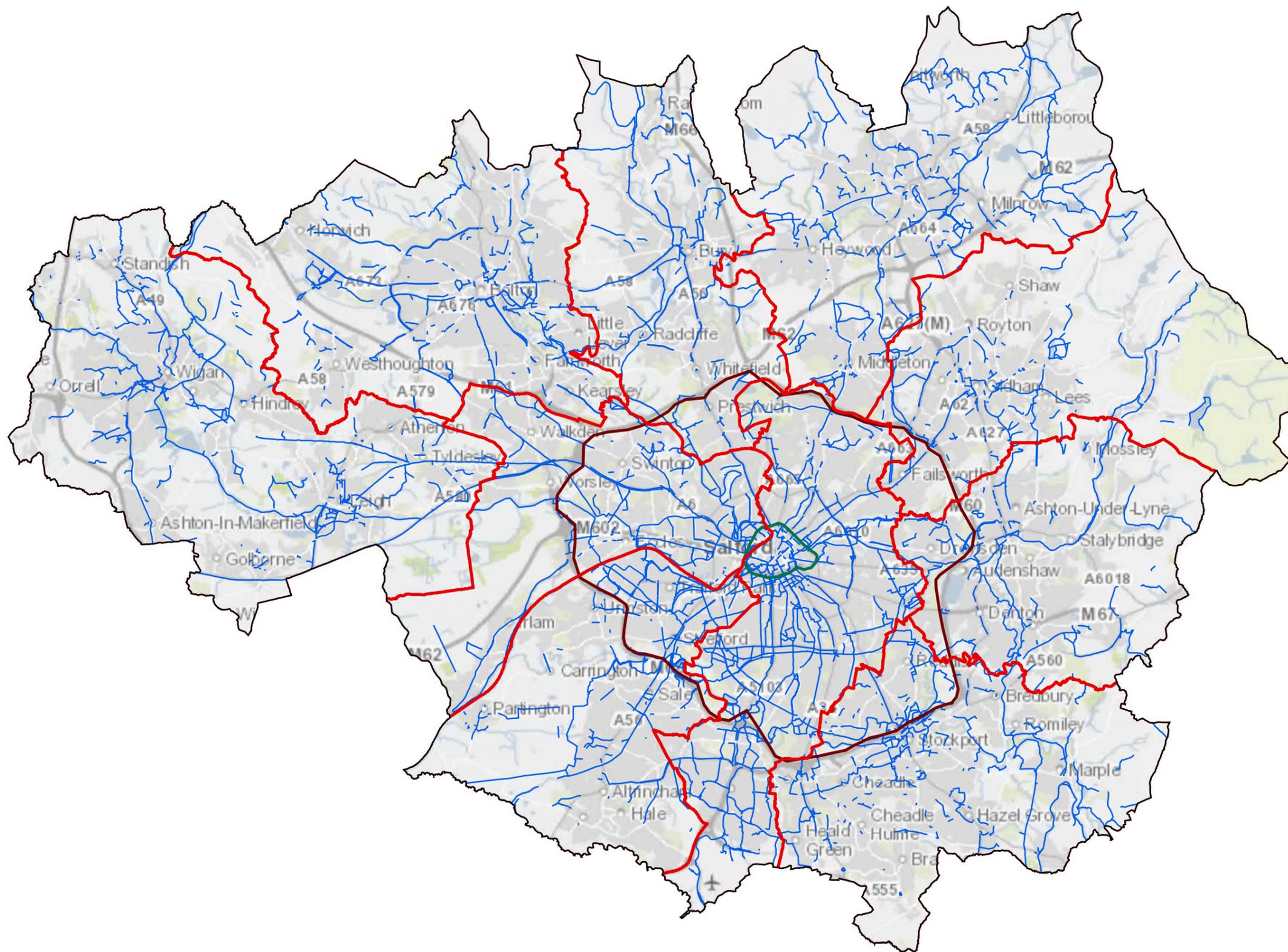
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FIGURE 19

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Cycle Routes



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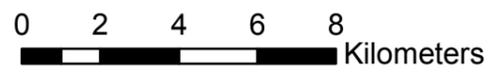


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Project
 Greater Manchester Clean Air Plan

Drawing Title
 Locations of cycle routes in Greater Manchester

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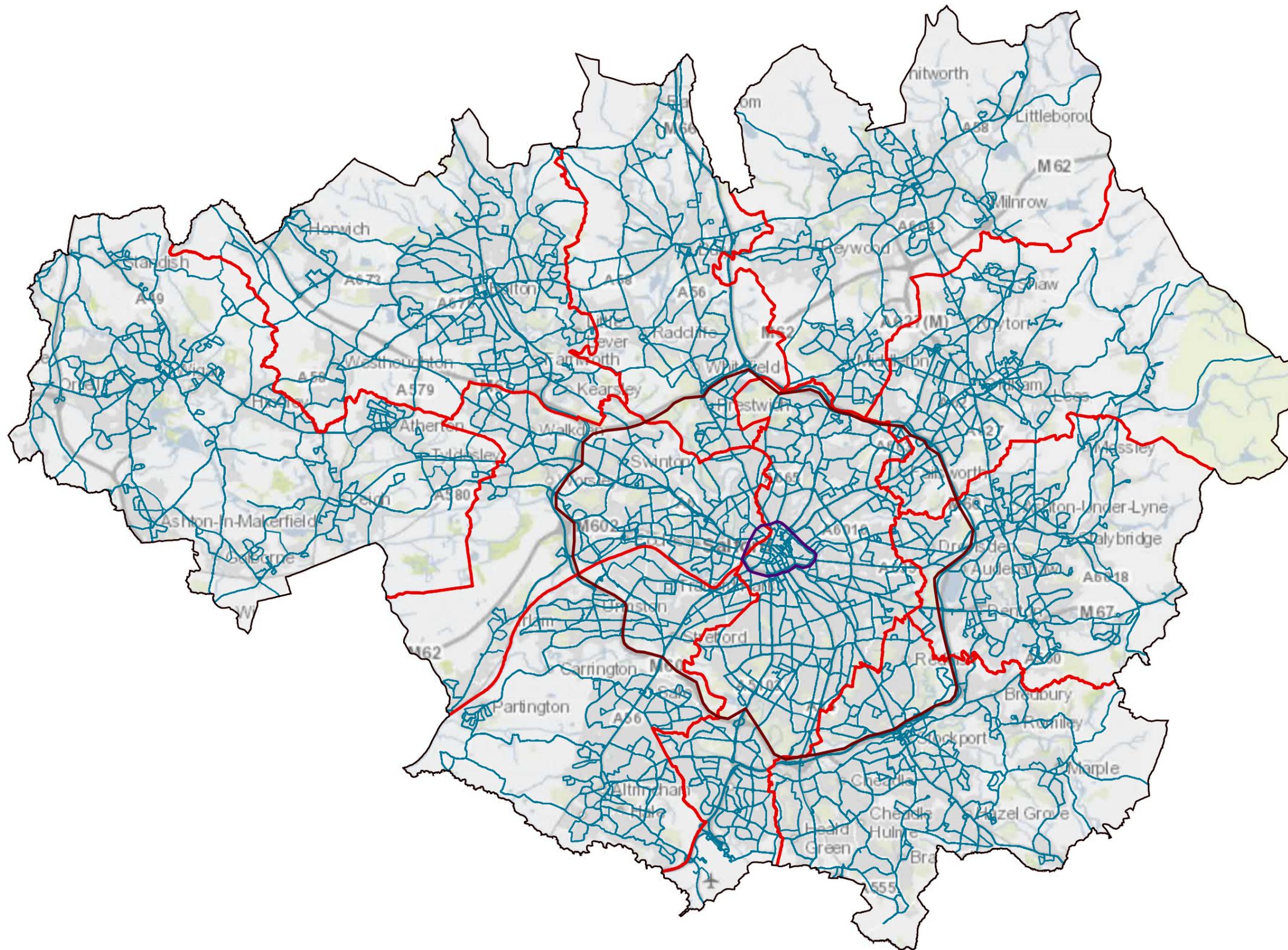
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FIGURE 20

Legend

-  Greater Manchester Boundary
-  Local Authority Boundary
-  Inner Ring Road
-  M60
-  Bus Route



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

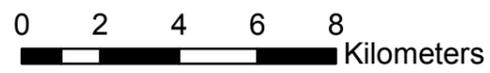


Client  Transport for Greater Manchester

Project Greater Manchester Clean Air Plan

Drawing Title
 Locations of bus routes in Greater Manchester

Scale @ A3	1:180,000	DO NOT SCALE
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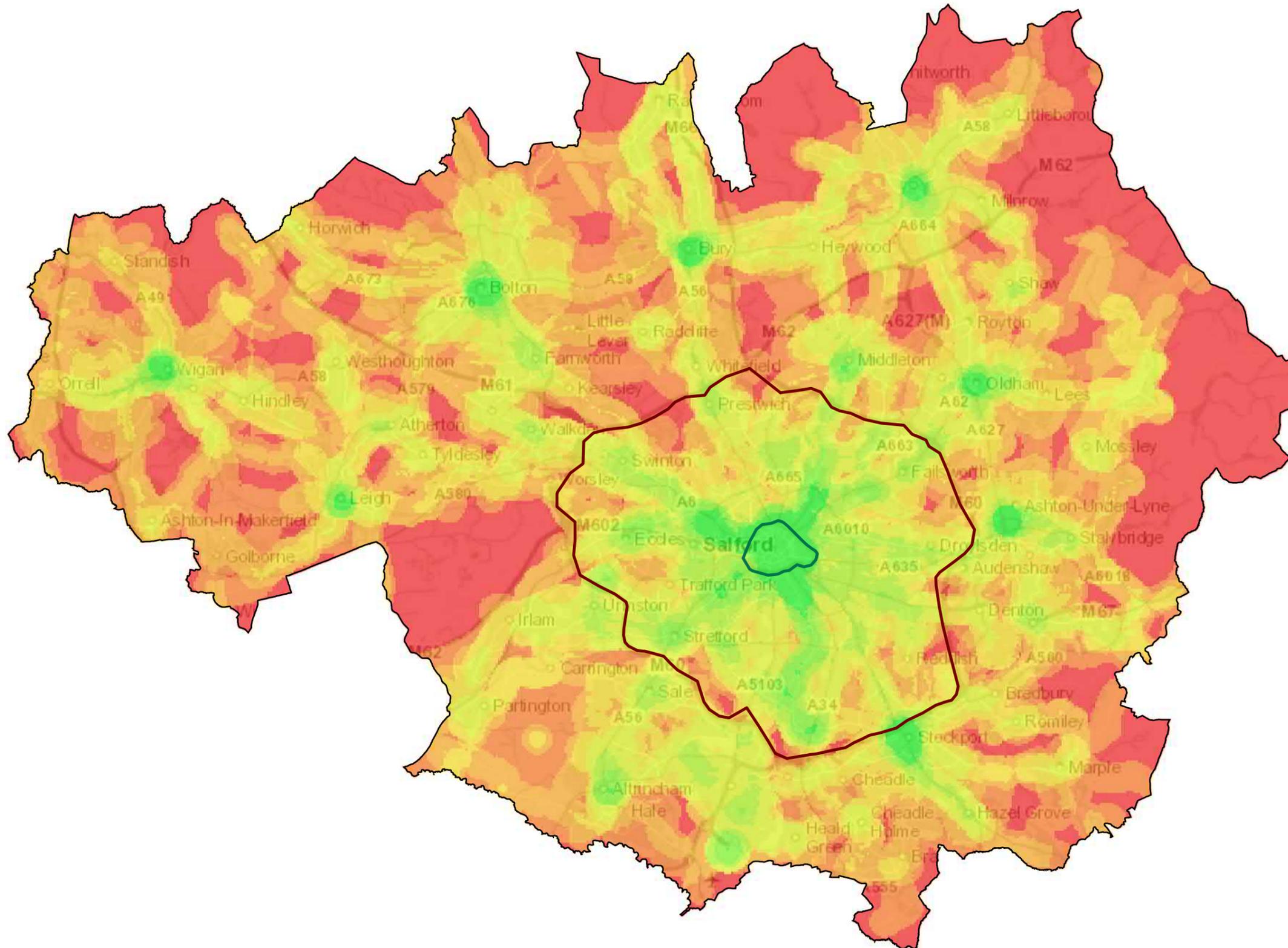
FIGURE 21

Legend

- Greater Manchester Boundary
- Inner Ring Road
- M60

Accessibility Level

- 1 = very low
- 2
- 3
- 4
- 5
- 6
- 7
- 8 = very high



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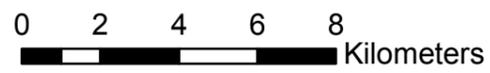


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Accessibility Levels in Greater Manchester

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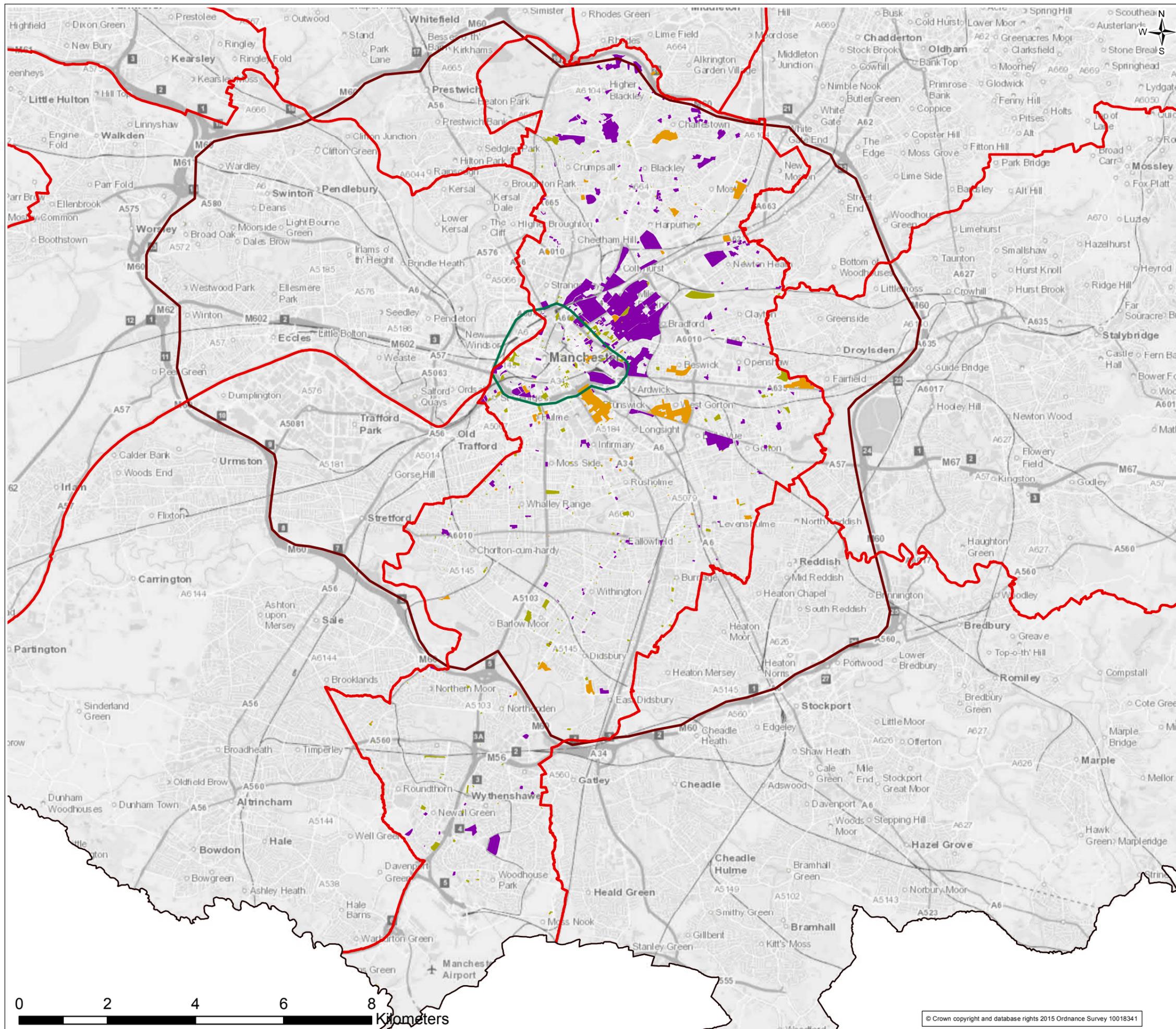
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FIGURE 22

Legend

-  Greater Manchester Boundary
-  Local Authority Boundary
-  Inner Ring Road
-  M60
-  Housing Sites Under Construction (2017)
-  Housing Planning Permission Sites (2017)
-  Housing Capacity Sites (2017)



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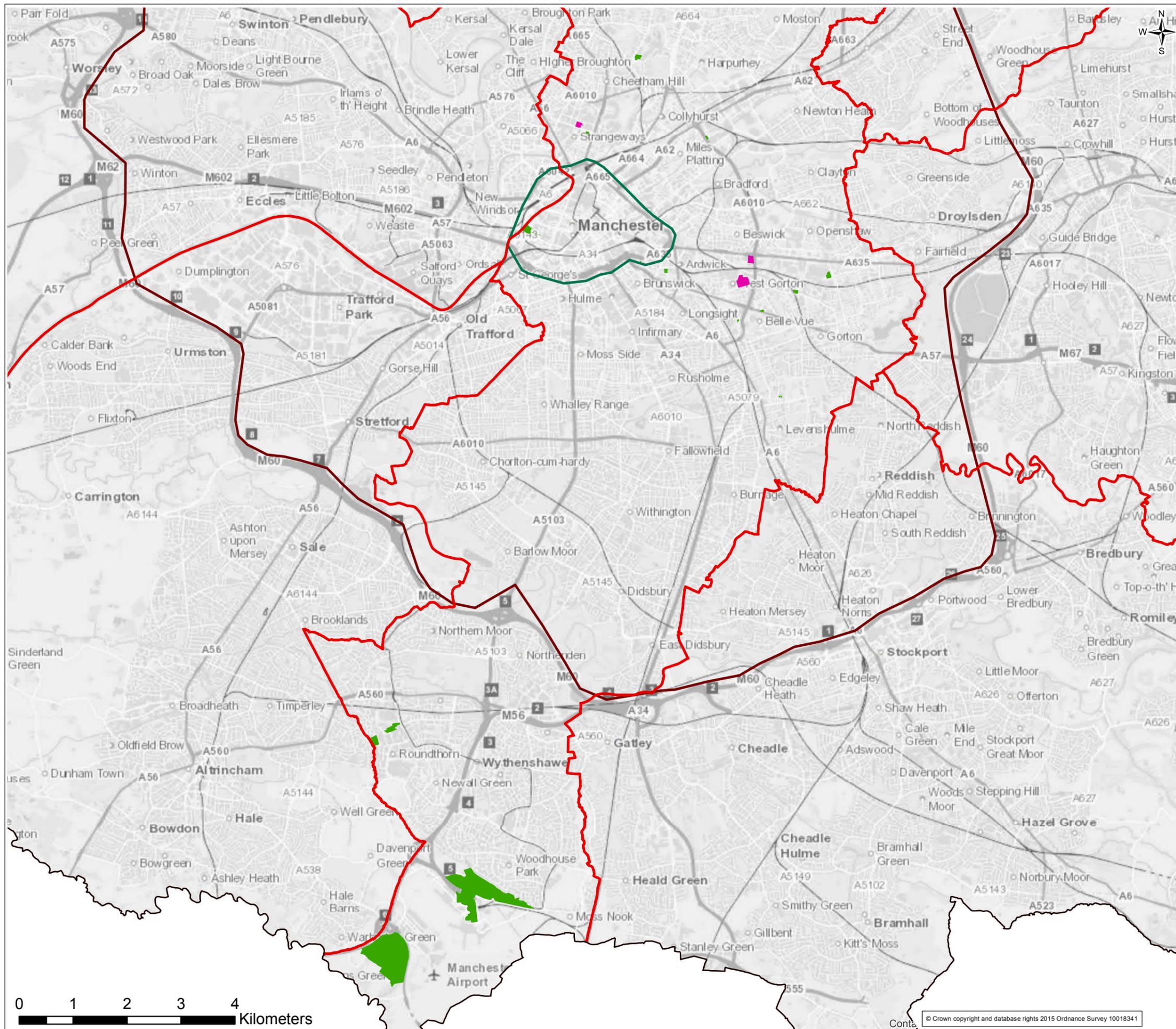
Drawing Title **Areas identified for housing in the Manchester Local Authority**

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FIGURE 23



Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Future Employment Areas B2 & B8 (2016-2017)
- Future Employment Areas under Construction B8 only (2016-2017)
- Future Employment Areas under Construction B2 only (2016-2017)



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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

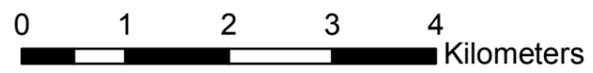


Client
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Project
 Greater Manchester Clean Air Plan

Drawing Title
 Areas Identified as Future Employment Areas in the Manchester Local Authority

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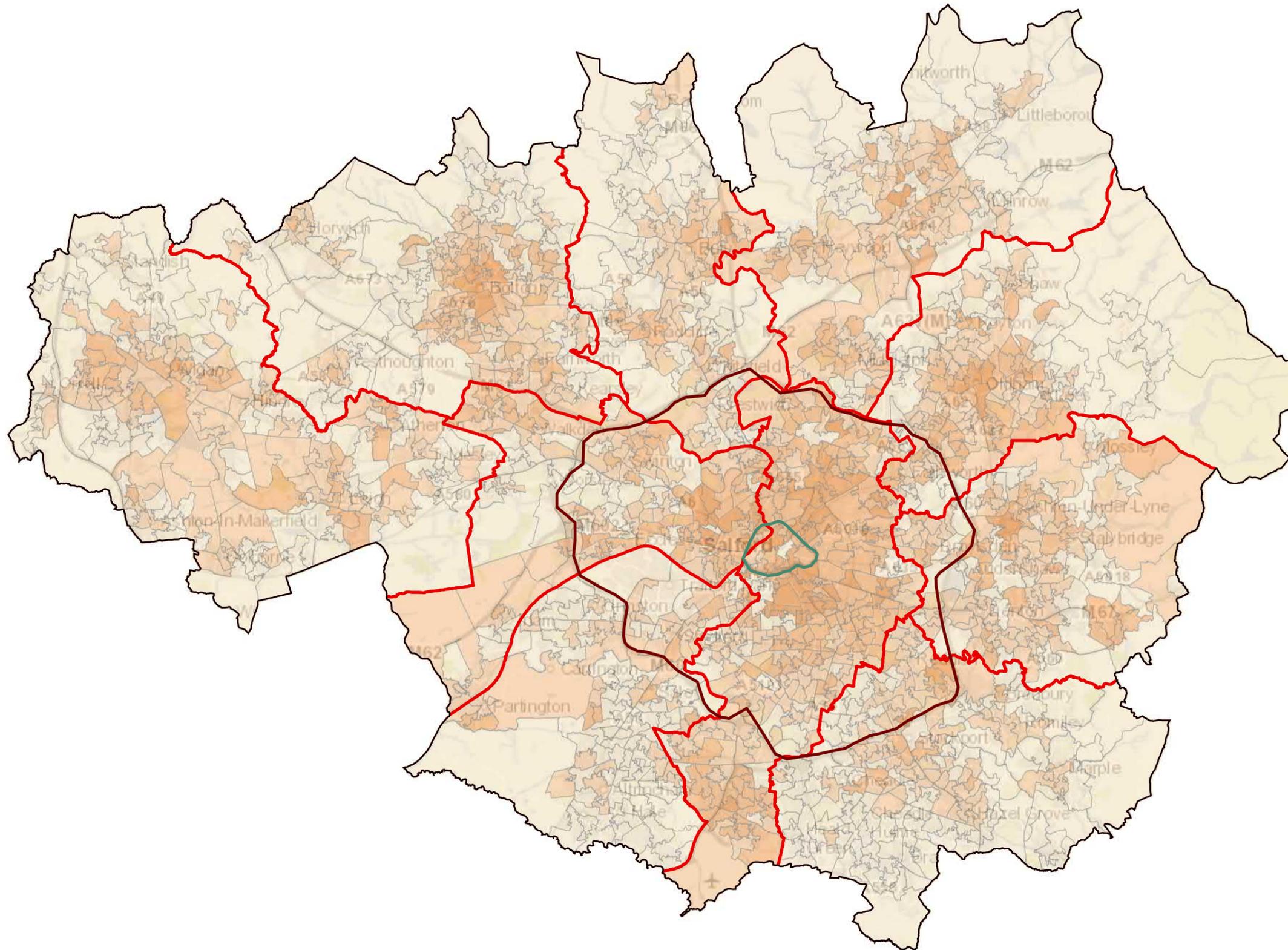
FIGURE 24

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

Car/Van Availability (% of households with no access)

- 0% - 20%
- 21% - 40%
- 41% - 60%
- 61% - 80%
- 81% - 100%



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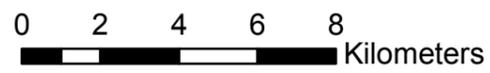


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Percentage of households with no access to a car or van in Greater Manchester

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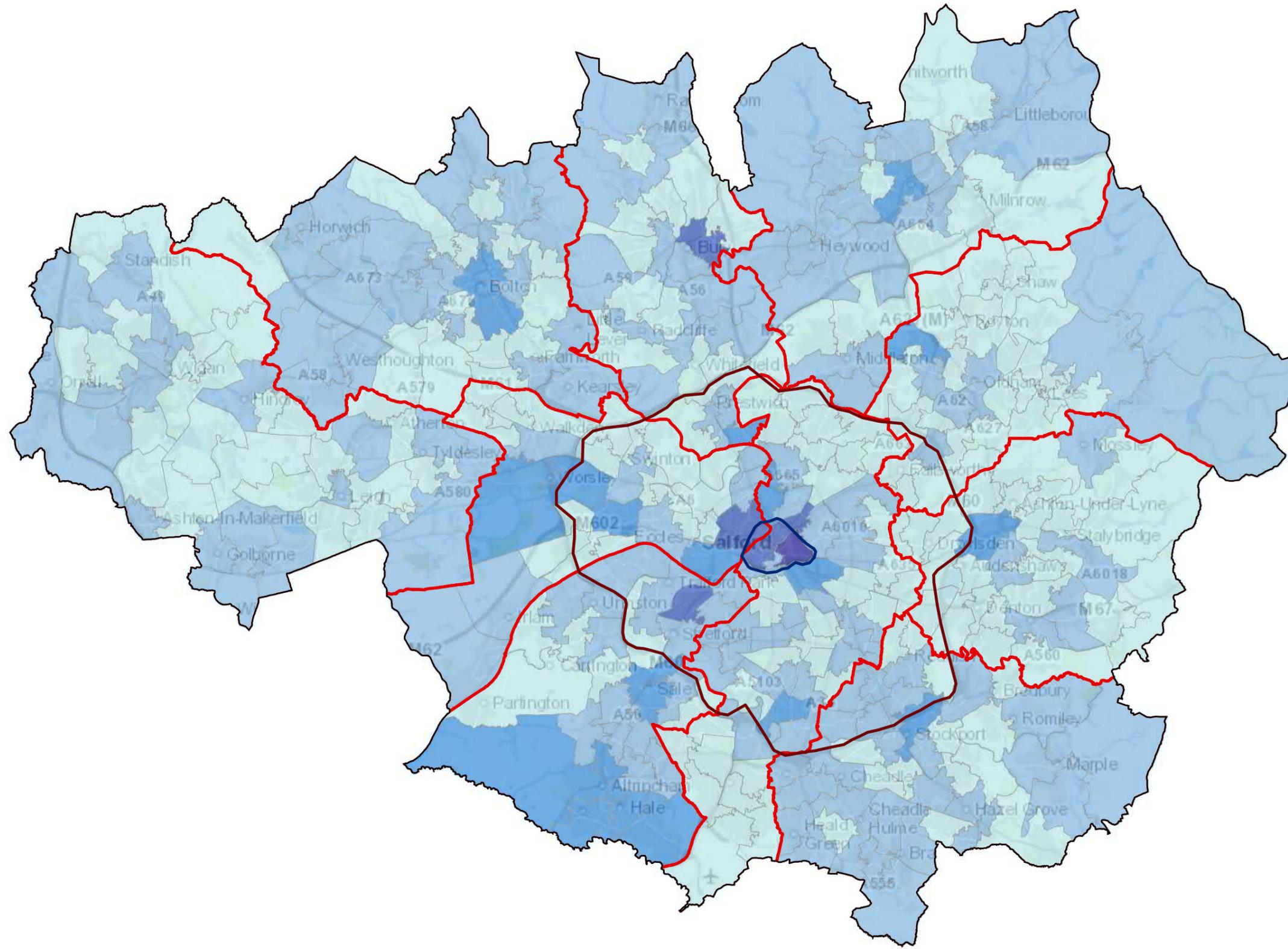
FIGURE 25

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

SMEs with a turnover of less than £200,000 per annum

- 30 - 170
- 171 - 325
- 326 - 710
- 711 - 1500
- 1501 - 3765



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

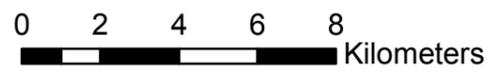


Client Transport for Greater Manchester

Project Greater Manchester Clean Air Plan

Drawing Title
Number of Small Medium Enterprises (SMEs) with an annual turnover of less than £200,000, in each MSOA

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



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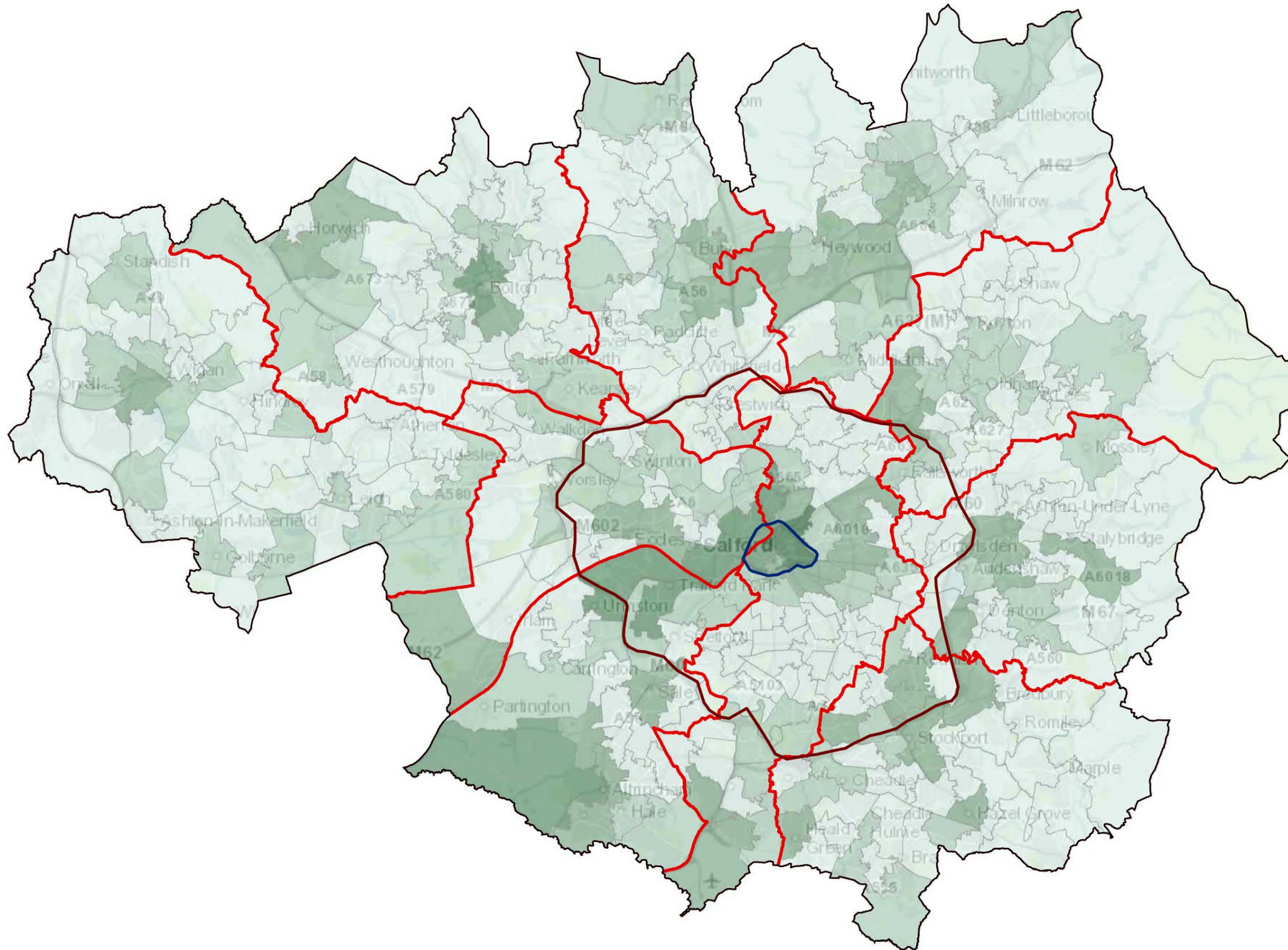
FIGURE 26

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

SMEs with a turnover of more than £1 million per annum

- 0 - 20
- 21 - 45
- 46 - 95
- 96 - 205
- 206 - 440



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

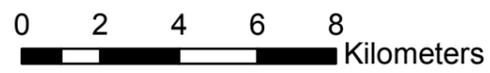


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Number of Small Medium Enterprises (SME's) with an annual turnover of more than £1million, in each MSOA

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



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FIGURE 27

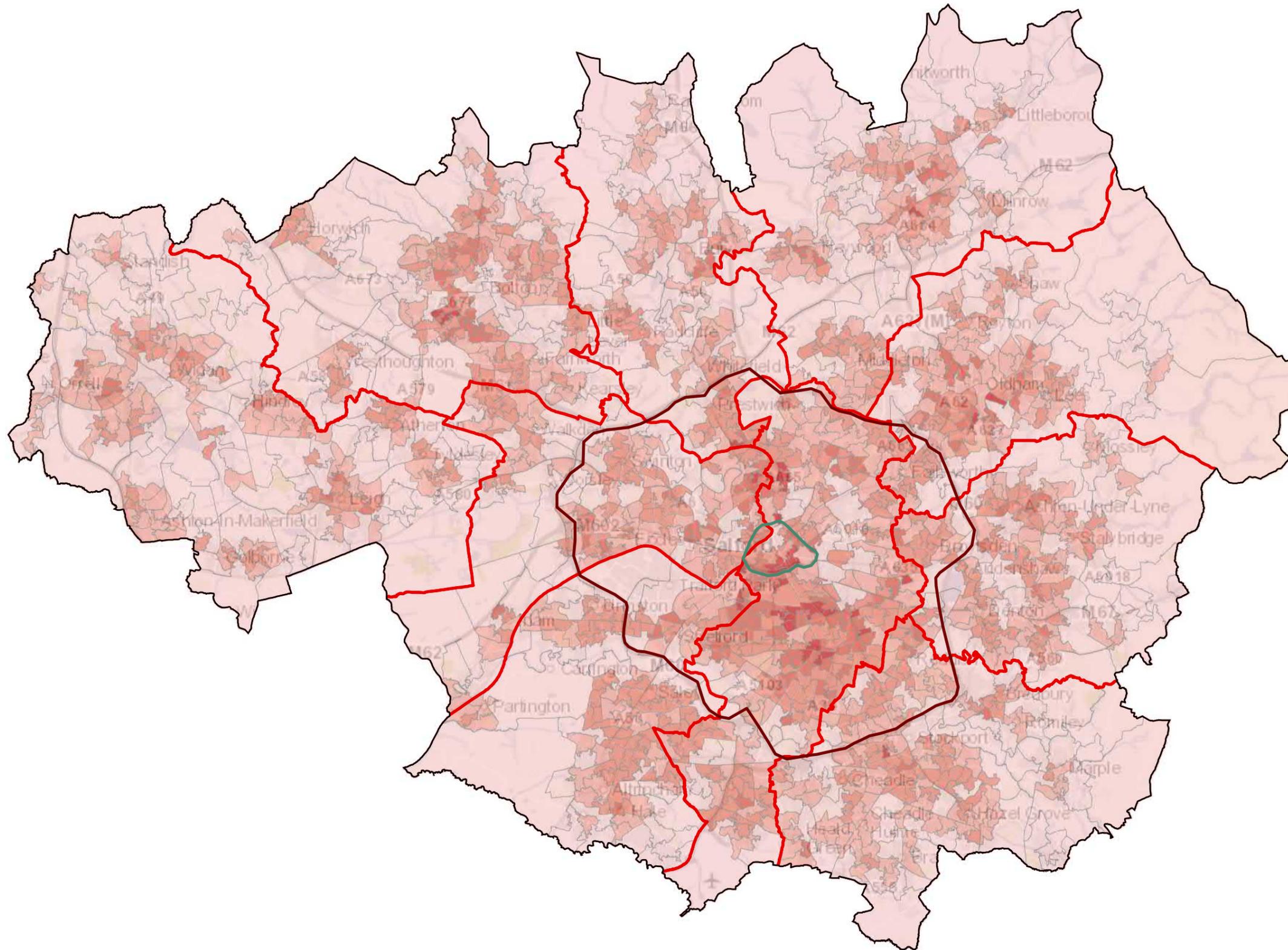


Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

Population Density (people per hectare)

- 1 - 25
- 26 - 45
- 46 - 75
- 76 - 125
- > 125



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

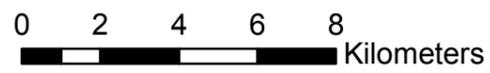


Client	Transport for Greater Manchester
--------	----------------------------------

Project	Greater Manchester Clean Air Plan
---------	-----------------------------------

Drawing Title	Population Density (people per hectare) in each LSOA
---------------	--

Scale @ A3	1:180,000	DO NOT SCALE
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FIGURE 28

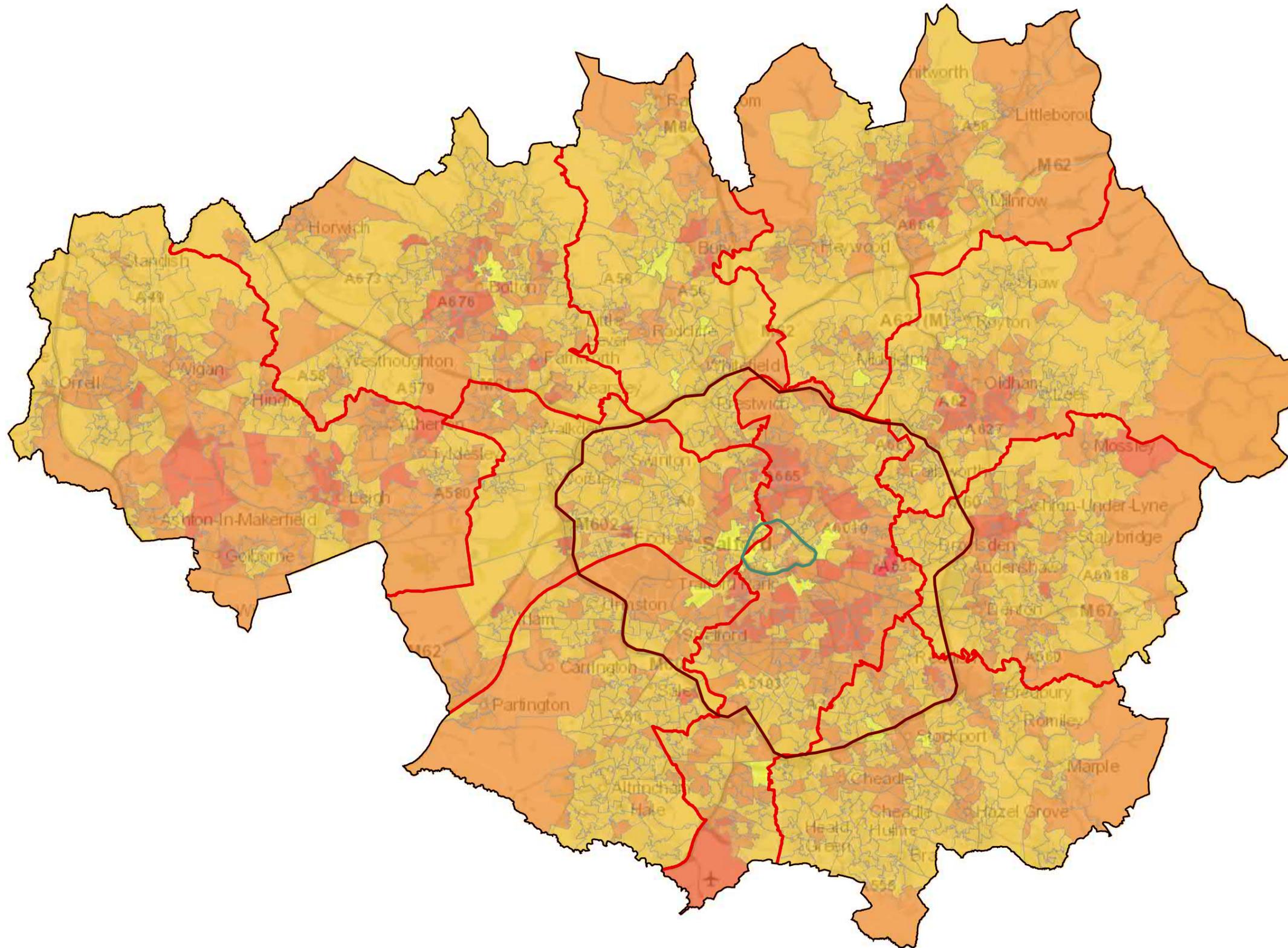
Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

Percentage Non-Compliance (Cars)

- < 40%
- 40% - 50%
- 50% - 60%
- 60% - 70%
- > 70%

Note: Non-compliant here means less than or equal to Euro 4 petrol and Euro 6 diesel



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Draw	Check'd	Rev'd	Appr'd

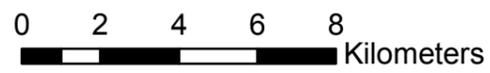


Client	Transport for Greater Manchester
--------	----------------------------------

Project	Greater Manchester Clean Air Plan
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Drawing Title	Percentage of Non-Compliant Cars Within Each LSOA in Greater Manchester
---------------	---

Scale @ A3	1:180,000	DO NOT SCALE
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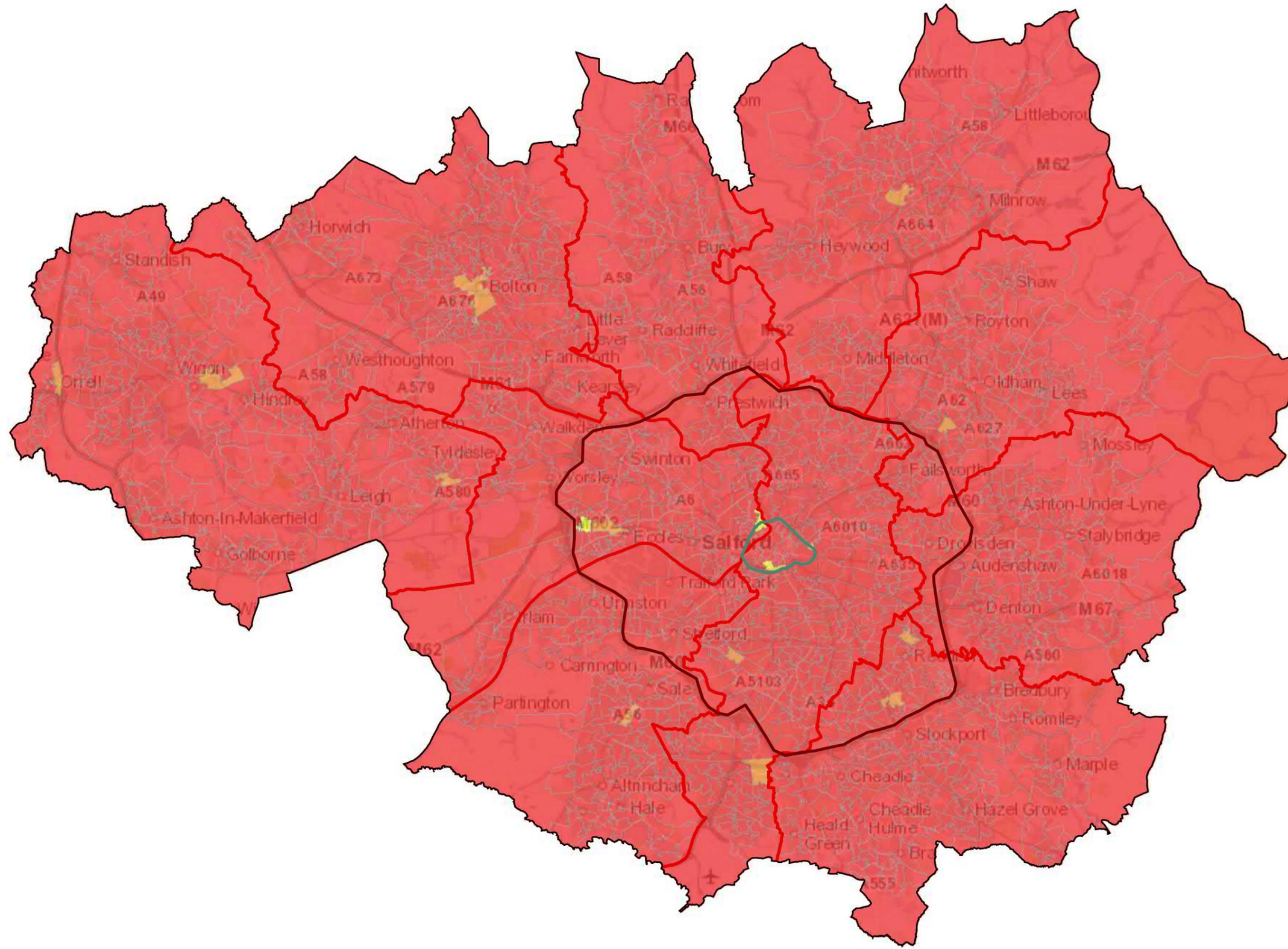
FIGURE 29

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

Percentage Non-Compliance (LGVs)

- <50%
- 50% - 90%
- > 90%



Note: Non-compliant here means less than or equal to Euro 4 petrol and Euro 6 diesel



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Draw	Check'd	Rev'd	App'd

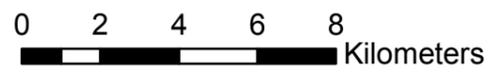


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Percentage of Non-Compliant LGVs Within Each LSOA in Greater Manchester

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	

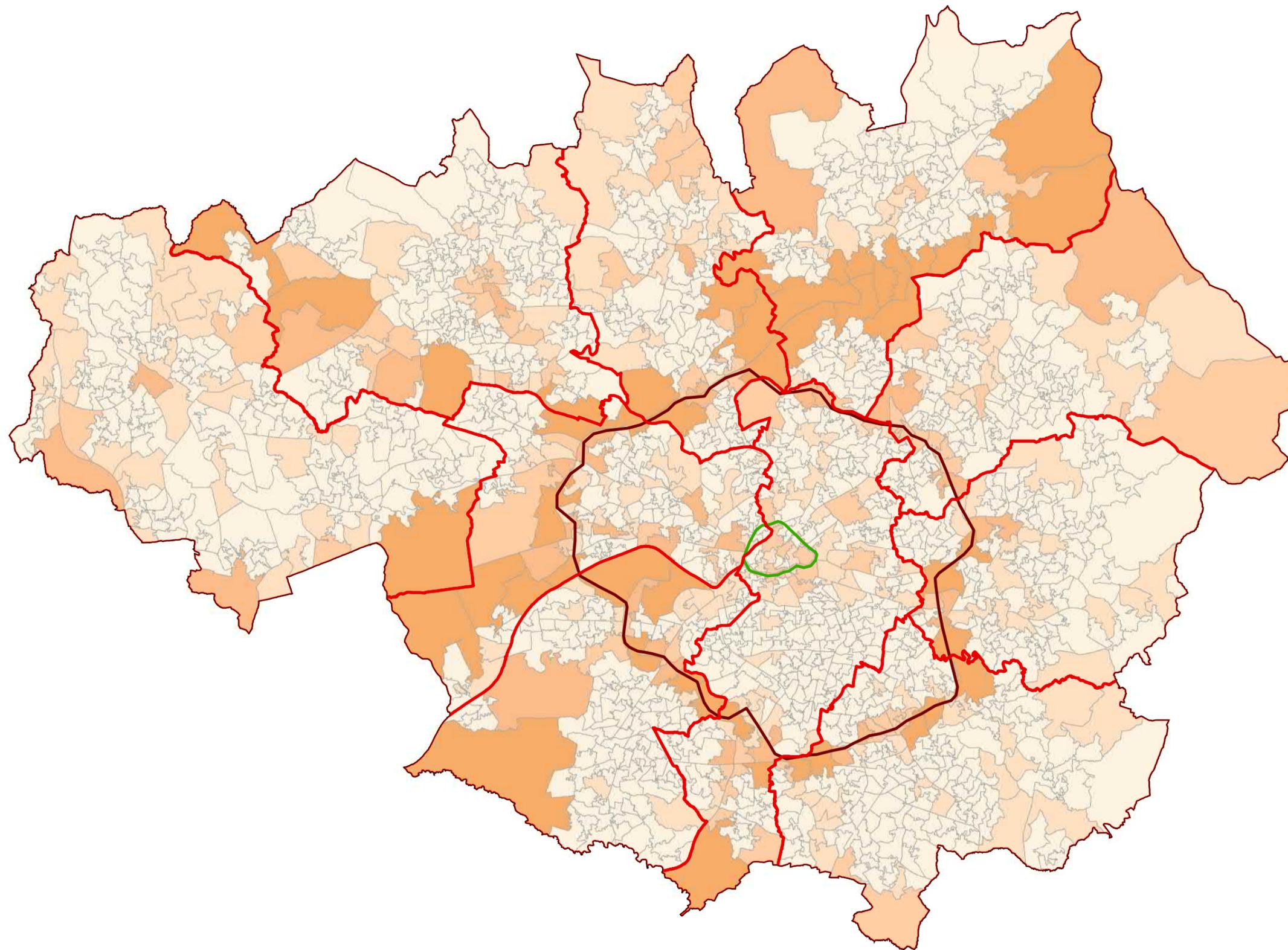


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FIGURE 30



Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60

Reduction in PM₁₀ Emissions (tonnes) - Option 5(i)

- 0.00 - 0.05
- 0.06 - 0.10
- 0.11 - 0.15
- 0.16 - 0.20
- >0.20



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

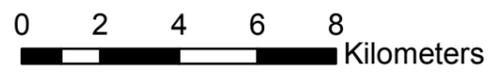


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Modelled reduction in PM₁₀ Emissions - Option 5(i)

Scale @ A3	1:180,000	DO NOT SCALE
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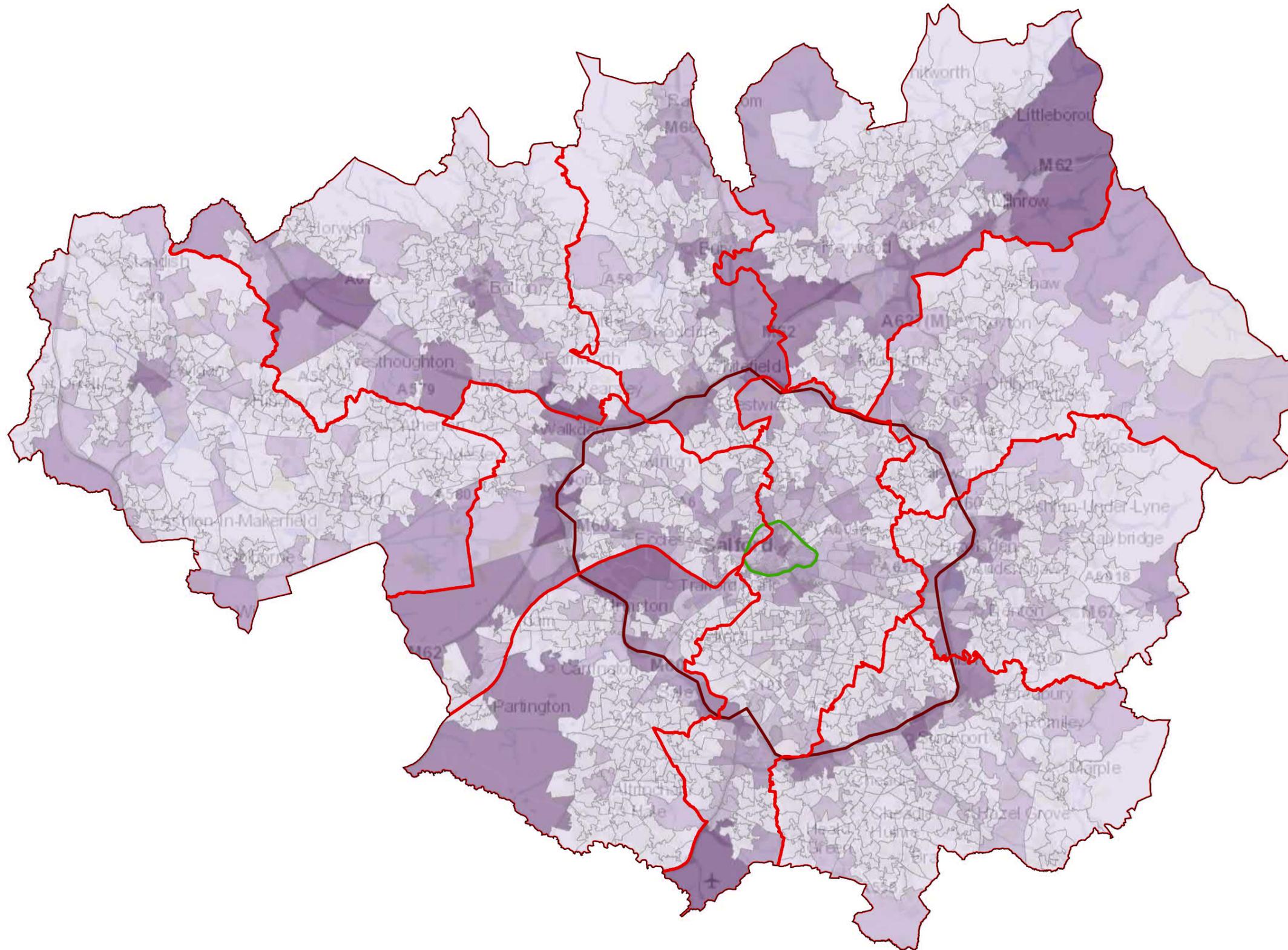
FIGURE 31

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60

Reduction in NOx Emissions (tonnes) - Option 5(i)

- 0.00 - 1.00
- 1.01 - 2.00
- 2.01 - 4.00
- 4.01 - 8.00
- 8.01 - 20.00



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

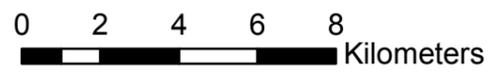


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Modelled reduction in NOx Emissions - Option 5(i)

Scale @ A3	1:180,000	DO NOT SCALE
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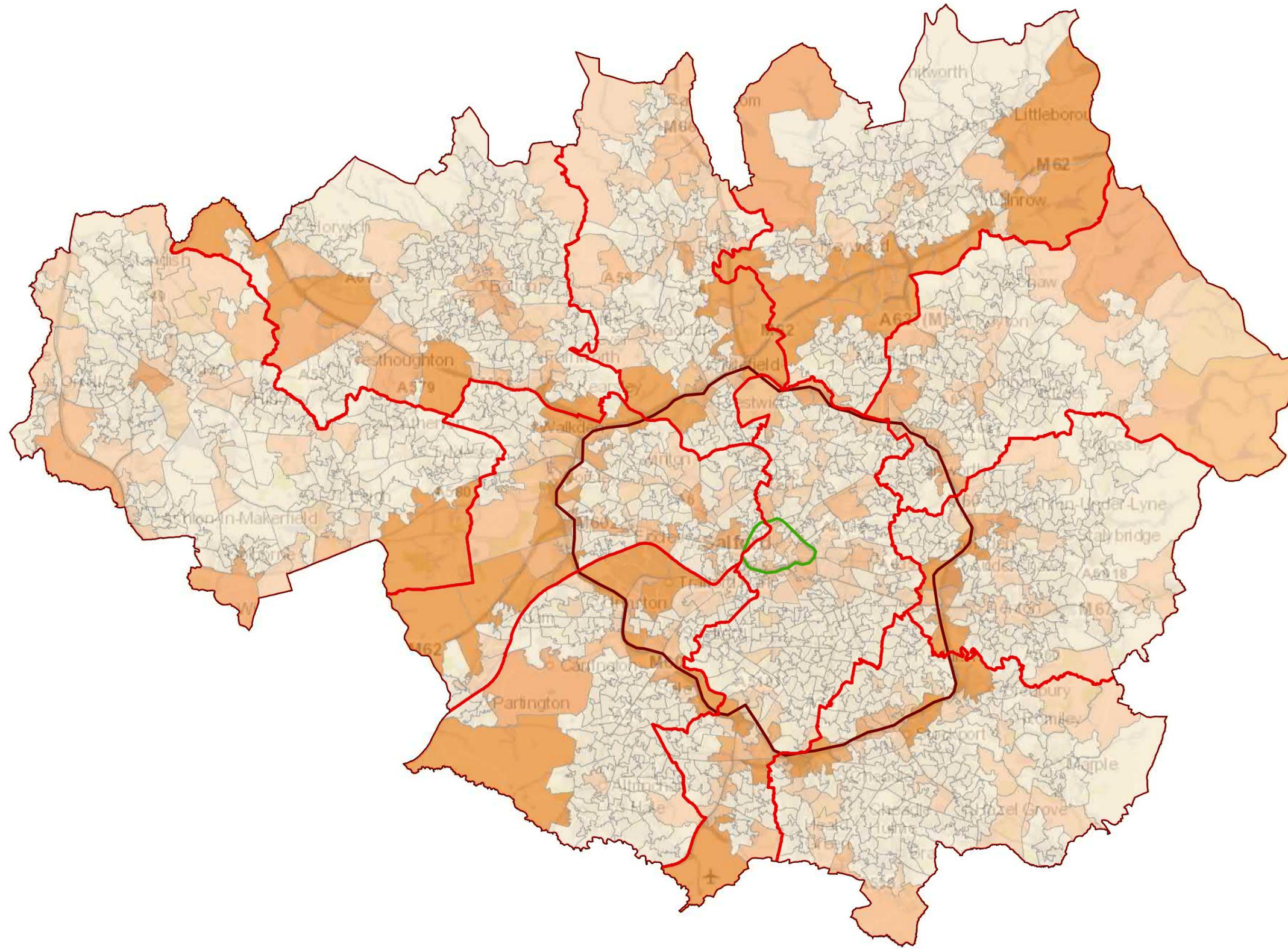
FIGURE 32

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60

Reduction in PM₁₀ Emissions (tonnes) - Option 5(ii)

- 0.00 - 0.05
- 0.06 - 0.10
- 0.11 - 0.15
- 0.16 - 0.20
- >0.20



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

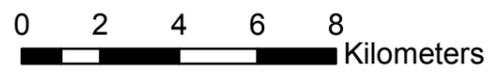


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Modelled Reduction in PM₁₀ Emissions - Option 5(ii)

Scale @ A3	1:180,000	DO NOT SCALE
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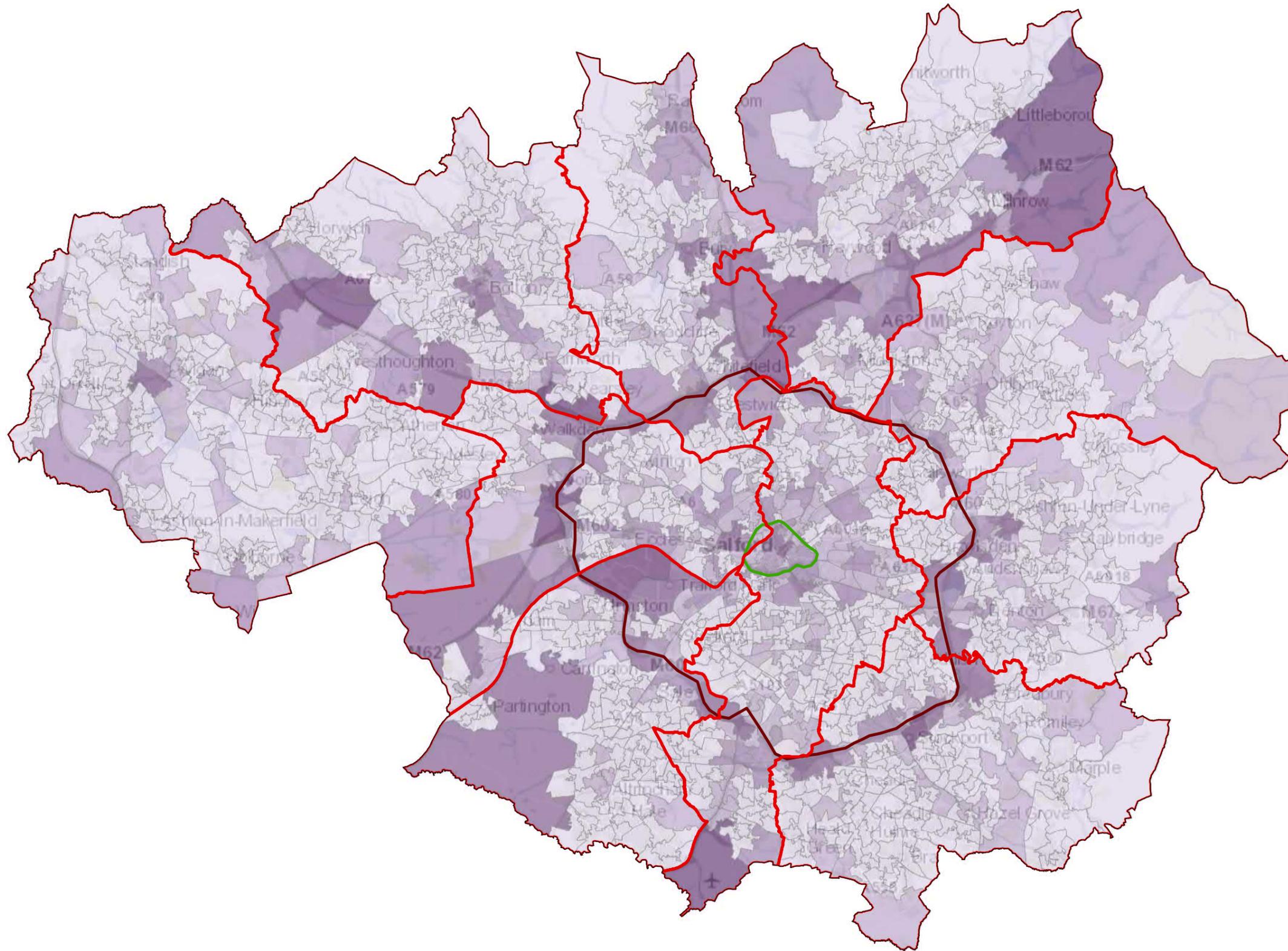
FIGURE 33

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60

Reduction in NOx Emissions (tonnes) - Option 5(ii)

- 0.00 - 1.00
- 1.01 - 2.00
- 2.01 - 4.00
- 4.01 - 8.00
- 8.01 - 20.00



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

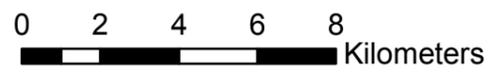


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Modelled Reduction in NOx Emissions - Option 5(ii)

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



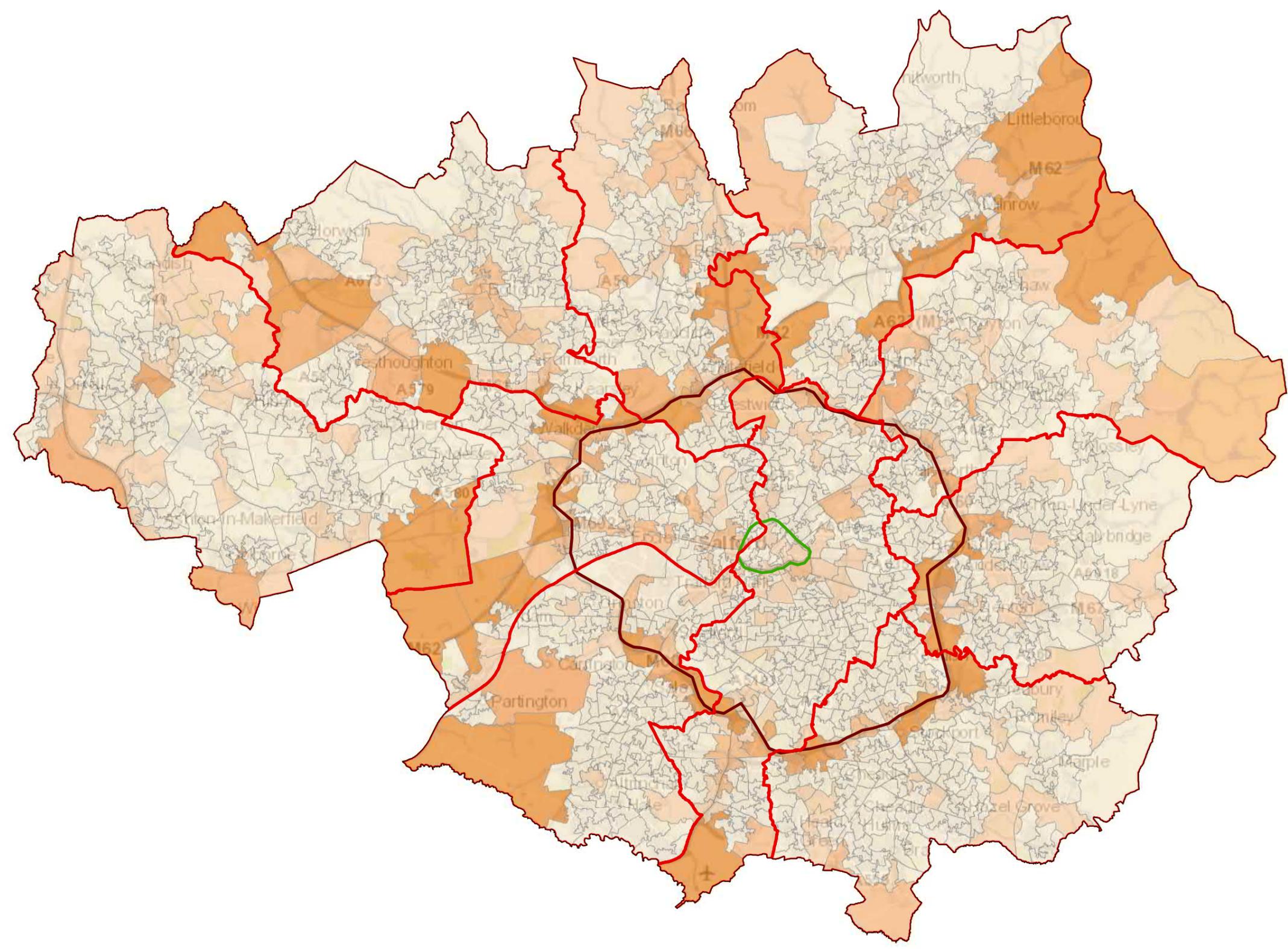
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FIGURE 34



- Legend**
- Greater Manchester Boundary
 - Local Authority Boundary
 - Inner Ring Road
 - M60
- Reduction in PM₁₀ Emissions (tonnes) - Option 8**
- < 0 - 0.05
 - 0.06 - 0.10
 - 0.11 - 0.15
 - 0.16 - 0.20
 - > 0.20



0	13/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd



Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Modelled Reduction in PM₁₀ Emissions - Option 8

Scale @ A3	1:182,000	DO NOT SCALE
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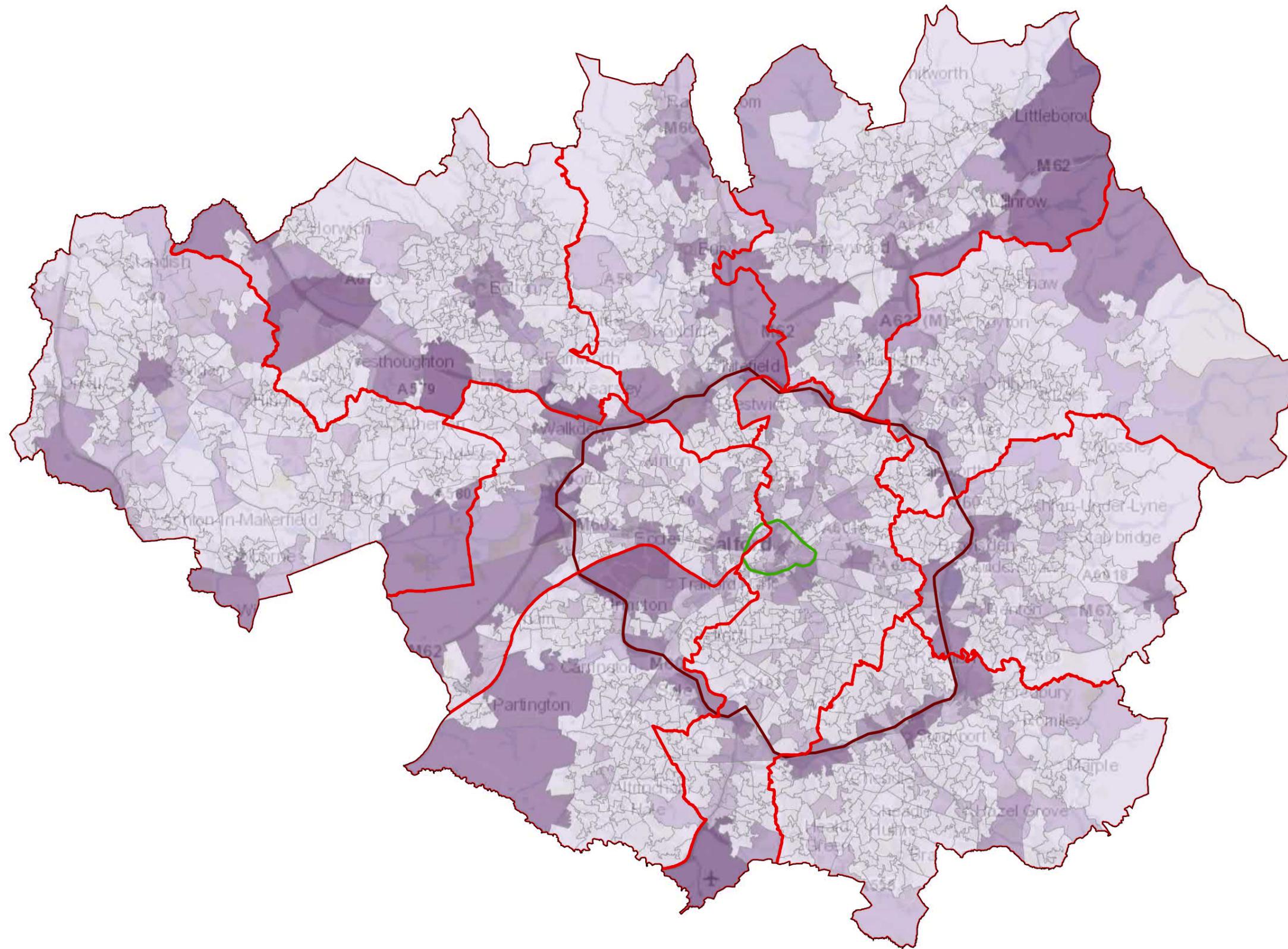
FIGURE 35

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60

Reduction in NOx Emissions (tonnes) - option 8

- <0.00 - 1.00
- 1.01 - 2.00
- 2.01 - 3.00
- 3.01 - 8.00
- 8.01 - 20.00



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

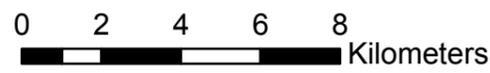


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Modelled Reduction in NOx Emissions - Option 8

Scale @ A3	1:177,510	DO NOT SCALE
Jacobs No.	BTGMO002	



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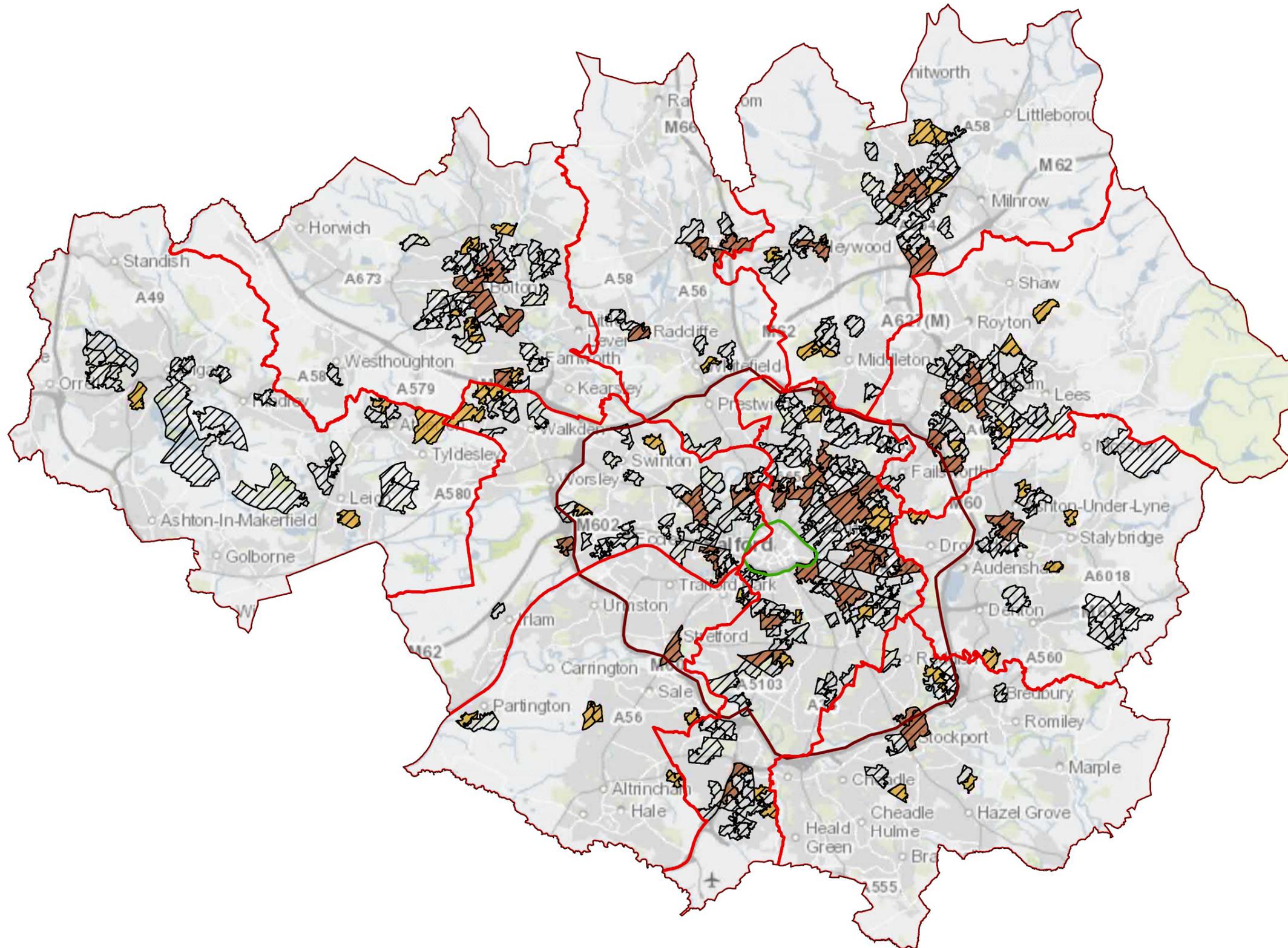
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FIGURE 36

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Income Deprivation Quintile 1
- Lowest Reductions in Emissions in Deprivation Quintile 1
- Highest Reductions in Emissions in Deprivation Quintile 1



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

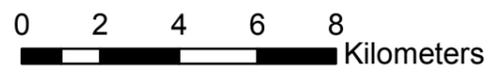


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which Contain the Most Deprived Areas under Option 5(i)

Scale @ A3	1:180,000	DO NOT SCALE
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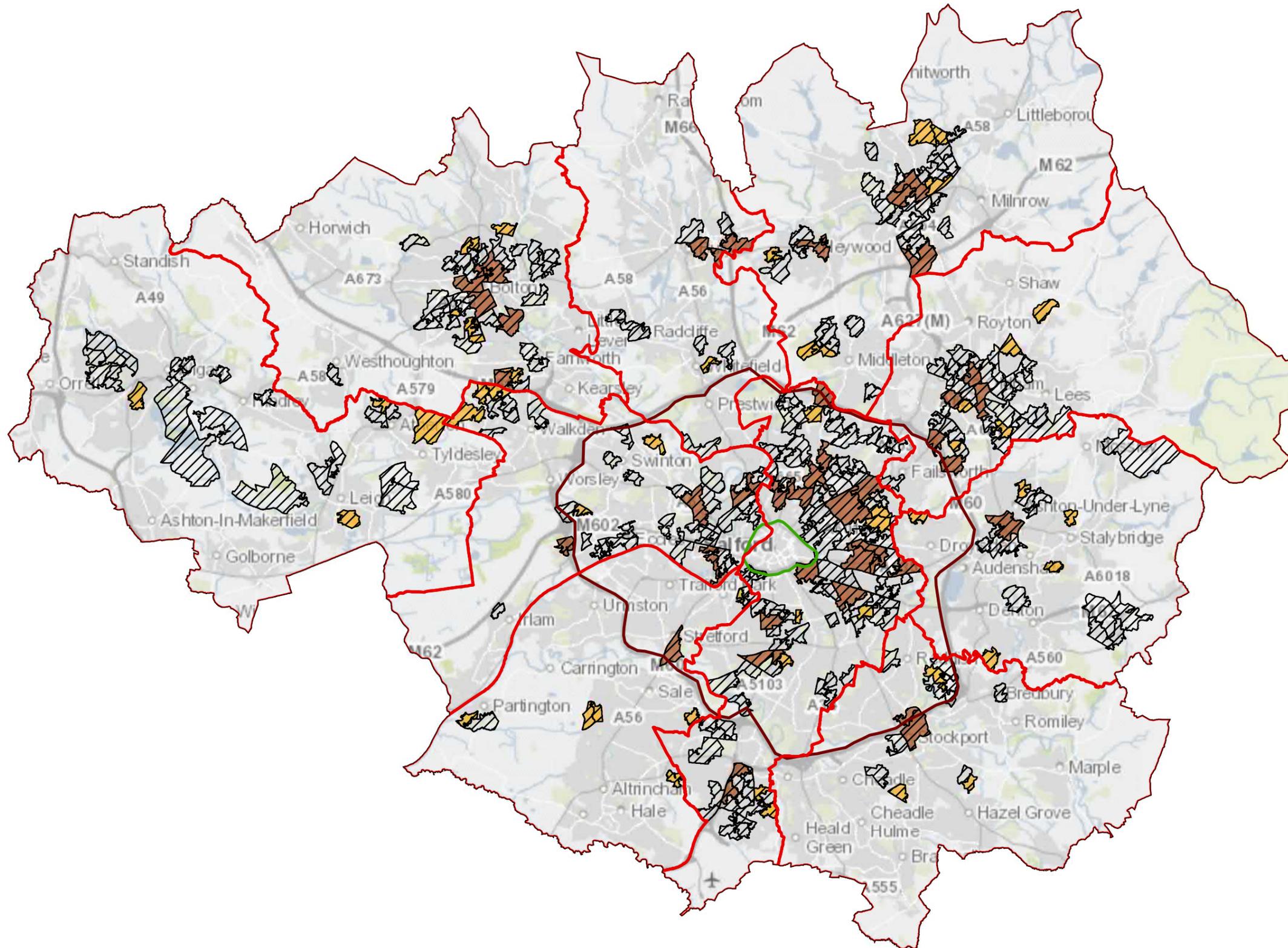
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FIGURE 37

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Income Deprivation Quintile 1
- Lowest Reductions in Emissions In Deprivation Quintile 1
- Highest Reductions in Emissions In Deprivation Quintile 1



0	20/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd

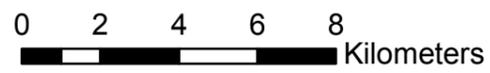


Client
Transport for Greater Manchester

Project
Greater Manchester Clean Air Plan

Drawing Title
LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which Contain the Most Deprived Areas for Option 5(ii)

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



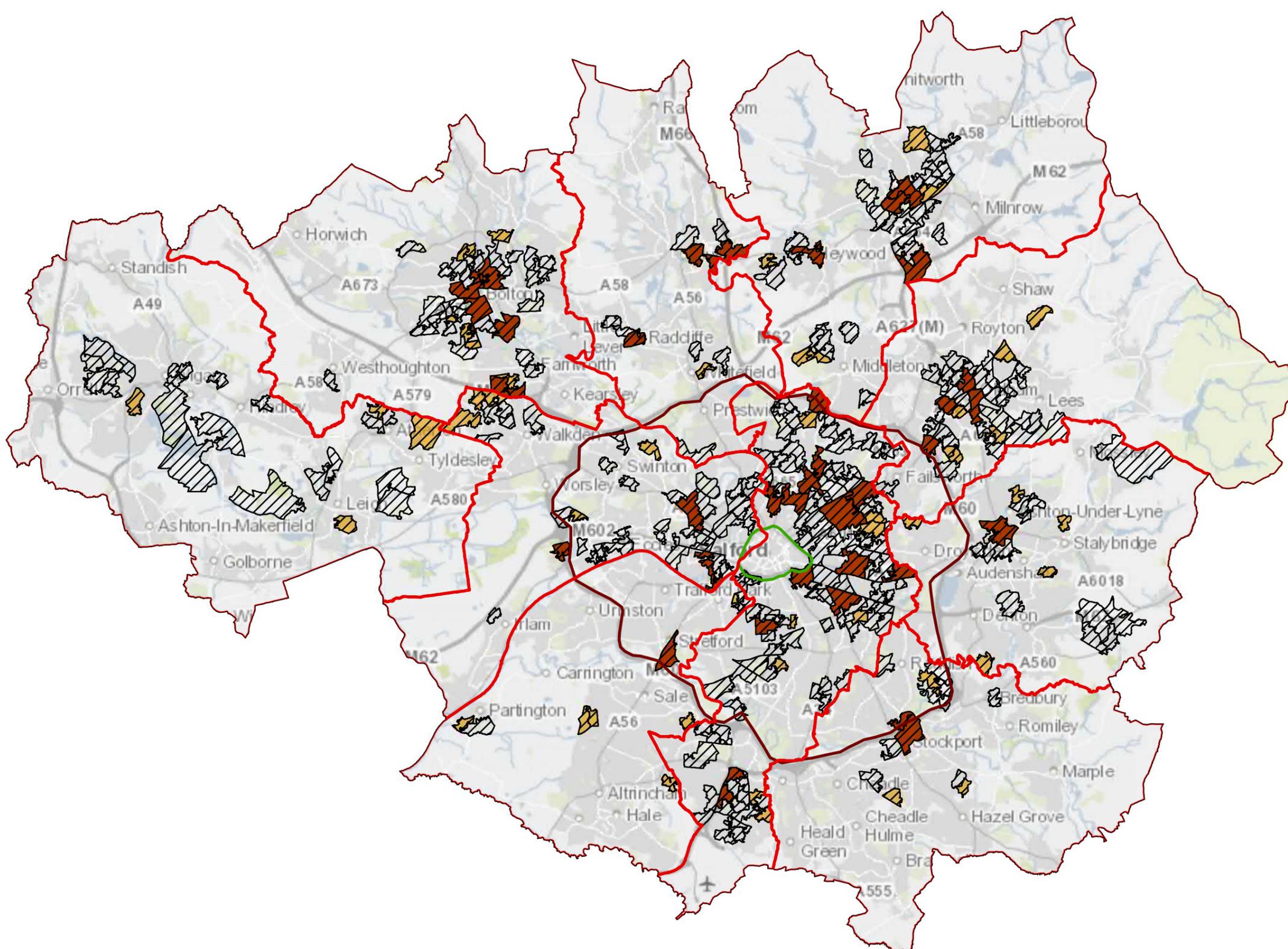
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FIGURE 38



- Legend**
- Greater Manchester Boundary
 - Local Authority Boundary
 - Inner Ring Road
 - M60
 - Income Deprivation Quintile 1
 - Lowest Reductions in Emissions in Deprivation Quintile 1
 - Highest reductions in Emissions in Deprivation Quintile 1



0	06/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

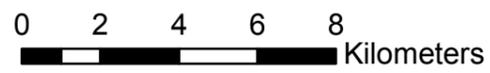


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which contain the Most Deprived Areas under Option 8

Scale @ A3	1:180,000	DO NOT SCALE
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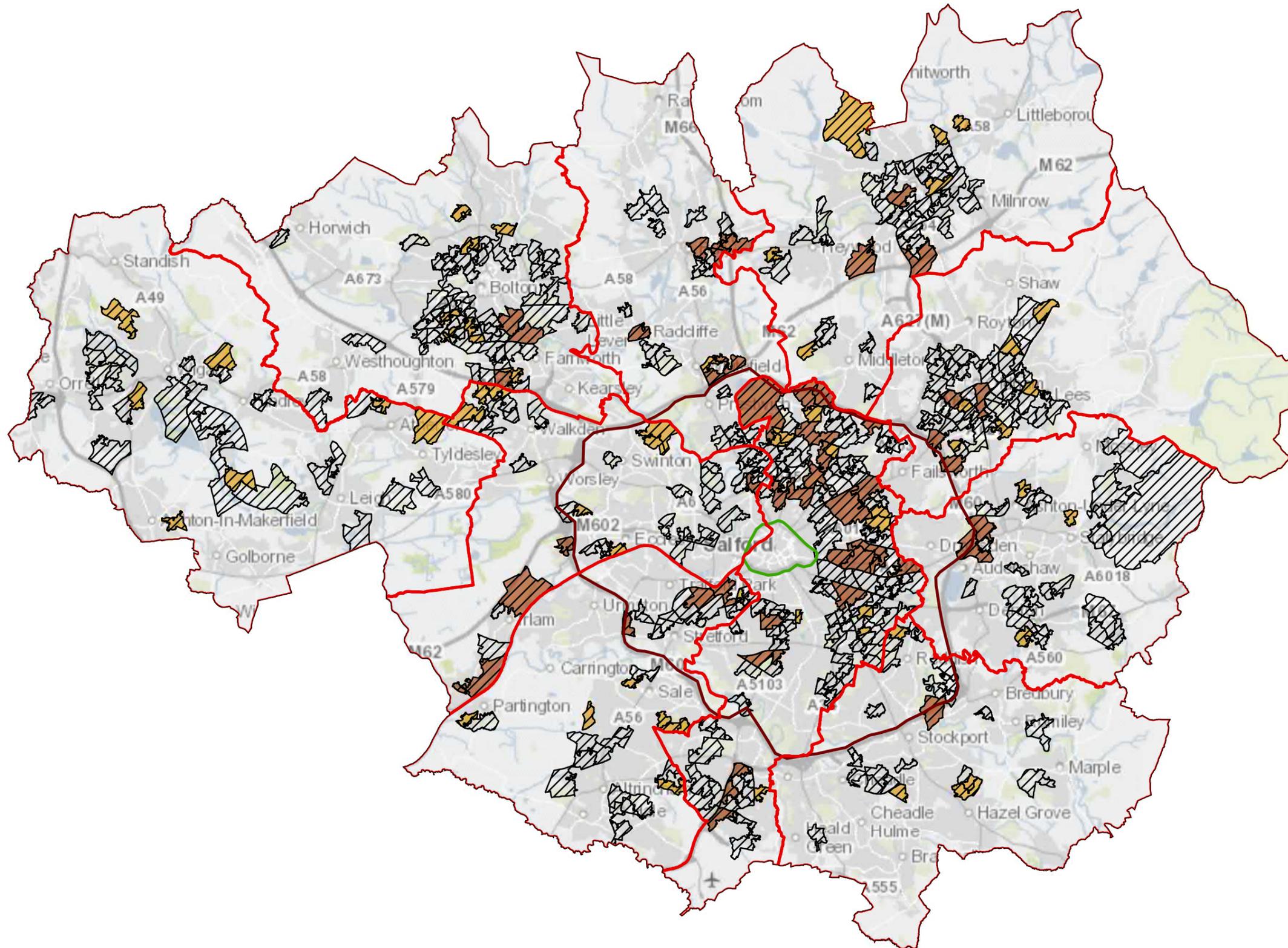
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FIGURE 39

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Under 16s Quintile 1
- Lowest Reductions in Emissions in Under 16's Quintile 1
- Highest Reductions in Emissions in Under 16's Quintile 1



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

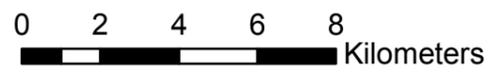


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which Also Contain the Most Under 16s for Option 5(i)

Scale @ A3	1:180,000	DO NOT SCALE
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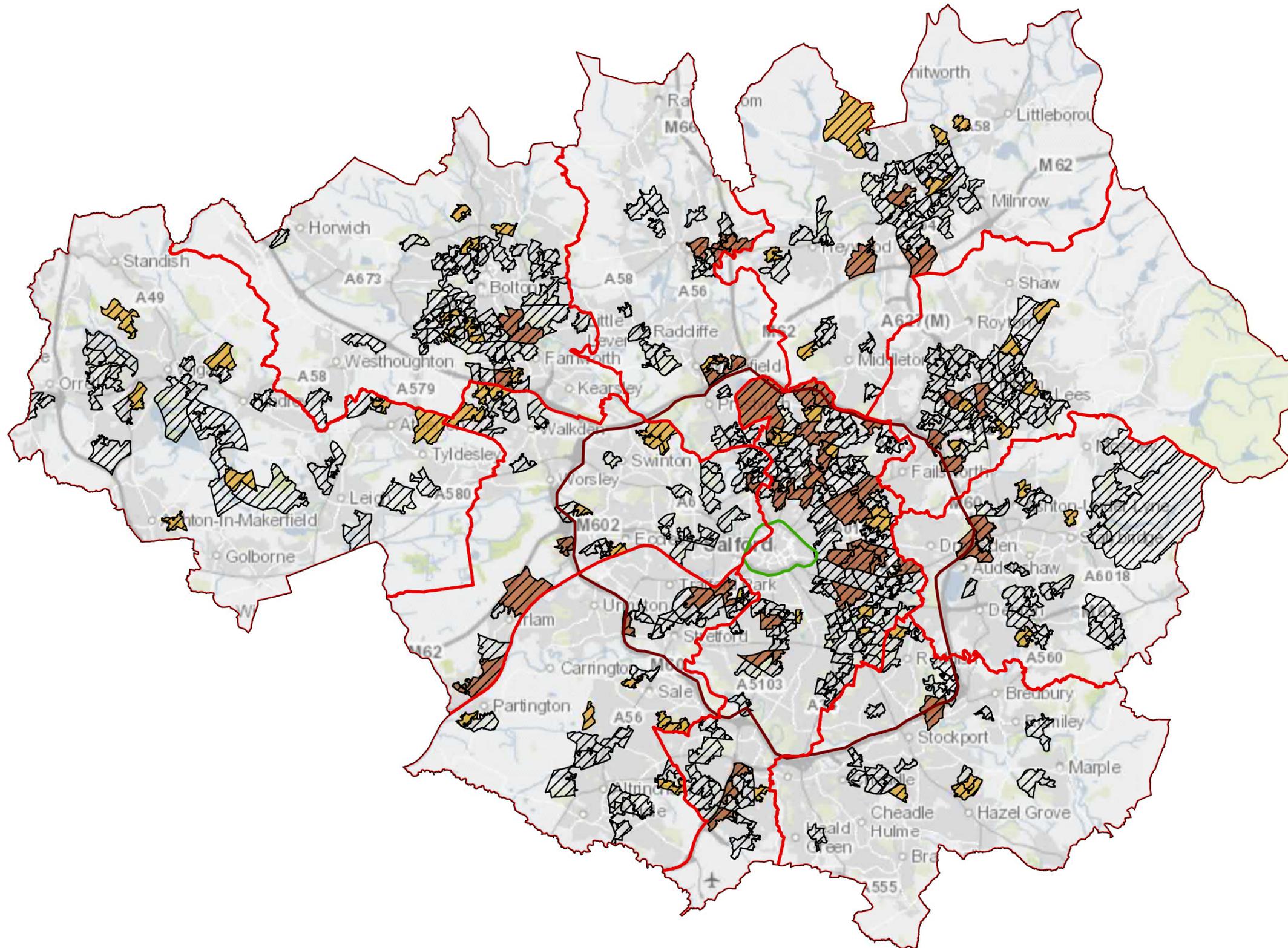
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FIGURE 40

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Under 16s Quintile 1
- Lowest Reductions in Emissions in Under 16s Quintile 1
- Highest Reductions in Emissions in Under 16s Quintile 1



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

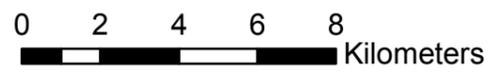


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest reductions in Emissions (PM₁₀ and NO_x) Which Also Contain the Most Under 16s for Option 5(ii)

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



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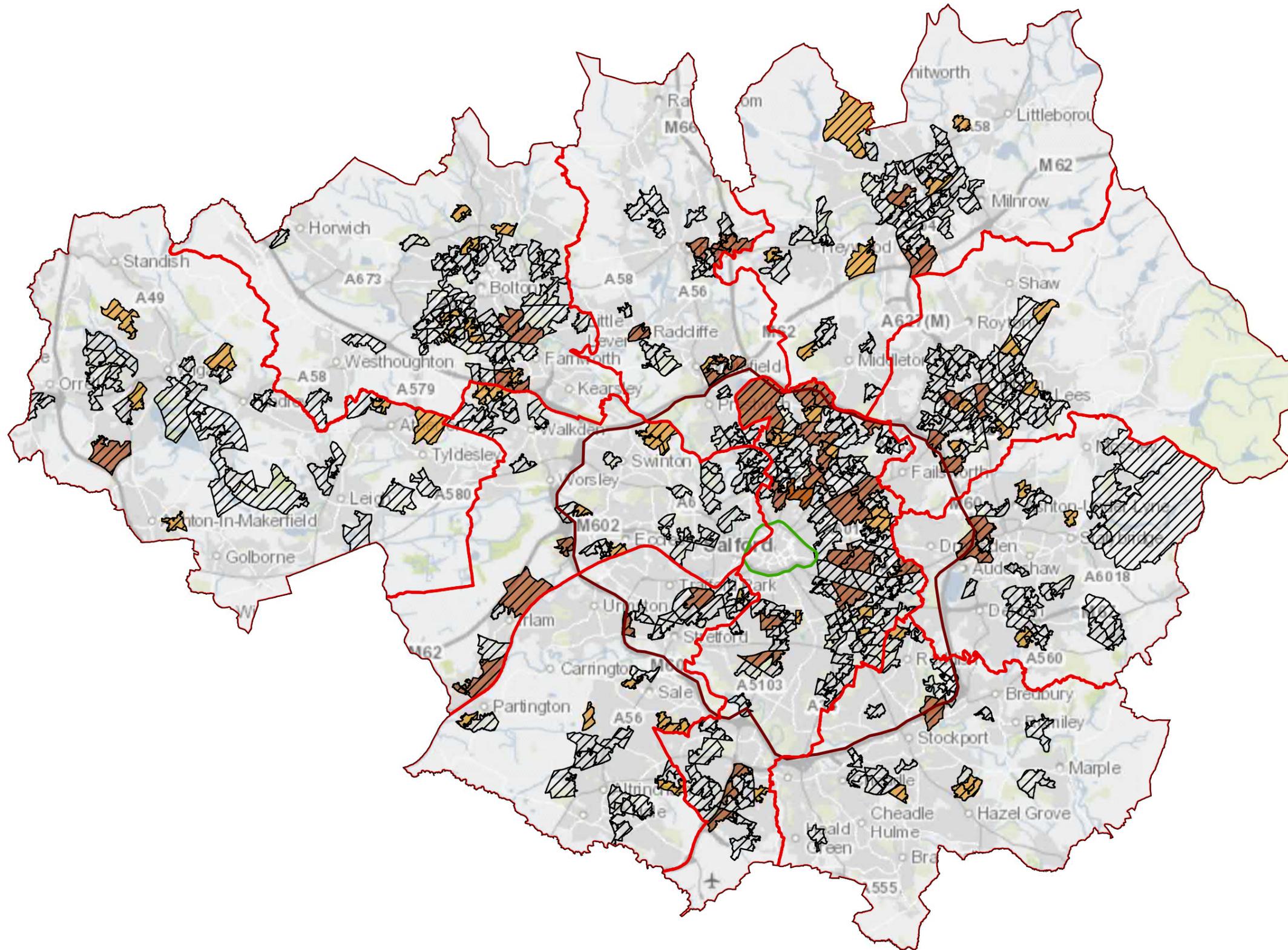
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FIGURE 41

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Under 16s Quintile 1
- Lowest Reductions in Emissions in Under 16s Quintile 1
- Highest Reductions in Emissions in Under 16s Quintile 1



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

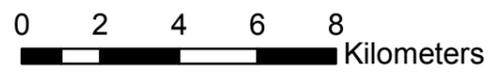


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which Also Contain the Most Under 16s for Option 8

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



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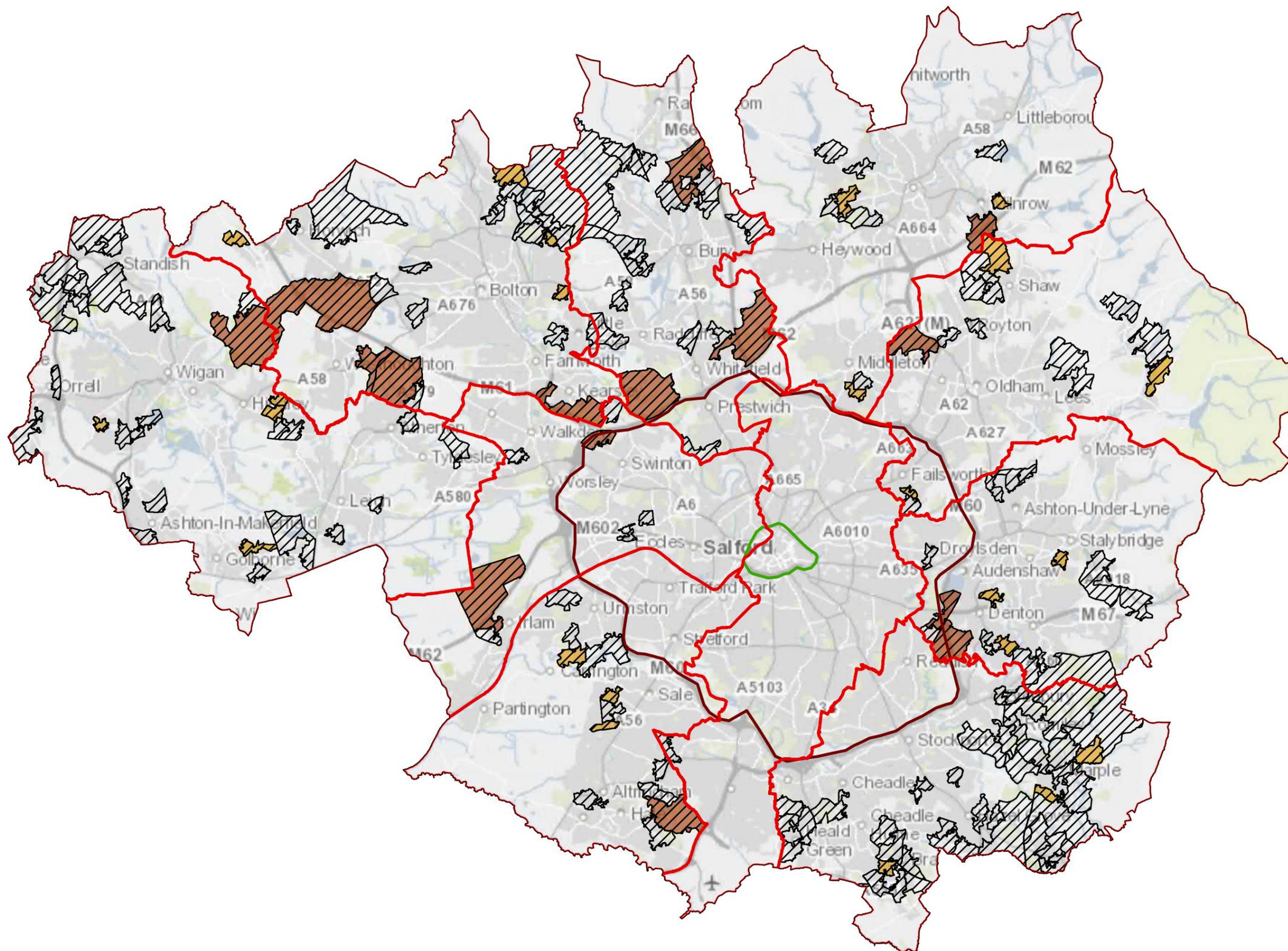
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FIGURE 42

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Over 65s Quintile 1
- Lowest Reductions in Emissions in Over 65s Quintile 1
- Highest Reductions in Emissions in Over 65s Quintile 1



0	19/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

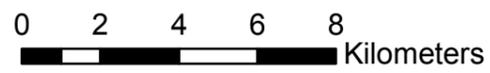


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which Also Contain the Most Over 65s for Option 5(i)

Scale @ A3	1:180,000	DO NOT SCALE
Jacobs No.	BTGMO002	



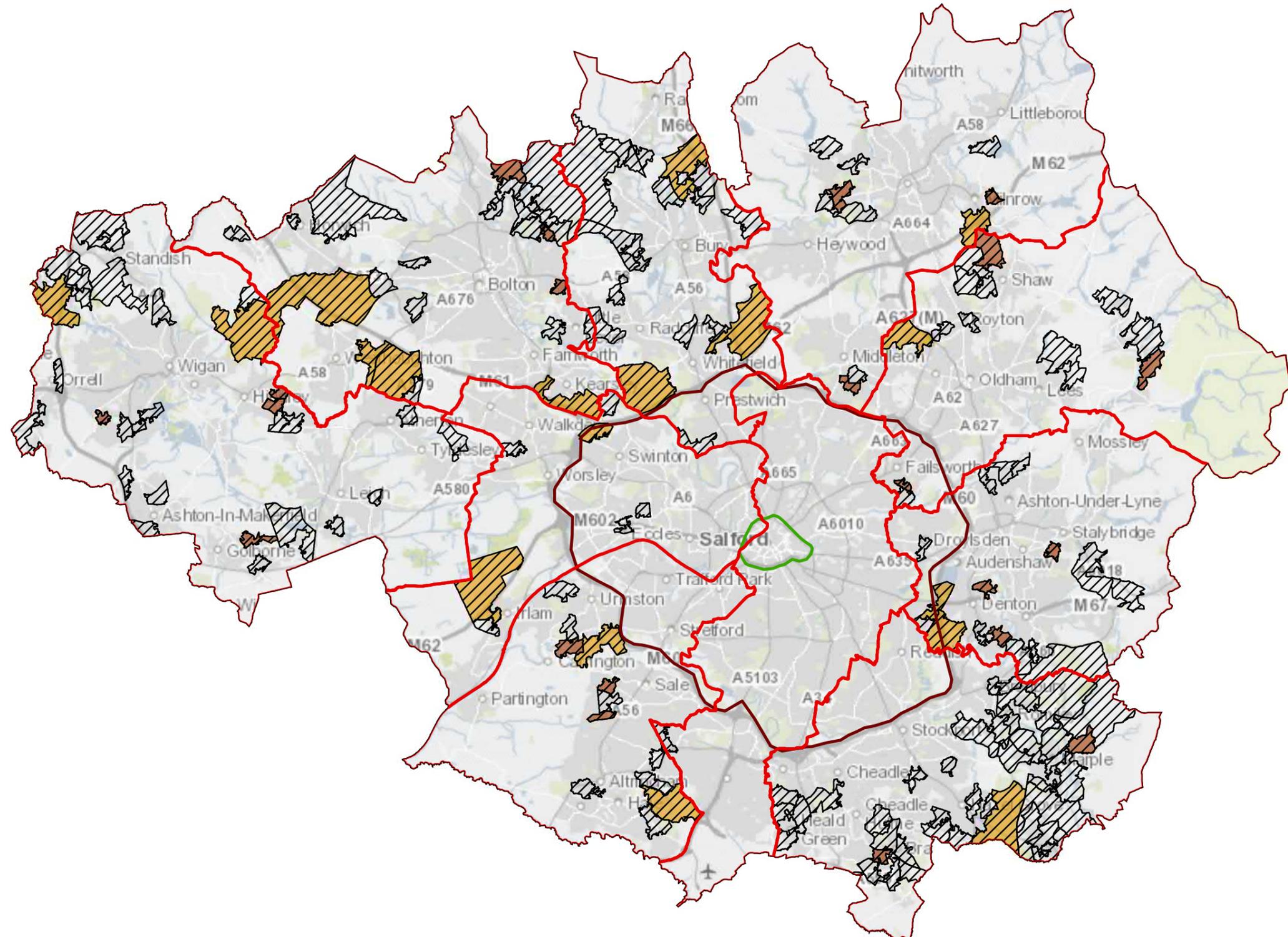
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FIGURE 44

- Legend
- Greater Manchester Boundary
 - Local Authority Boundary
 - Inner Ring Road
 - M60
 - Over 65s Quintile 1
 - Lowest Reductions in Emissions in Over 65s Quintile 1
 - Highest Reductions in Emissions in Over 65s Quintile 1



0	19/02/2019	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

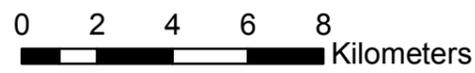


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs with the 10% Highest/Lowest Reductions in Emissions (PM₁₀ and NO_x) Which Also Contain the Most Over 65s for Option 8

Scale @ A3	1:187,509	DO NOT SCALE
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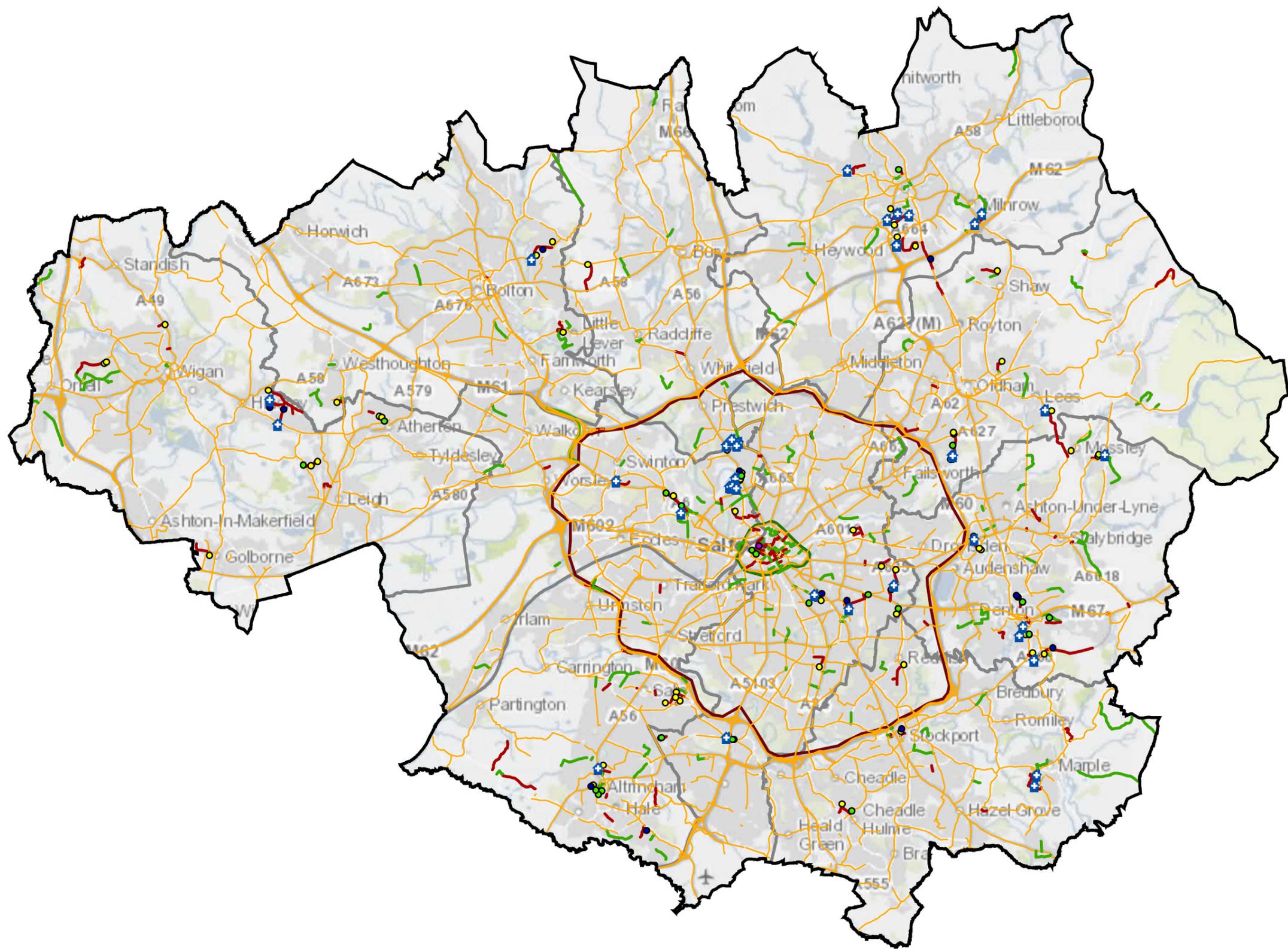
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FIGURE 45

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Medical Facility
- ⚕ Care/Nursing Home
- Primary School
- Secondary School
- University
- Decrease in traffic flows >10%
- Increase in traffic flows >10%
- Links with >8000 vehicles per day



0	19/02/2019	Initial Issue	LK	AH	ES	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

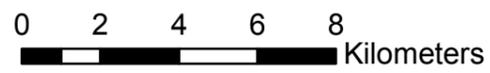


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Key Impact Areas for Effects Relating to Changes in Traffic Flows for CAP Option 5(i) and 5(ii) in 2021 - Greater Manchester

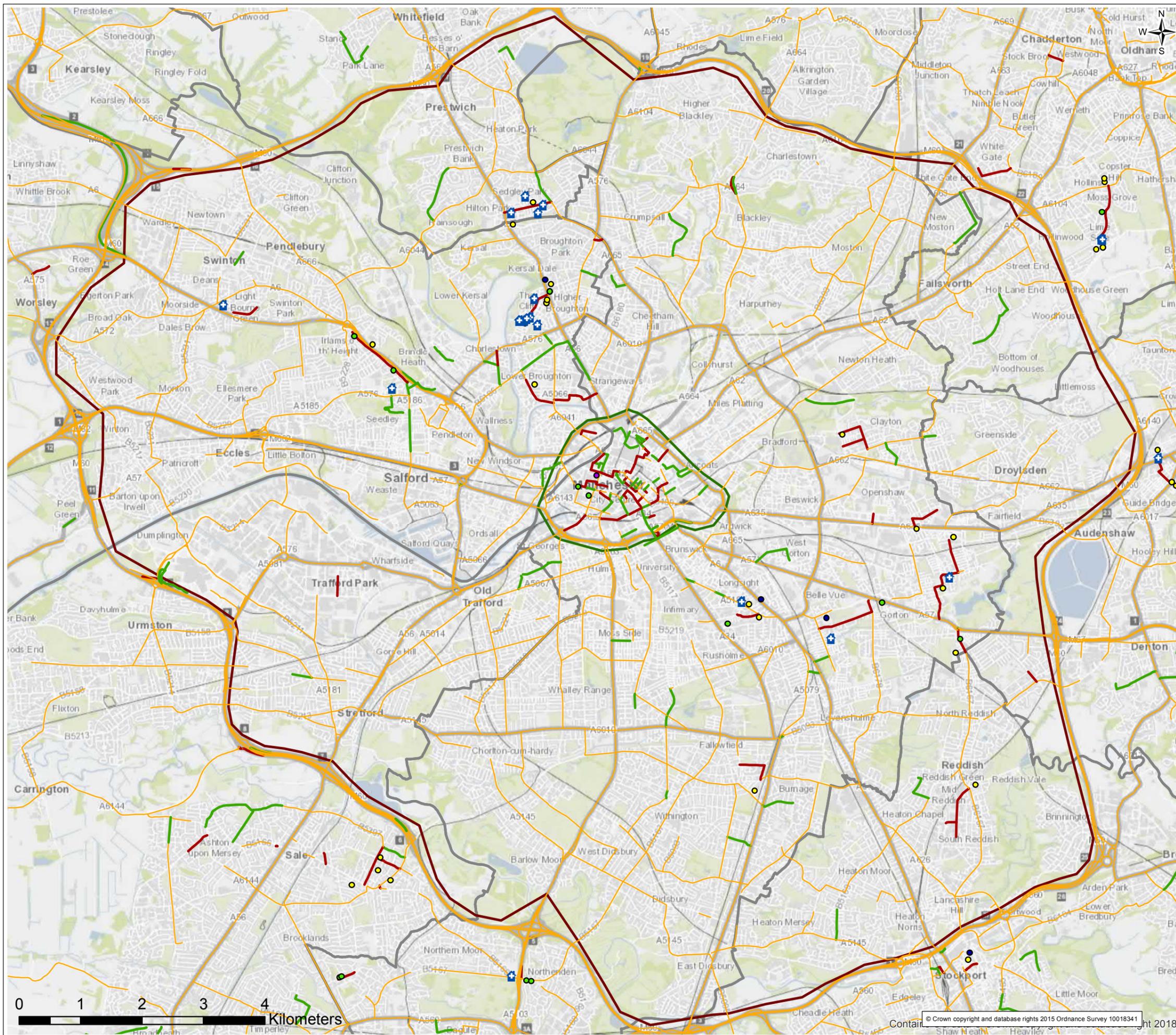
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FIGURE 46



Legend

- Greater Manchester Boundary
- Local Authority Boundary
- Inner Ring Road
- M60
- Medical Facility
- Care/Nursing Home
- Primary School
- Secondary School
- University
- Decrease in traffic flows >10%
- Increase in traffic flows >10%
- Links with >8000 vehicles per day



0	19/02/2019	Initial Issue	LK	AH	ES	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd



Client
 Transport for Greater Manchester

Project
Greater Manchester Clean Air Plan

Drawing Title
Key Impact Areas for Effects Relating to Changes in Traffic Flows for CAP Option 5(i) and 5(ii) in 2021 - M60 and IRR

Scale @ A3	1:60,000	DO NOT SCALE
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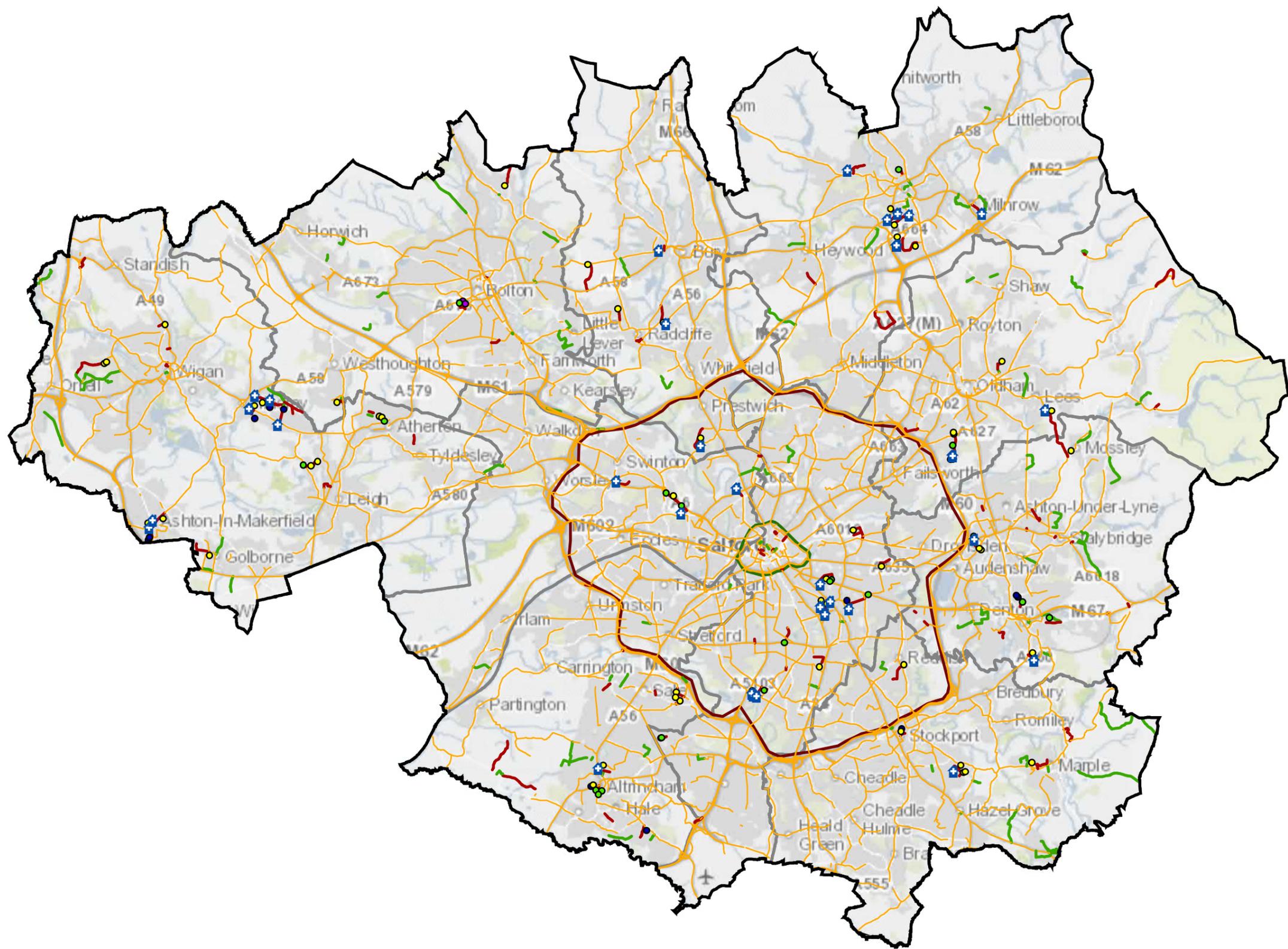
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FIGURE 47

- Legend**
- Greater Manchester Boundary
 - Local Authority Boundary
 - Inner Ring Road
 - M60
 - Medical Facility
 - Care/Nursing Home
 - Primary School
 - Secondary School
 - University
 - Decrease in traffic flows >10%
 - Increase in traffic flows >10%
 - Links with >8000 vehicles per day



0	19/02/2019	Initial Issue	LK	AH	ES	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

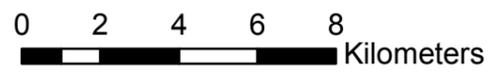


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Key Impact Areas for Effects Relating to Changes in Traffic Flows for CAP Option 8 in 2021 - Greater Manchester

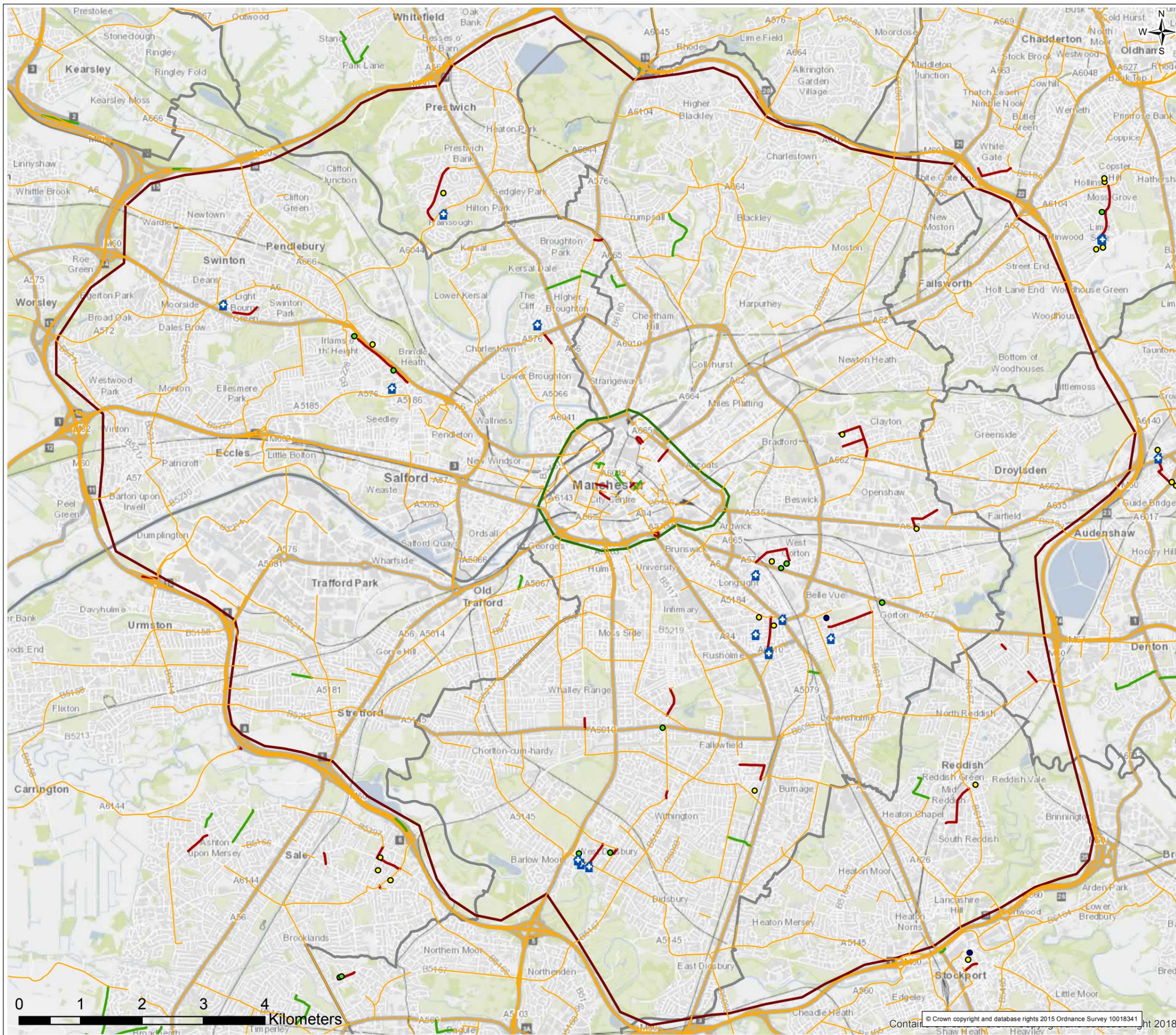
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FIGURE 48



- Legend**
- Greater Manchester Boundary
 - Local Authority Boundary
 - Inner Ring Road
 - M60
 - Medical Facility
 - Care/Nursing Home
 - Primary School
 - Secondary School
 - University
 - Decrease in traffic flows >10%
 - Increase in traffic flows >10%
 - Links with >8000 vehicles per day



0	19/02/2019	Initial Issue	LK	AH	ES	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd



Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 Key Impact Areas for Effects Relating to Changes in Traffic Flows for CAP Option 8 in 2021 - M60 and IRR

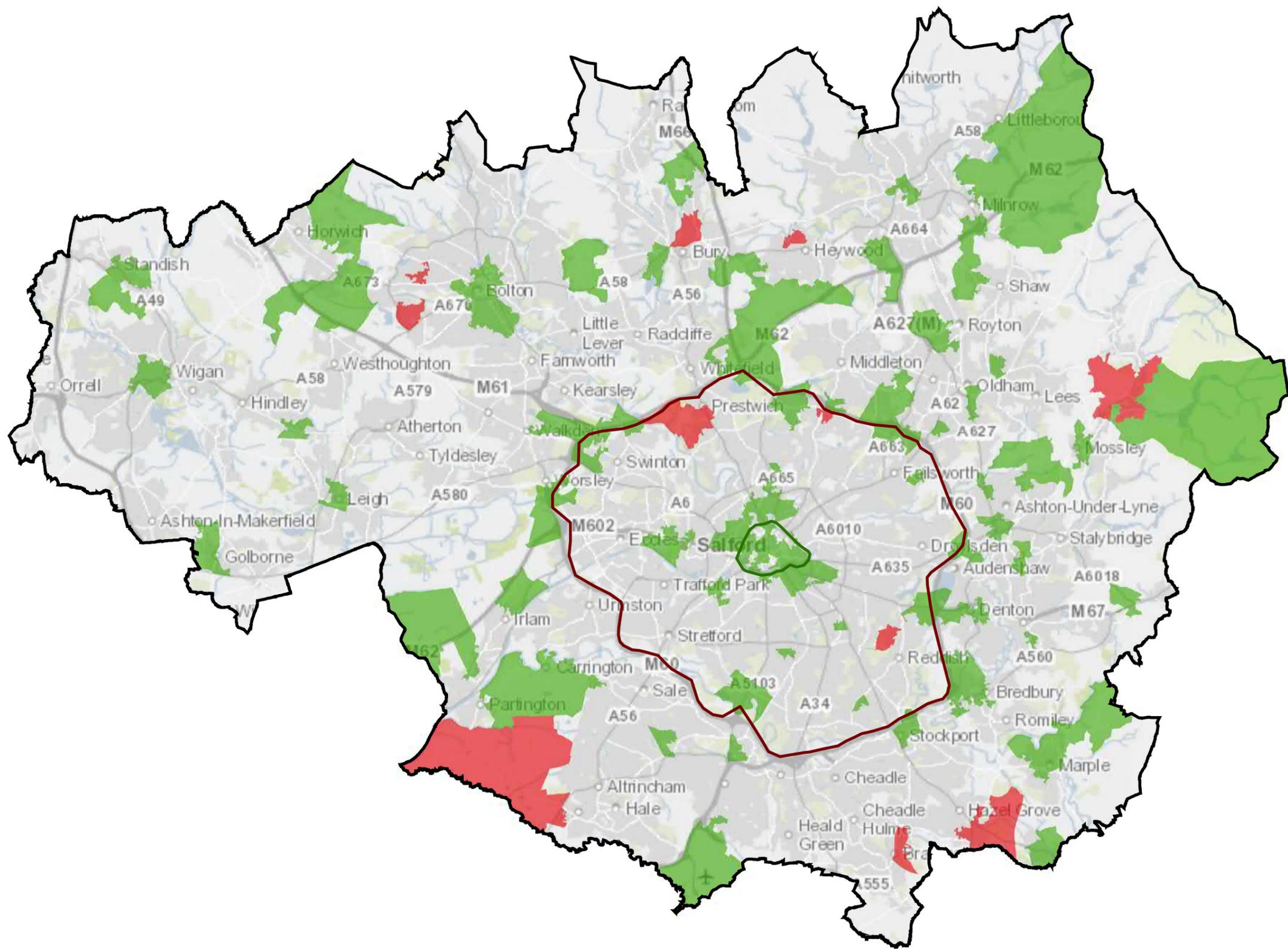
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FIGURE 49

- Legend
- Greater Manchester Boundary
 - Inner Ring Road
 - M60
 - 10% largest increases in journey times
 - 10% largest decreases in journey times



0	19/02/2019	Initial Issue	LK	AH	ES	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

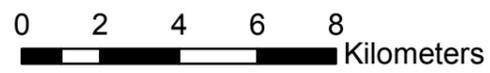


Client
 Transport for Greater Manchester

Project
Greater Manchester Clean Air Plan

Drawing Title
LSOAs With the 10% Largest Increases and Decreases in Journey Times for Options 5(i) and 5(ii)

Scale @ A3	1:180,000	DO NOT SCALE
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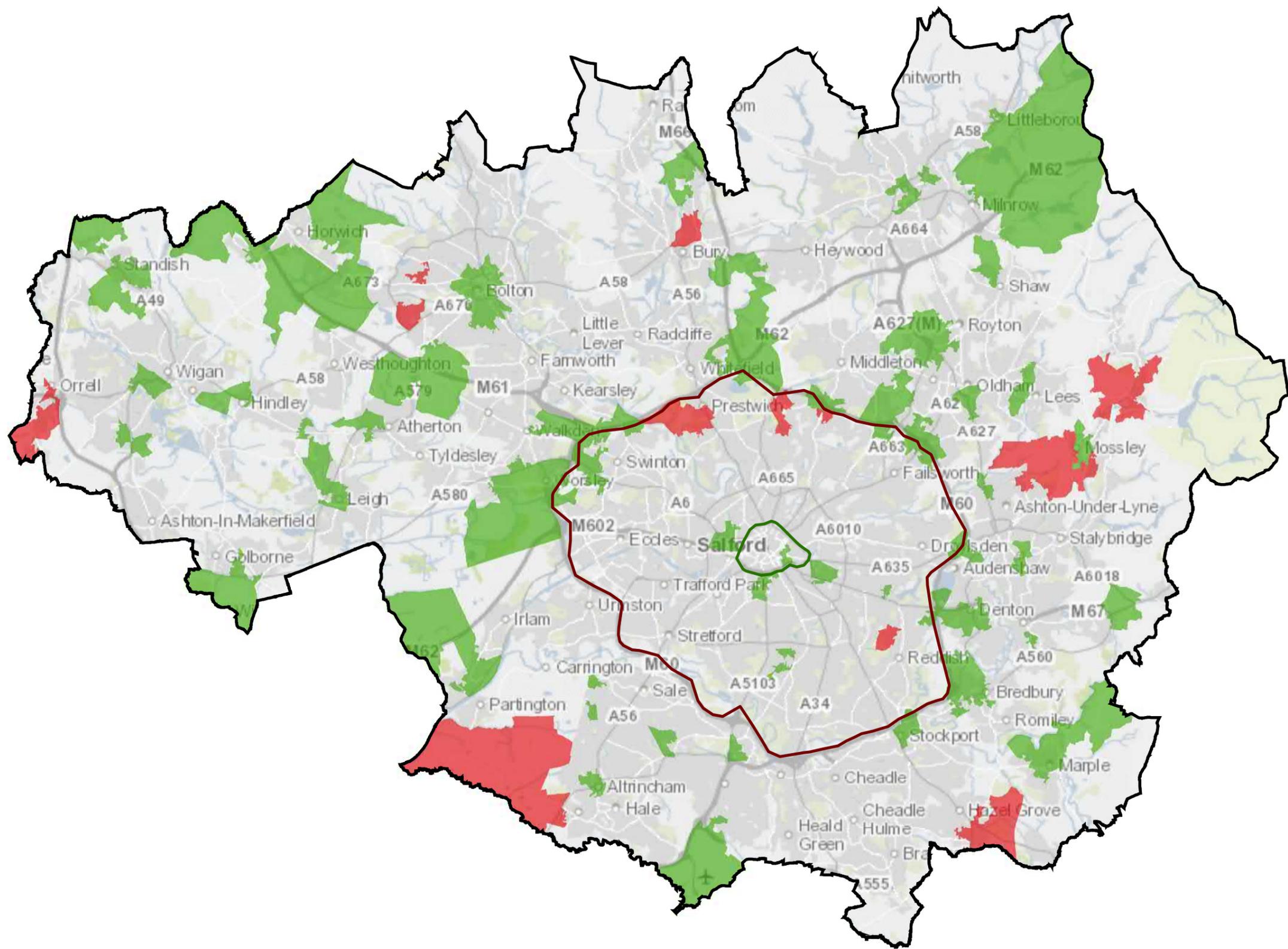
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FIGURE 50

- Legend
- Greater Manchester Boundary
 - Inner Ring Road
 - M60
 - 10% largest increases in journey times
 - 10% largest decreases in journey times



0	19/02/2019	Initial Issue	LK	AH	ES	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

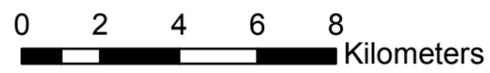


Client
 Transport for Greater Manchester

Project
 Greater Manchester Clean Air Plan

Drawing Title
 LSOAs With the 10% Largest Increases and Decreases in Journey Times for Option 8

Scale @ A3	1:180,000	DO NOT SCALE
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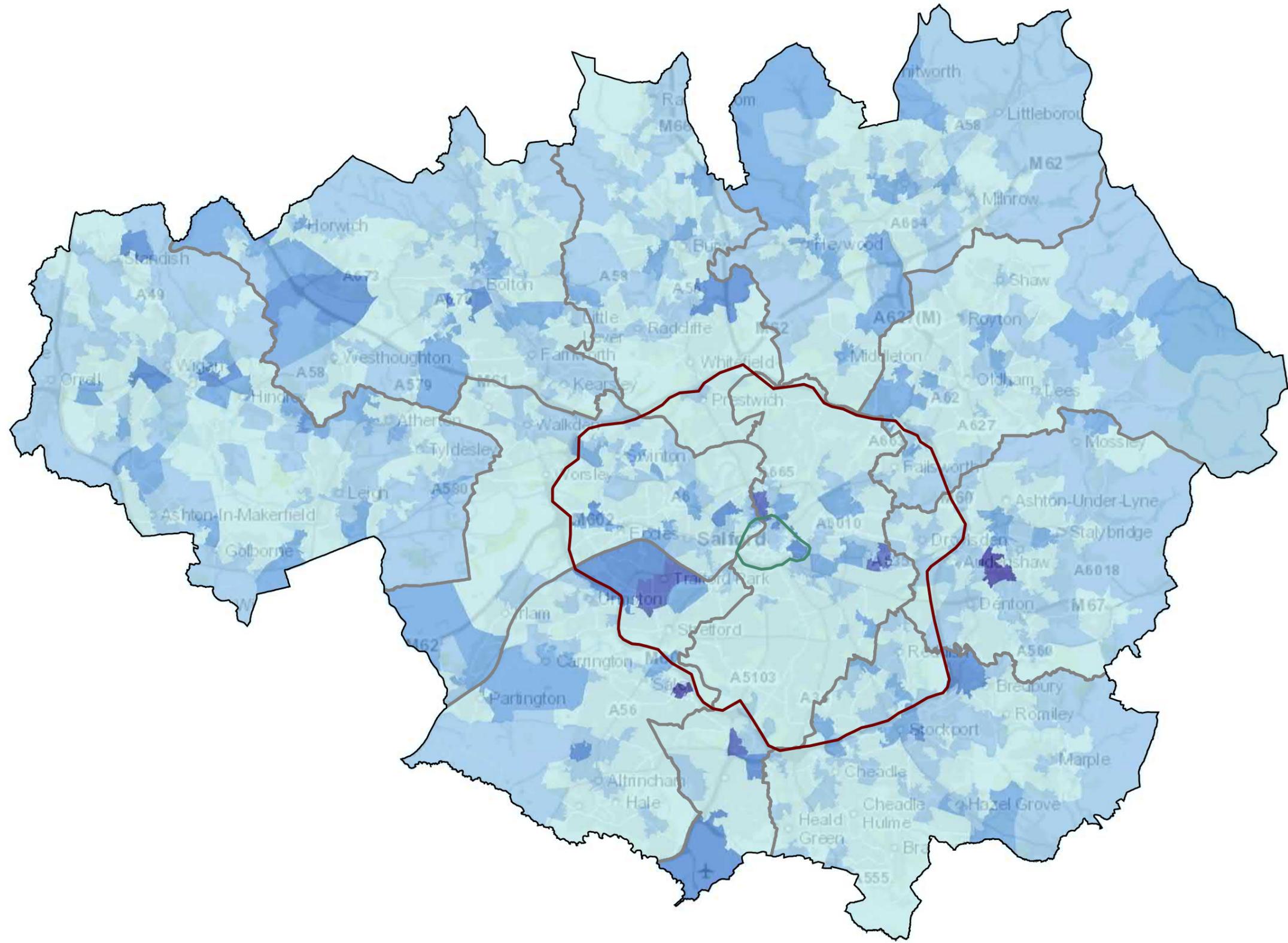
FIGURE 51

Legend

- Greater Manchester Boundary
- Local Authority Boundary
- M60
- Inner Ring Road

Total registered LGVs

- 0 - 60
- 61 - 120
- 121 - 300
- 301 - 600
- 601 - 2,200
- > 2,200



0	22/11/2018	Initial Issue	LK	BK	EK	EK
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

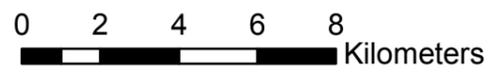


Client **Transport for Greater Manchester**

Project **Greater Manchester Clean Air Plan**

Drawing Title **Total Resistered LGVs Within Each LSOA in Greater Manchester**

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