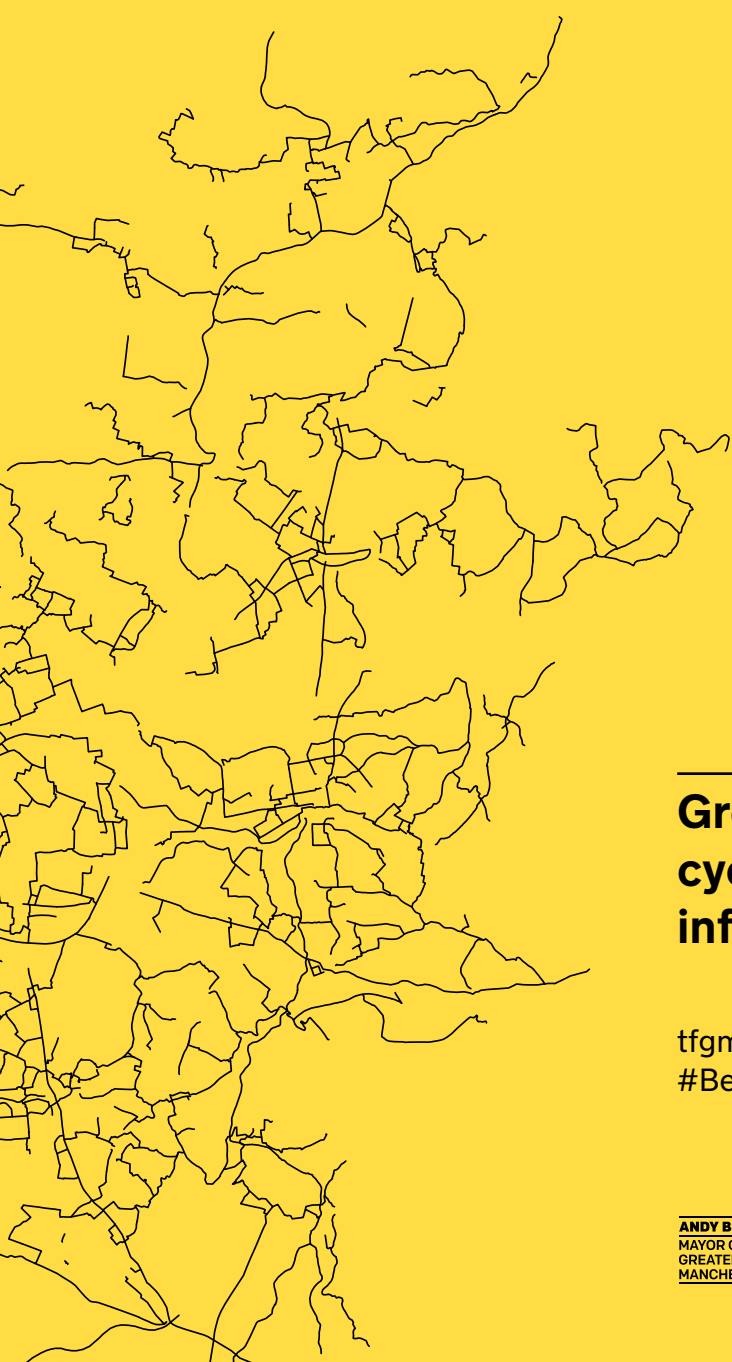


Beelines



Greater Manchester's cycling and walking infrastructure proposal

tfgm.com/beelines
#Beelines

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 Transport for
Greater Manchester



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01.

The challenge



Chris Boardman

Greater Manchester's Cycling and Walking Commissioner

Greater Manchester has a once-in-a-generation opportunity to revolutionise the way we all get around.

The city region shares common problems that are being felt across Britain — an obesity epidemic, air quality issues, and streets that are often clogged with motor traffic during peak hours.

With congestion alone costing businesses in Greater Manchester £1.3 billion annually¹, we cannot afford to go on with business as usual. European countries such as the Netherlands, Denmark and Germany, and even cities in the US such as New York and Portland, Oregon, have taken similar approaches to that proposed in this proposal. The evidence is clear that enabling residents to travel actively will lead to healthier, happier and more prosperous cities.

My report for the Mayor, *Made to Move*, published in December 2017, set out a 15-step plan to transform Greater Manchester. This report was adopted unanimously by the district leaders. The first and most crucial step was the publication of a detailed, Greater Manchester-wide walking and cycling and infrastructure proposal, in collaboration with all ten local authorities.

Beelines is a vision for Greater Manchester to become the very first city region in the UK to have a fully joined up cycling and walking network; the most comprehensive in Britain covering 1,000 miles. We've outlined plans for over 75 miles of segregated cycling and walking routes, plus 1,400 new crossings that will connect every community in Greater Manchester.



The Mayor's decision to allocate £160 million to kick-start the project means that Greater Manchester's spend on cycling and walking is now at least £15 per head per year, almost putting us on a par with great liveable cities like Amsterdam and Copenhagen. We intend to increase this number significantly with match funding and new innovative strategies to fund infrastructure.

This proposal sets out our vision to connect every neighbourhood and community in Greater Manchester, as well as a clear strategy for effective delivery of a network that will make cycling and walking a viable choice for those that don't do so now.

Crucially, the proposed network is not for people who already cycle or walk for the majority of their journeys. Its focus is to enable the two thirds of people who currently use their car, as their main mode of transport.² Numerous surveys have told us they do this because at present, cycling and walking doesn't feel safe, attractive or easy. We need thousands of Greater Manchester residents to look out of their car windows and think: "That appeals to me." In the few places where we have safe, attractive infrastructure, that is exactly what has happened.

One of the keys to unlocking walking and cycling's potential across Greater Manchester will be building major, fully segregated cycle ways on key routes; these must be safe, attractive spaces alongside high quality footpaths. But they are not the only requirement, and not even the first.



Many local trips to schools, GP surgeries and shops could be made on existing quiet streets. At present, this is not possible due to most low-traffic, quiet areas being hemmed in by busier, intimidating roads. We can unlock the potential of our local roads and communities by providing easy crossing points, thereby unlocking opportunities to walk and cycle. It is worth noting that 80% of cycling trips in Amsterdam happen where there is no segregation. These strategically-placed crossing points will feed local walking and cycling trips into the more costly, fully-segregated routes, enabling even longer journeys to be made actively.

To help ensure consistency across Greater Manchester's network, we are proposing a single identity be applied across all ten local authorities. Synonymous with industry, and more recently with unity, the design of the Beelines network uses the symbol of the worker bee with a twist and — once applied — will be a trusted symbol, promising good quality. It will also be a crucial aspect of the proposed wayfinding system.

The *Made to Move* report highlighted that this mission has to be owned and driven by the local authorities. In line with that promise, this network has not been created in isolation by engineers, it has been created by all of Greater Manchester's ten local authorities. The networks were drawn collaboratively by council officers, local highways engineers, as well as local cycling, walking and community groups. And crucially, they held the pen; another UK first.

Beelines is a truly inspirational vision for how we can transform Greater Manchester for the better. Now, let's get on with it.

1. TfGM Congestion Conversation 2017
2. TfGM TRADS travel survey, 2015-2017



Photograph
TfGM

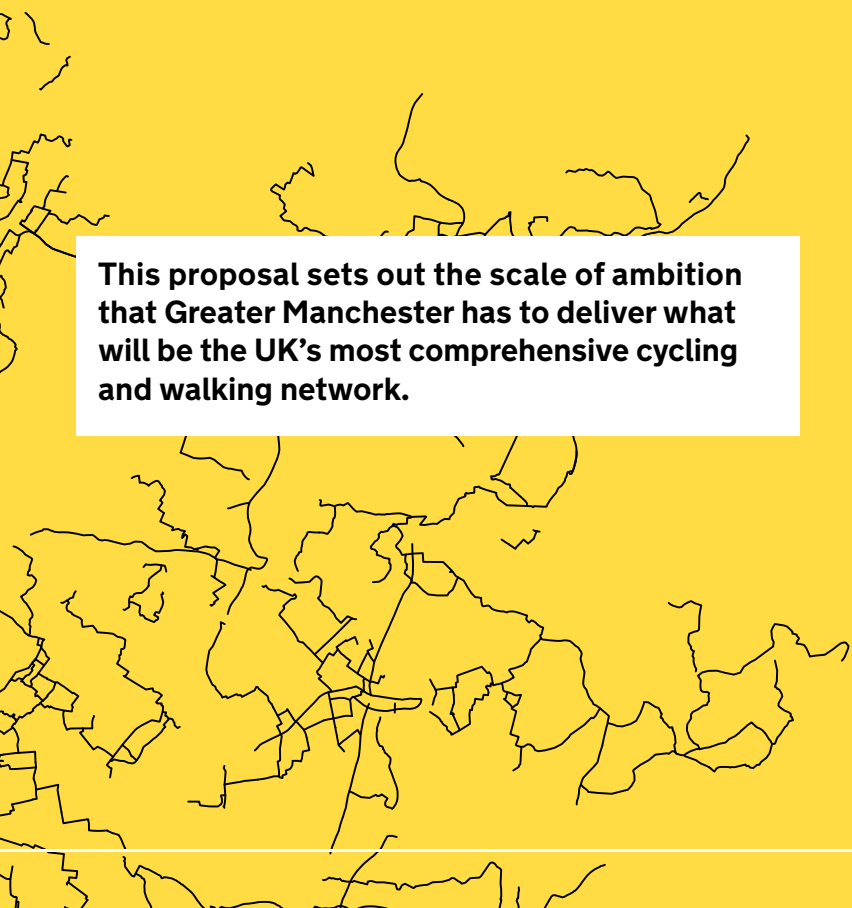


02. Developing the network

Setting the scene

This proposal incorporates the ambitions set out in Chris Boardman's 2017 *Made to Move* report, as well as the broader policy direction set out in the Greater Manchester Strategy, The Greater Manchester Transport Strategy 2040 and Streets for All, Greater Manchester's emerging strategy to deliver more people-friendly streets.

It sets out the scale of ambition that Greater Manchester has to deliver what will be the UK's most comprehensive cycling and walking network. The proposal also details the collaborative approach, how we will invest widely in walking and cycling as part of an integrated transport network, and the design principles and tools that will ensure consistent quality.



This proposal sets out the scale of ambition that Greater Manchester has to deliver what will be the UK's most comprehensive cycling and walking network.

Collaborating with local authorities to create our network

To ensure Greater Manchester's cycling and walking infrastructure proposal was embraced by all ten local authorities, each authority took charge of creating their own plans.

Throughout March and April 2018, a series of practical cycling and walking network planning sessions were held.

The aim of the workshops was to gather a local view of potential routes. This informal approach allowed the team to tap into detailed local knowledge.

The workshops resulted in a series of maps showing routes for major interventions, routes for minor interventions, and proposed crossings. The outcomes of each workshop were then referenced against existing planned networks and network development being undertaken by the local authorities and Transport for Greater Manchester (TfGM). The result was an infrastructure proposal for Greater Manchester.



The network maps are a considered first take on where crossings, infrastructure interventions and routes could be located. They have been published both to show the scale of ambition that Greater Manchester has and to ensure that even more detailed local feedback can be obtained.



The philosophy behind Beelines

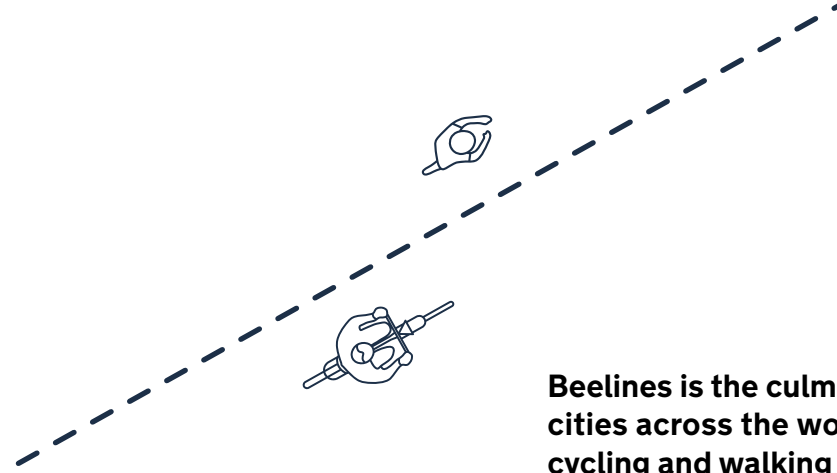
This proposal for Greater Manchester is the culmination of looking at how different cities across the world have developed cycling and walking infrastructure over many years.

One common theme identified in how people move around communities is that they nearly always navigate by identifying a series of points along their route. For example, the church at the end of the street, which then takes you past the school.

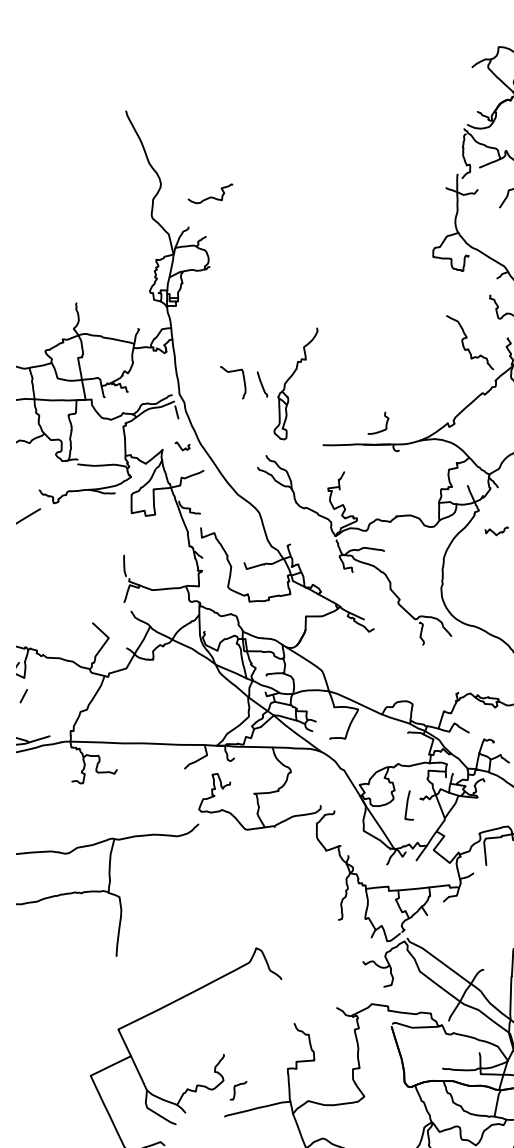
Instinctively, when cycling or walking, people seek out quieter roads where possible, rather than travelling on or alongside a busy main corridor with no protected space.

For this reason, roads with more than six cars per minute would be classified as 'busier routes' and would be therefore less desirable for cycling or walking. The remaining roads — adding up to more than 80% of streets — can be deemed 'quiet' and pass the 'usable by a competent 12-year-old' and 'usable by someone with a double buggy' test in terms of traffic flow, as set out in *Made to Move*. In practice, this means that the roads are accommodating to people who have completed national cycle training programme Bikeability level 2 standard: able to ride a bike on-road for local trips and have basic handling skills. The 'double buggy test' will not only ensure that pavements and roads are fit for people pushing a double buggy, it means that they are also suitable for people with mobility problems, physical impairments or adapted bikes for example.

The remaining quieter roads can therefore be classified as Beelines routes that require little intervention. All that is needed to capitalise on these large areas is a safe and attractive way to cross the busier roads. By using this simple method, huge areas of streets can be linked up, enabling people to cycle and walk in safety.



Beelines is the culmination of looking at how cities across the world have developed their cycling and walking infrastructure over many years. Our approach will open up communities and neighbourhoods across Greater Manchester to people of all ages.



What are Beelines?

Beelines are routes that get people from A to B, connecting up communities across the whole of Greater Manchester. They can be a fully segregated route or a network connected via a series of crossing points on quieter roads. They are a marker for quality and 1,000 miles of routes will be delivered if this proposal is fully realised.

This approach will open up communities and neighbourhoods across the whole of Greater Manchester, making them much more accessible and pleasant places to be. And because this approach is largely reliant on wayfinding signage and paint on the ground, it should be cost-effective and fast to implement. It is estimated that the entire network for Greater Manchester could be completed as early as 2023.

To cater for people who want to walk or cycle along main arteries, much more intervention is required. The majority will only do so if they are fully protected from motor traffic. The ambition is to have at least one of these interventions per district, each fed by the network of quieter roads.

This approach has been successful in many cities across the world, all of which are regularly lauded as being great places to live for people of all ages.



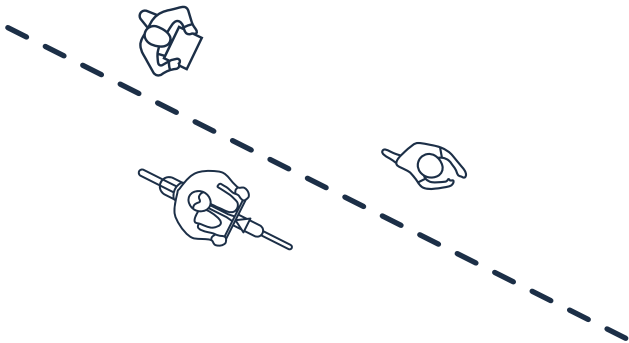
The two types of infrastructure being delivered

The two walking and cycling infrastructure approaches that have been identified to ensure successful delivery of the network are:

| Beelines on quieter streets | Beelines on busier roads and in towns |
|--|--|
| <p>Signed routes showing the shortest possible route between the crossing points connecting neighbourhoods.</p> <p>Some Beelines will require traffic management and design interventions. However, most will initially require very little intervention. Funding will be focused on side road interventions. This approach makes use of zebra crossings to promote courteous driver behaviour when turning, and to prioritise pedestrian movements. Cyclists will also benefit from the slower movement of turning motor vehicles. Off-road, green routes may also be considered as Beelines if they reach the necessary quality standard. Ideally, these Beelines will have 20mph speed restrictions in place.</p> <p>The second element of neighbourhood design is the provision of filter points, which allow for movement of people walking or on bike but do not allow through motor traffic (except, potentially, for buses and emergency vehicles). This may allow new opportunities for improvements to streets, such as creating mini parks, that make them more people-friendly places to spend time in.</p> | <p>Main road corridors with protected links and junctions for cyclists and area-wide treatments to improve walking and cycling links to town centres.</p> <p>At least one corridor and town per local authority is desired.</p> <p>Beelines on busier roads are, by definition, on direct main road corridors and so a higher level of design intervention is required to enable people to walk and cycle. Interventions may include full and light segregation for cyclists as well continuous footpaths and side road zebra crossings for pedestrians.</p> <p>Many junctions will require major interventions to accommodate Beelines. In most cases, standard junction design approaches will not meet quality thresholds. Ensuring these approaches are of a high standard is critical if we are to create trust in the network. Innovative approaches to junction design will be required that meet the level of service needed to enable significant modal shift.</p> <p>Town centre improvements will require multiple connections. The main element will be crossing points, which help pedestrians and cyclists move easily into and out of town centres. These will take the form of parallel signalised crossings, parallel zebra crossings, minor signal-controlled junctions, toucan crossings and, in some cases, priority crossings.</p> <p>All infrastructure projects will include funding for cycle parking at various points along the network. A lack of easy bike parking is another known deterrent to making the journey in the first place and is often overlooked.</p> <p>The LCWIP process (Local Cycling and Walking Infrastructure Plan) which has been underway for some time, will provide the detailed evidence needed for the larger, more complex and expensive Beelines. Beelines on quieter roads will provide easy access to these direct corridors, as they are implemented.</p> |

What is a filtered neighbourhood?

A neighbourhood where the movement of people is prioritised over the movement of motor vehicles. Typically this is achieved by creating cul-de-sac style access for cars but allowing through traffic for people walking and cycling. This approach creates spaces to play and socialise and enables more green areas to be created.





The district maps

A tailored approach for each local authority

The draft network maps for each local authority set out on the following ten pages (figures 1 to 13) clarify the extent of infrastructure required.

The Before maps show the following:

- Red areas:** Neighbourhoods that are currently closed off as they do not have any quality and accessible crossing points.
- Orange areas:** Neighbourhoods that are partially open, with one good access point.
- Green area:** Neighbourhoods that have accessible crossing points already.
- Blue points:** Existing crossing points.
- Red lines:** Busy roads acting as severance.

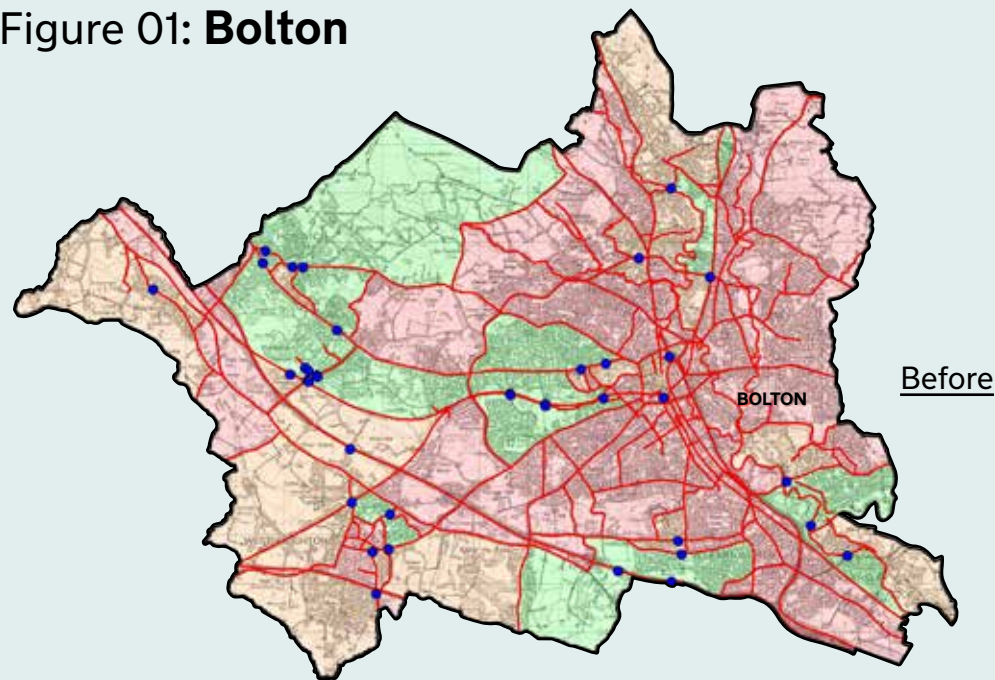
The After maps show the following:

- Green points:** Proposed crossing points
- Blue points:** Existing crossing points
- Yellow lines:** Beelines
- Thicker yellow lines:** Beelines on a busy road
- Hashed yellow areas:** Filtered neighbourhood

These maps show how the infrastructure, if delivered as planned, will open up neighbourhoods and communities.



Figure 01: **Bolton**



In Bolton, 124 new or upgraded crossings are proposed enabling 83% of the population to use Beelines. Eight miles of Beelines on busy roads are proposed.

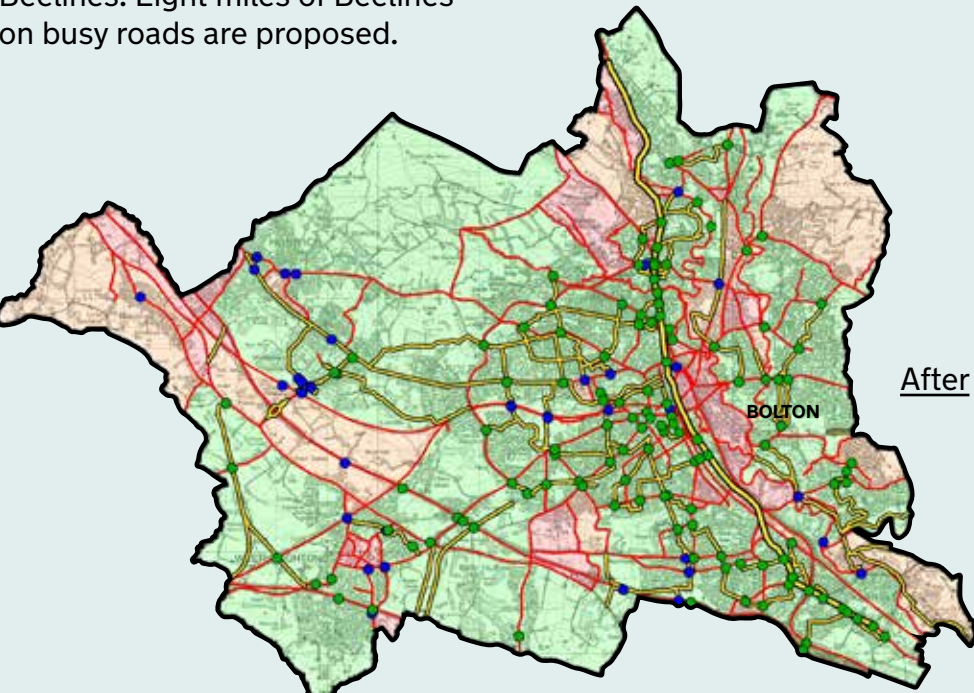
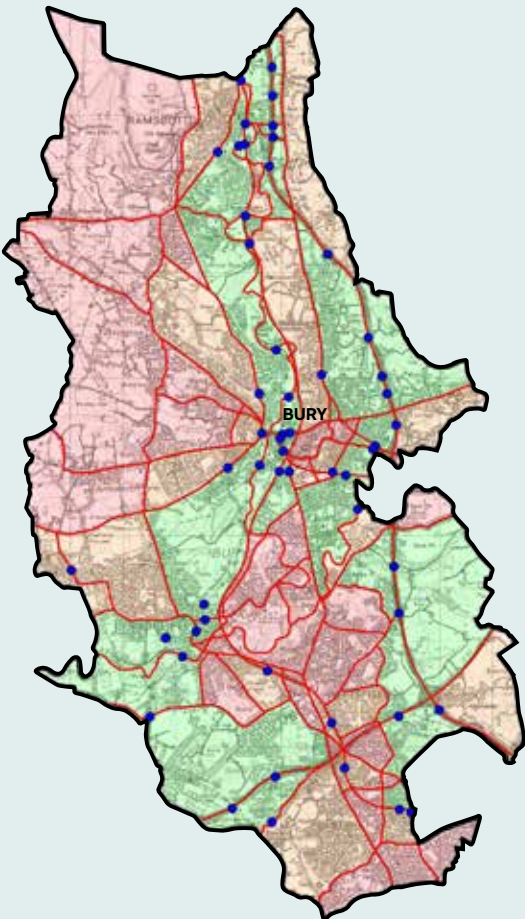
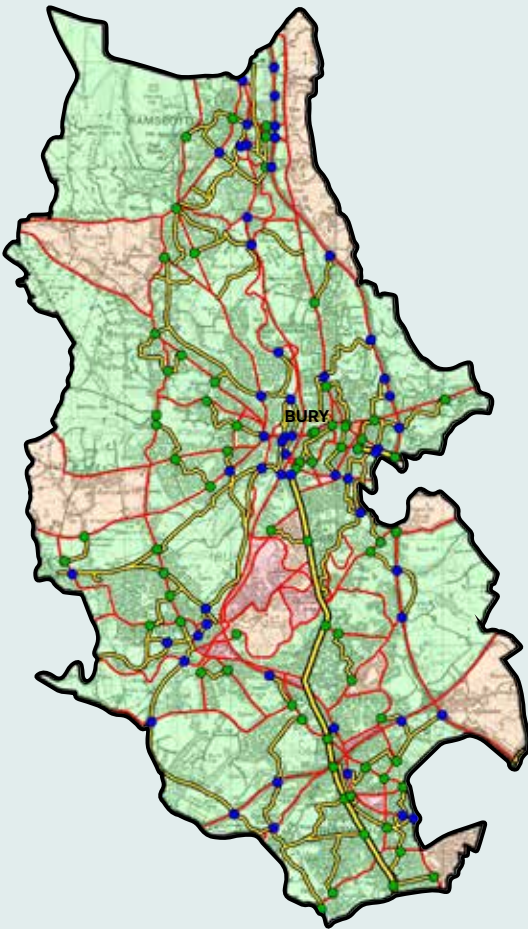


Figure 02: **Bury**



In Bury, 71 new or upgraded crossings are proposed enabling 88% of the population to use Beelines. Five miles of Beelines on busy roads are proposed.

Before



After

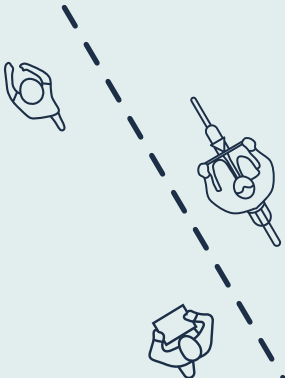
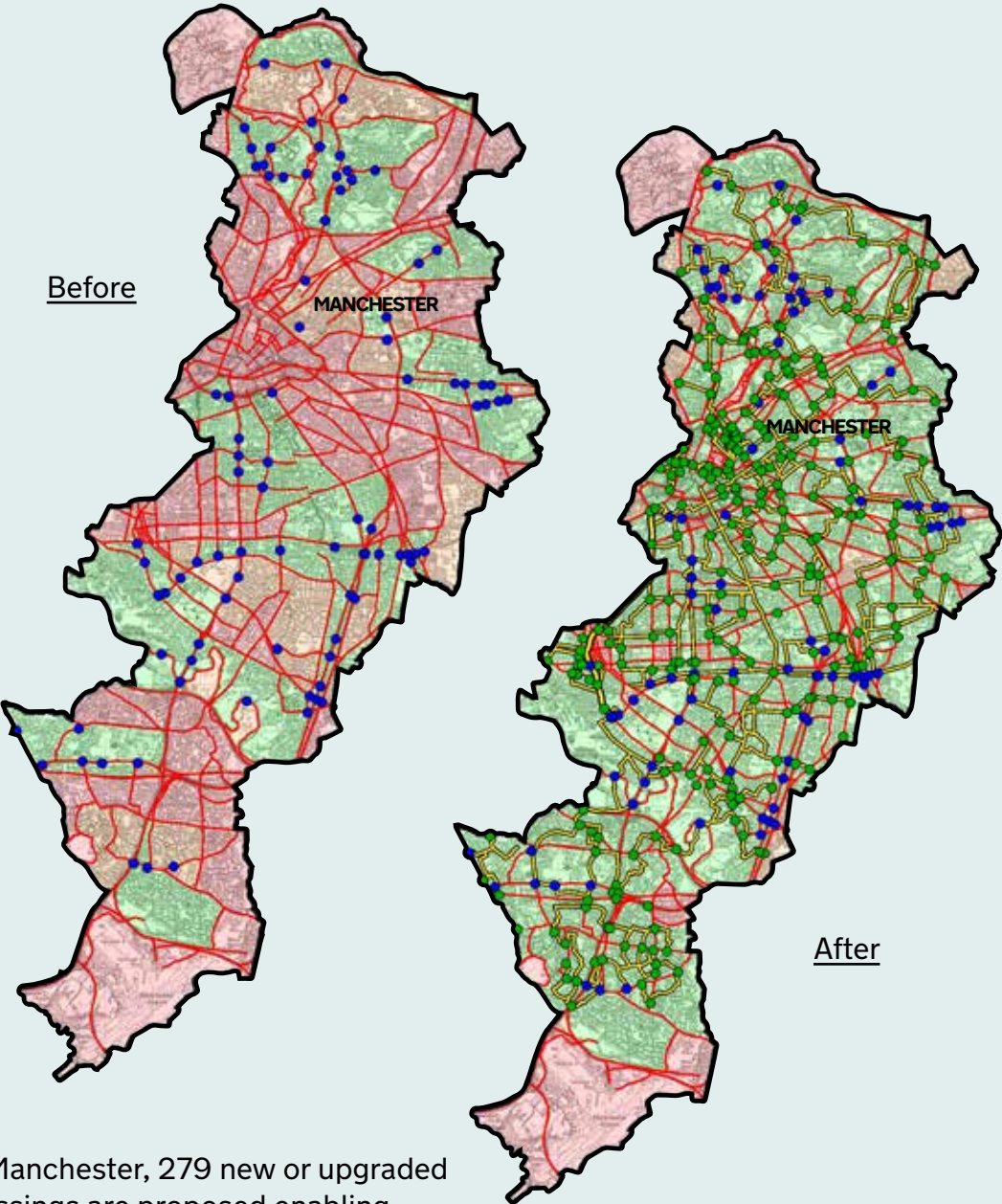




Figure 03: **Manchester**



In Manchester, 279 new or upgraded crossings are proposed enabling 94% of the population to use Beelines. Three miles of Beelines on busy roads are proposed.

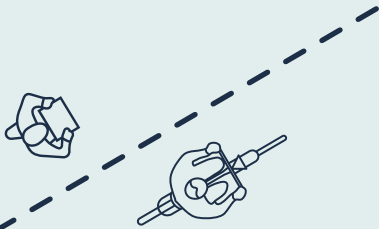
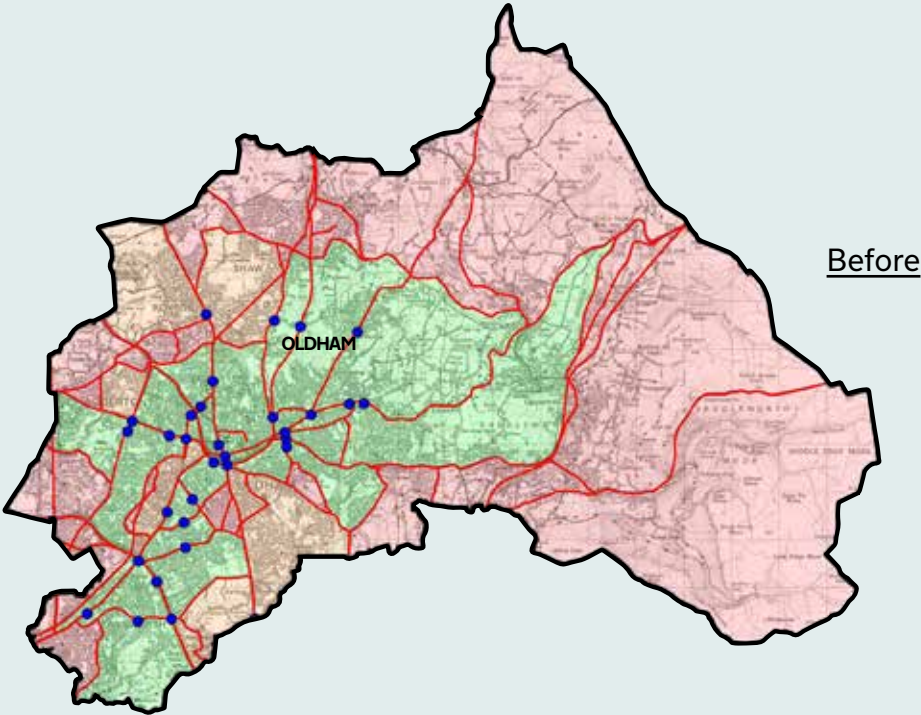


Figure 04: **Oldham**



In Oldham, 80 new or upgraded crossings are proposed enabling 84% of the population to use Beelines.

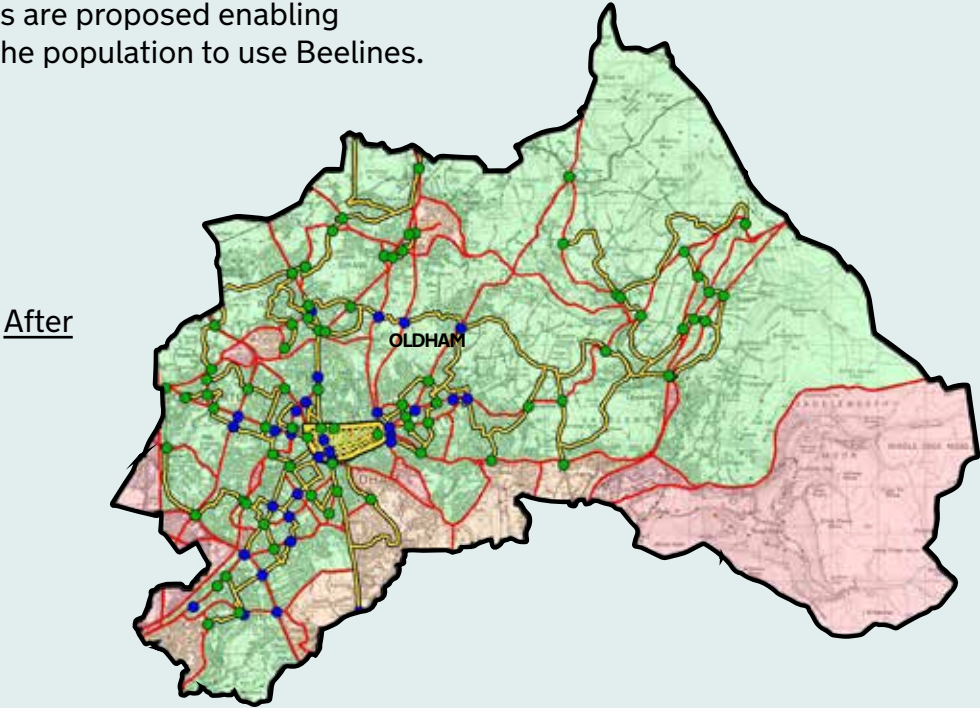
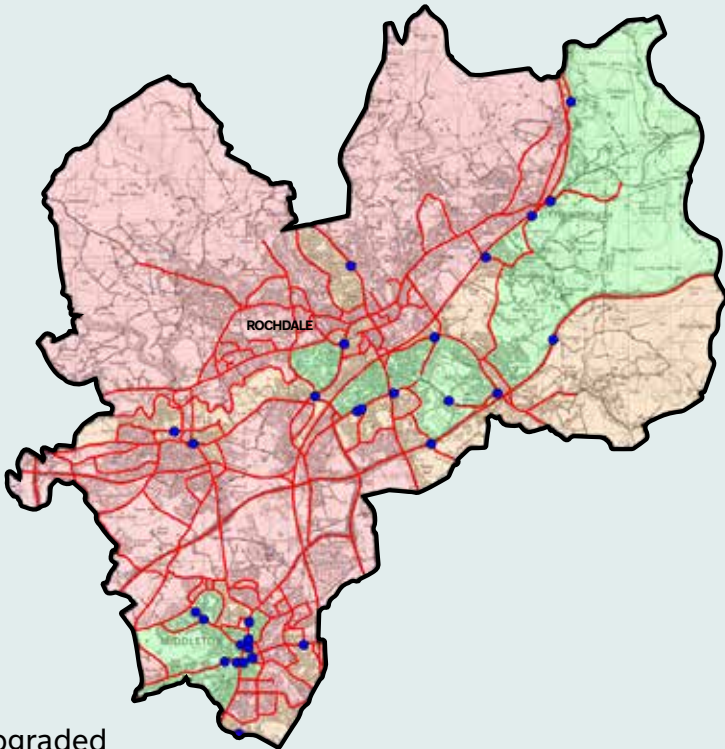




Figure 05: Rochdale

Before



In Rochdale, 136 new or upgraded crossings are proposed enabling 89% of the population to use Beelines. Six miles of Beelines on busy roads are proposed.

After

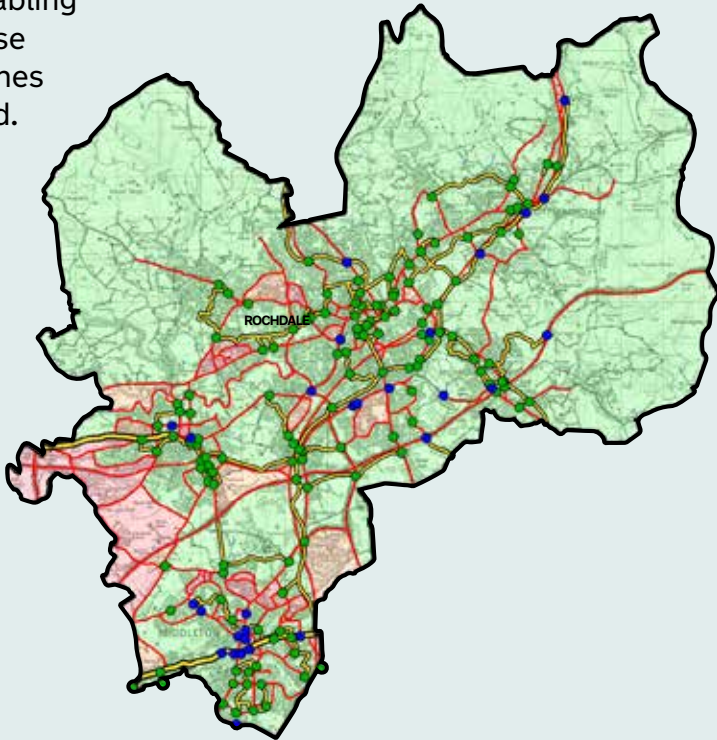
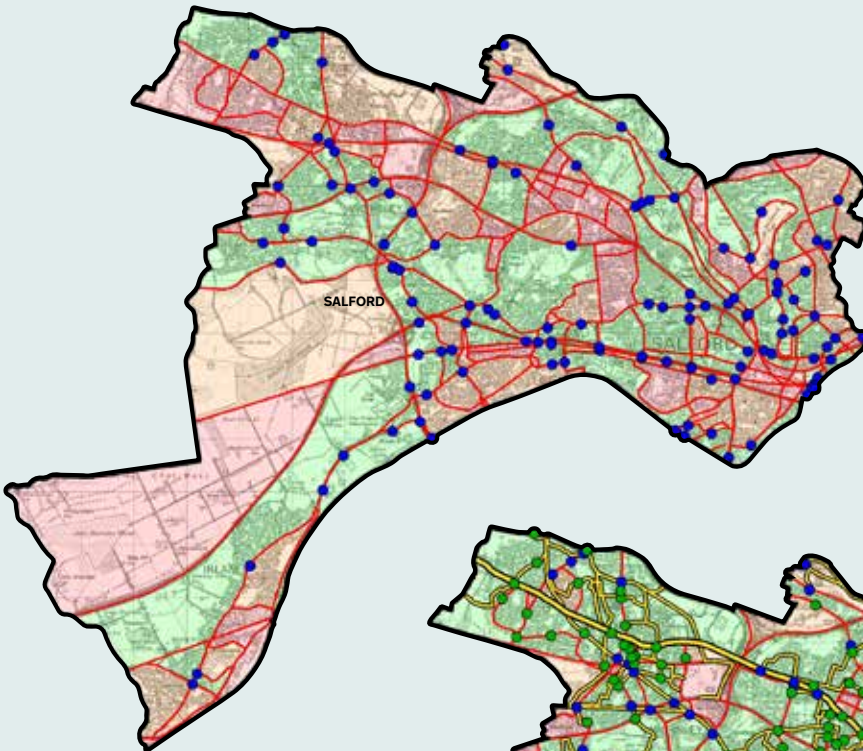
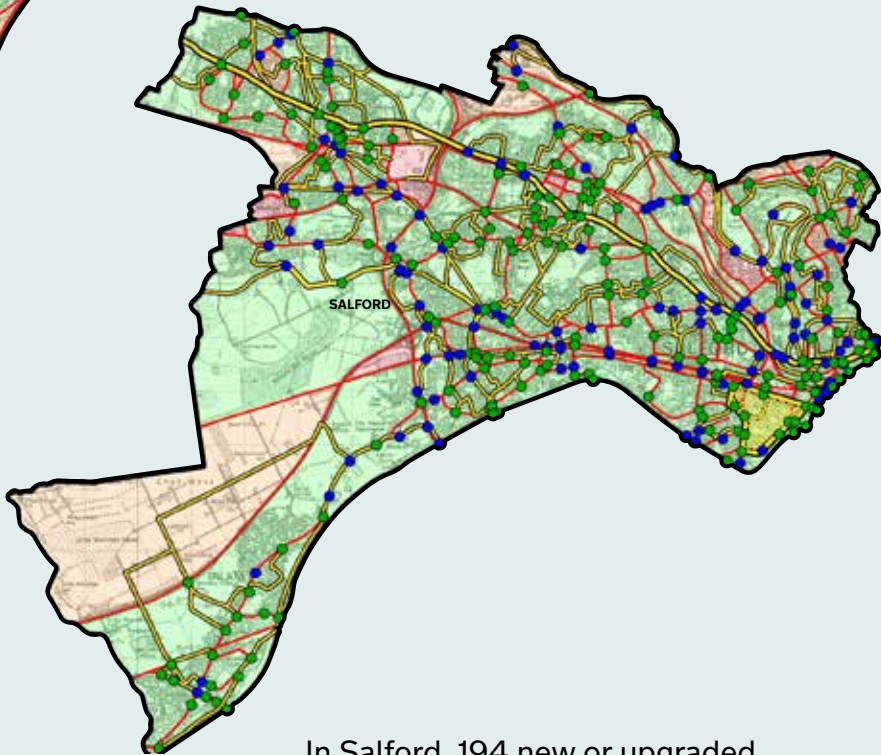


Figure 06: Salford

Before



After



In Salford, 194 new or upgraded crossings are proposed enabling 94% of the population to use Beelines. Nine miles of Beelines on busy roads are proposed.



Figure 07: **Stockport**

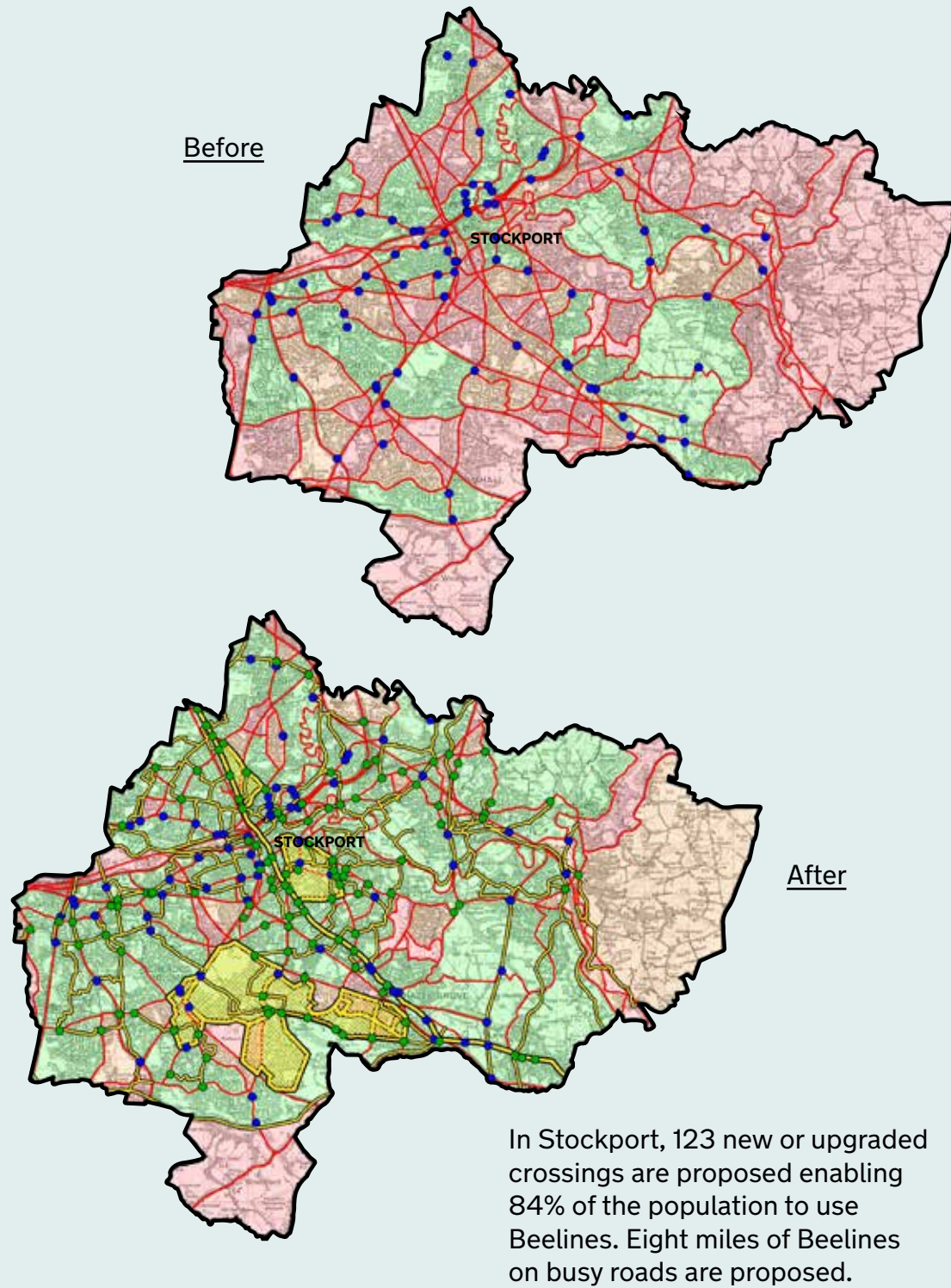


Figure 08: **Tameside**

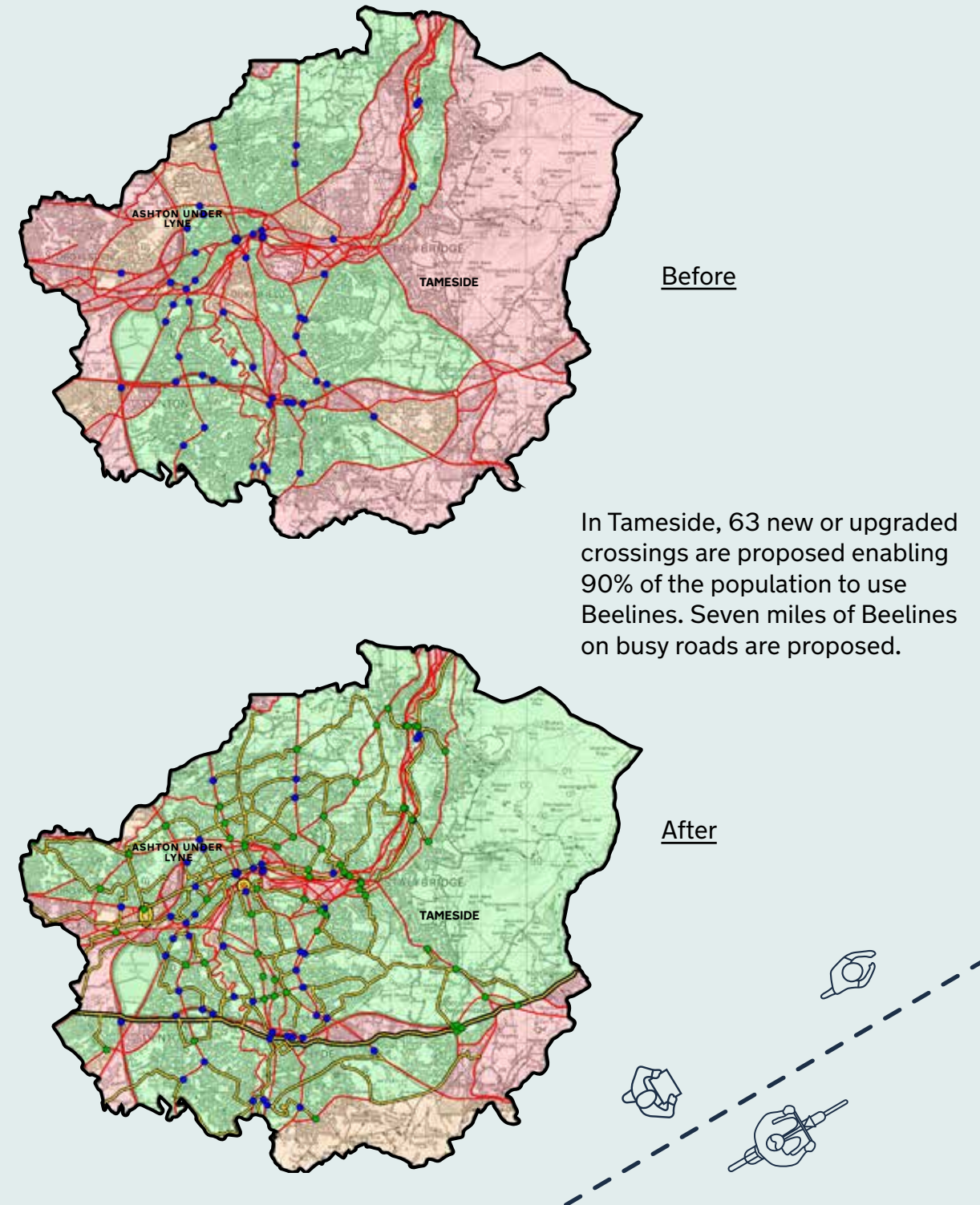
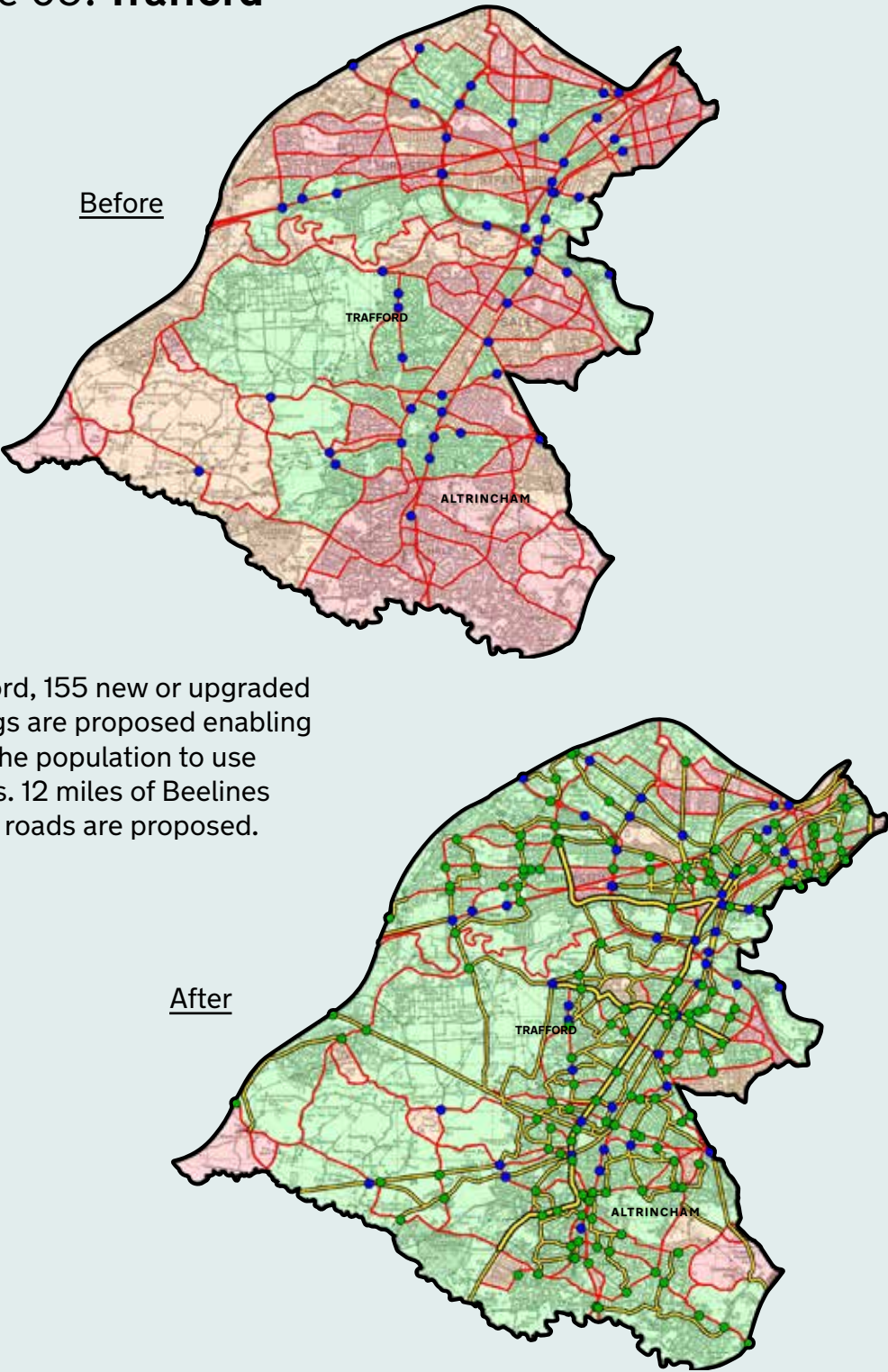


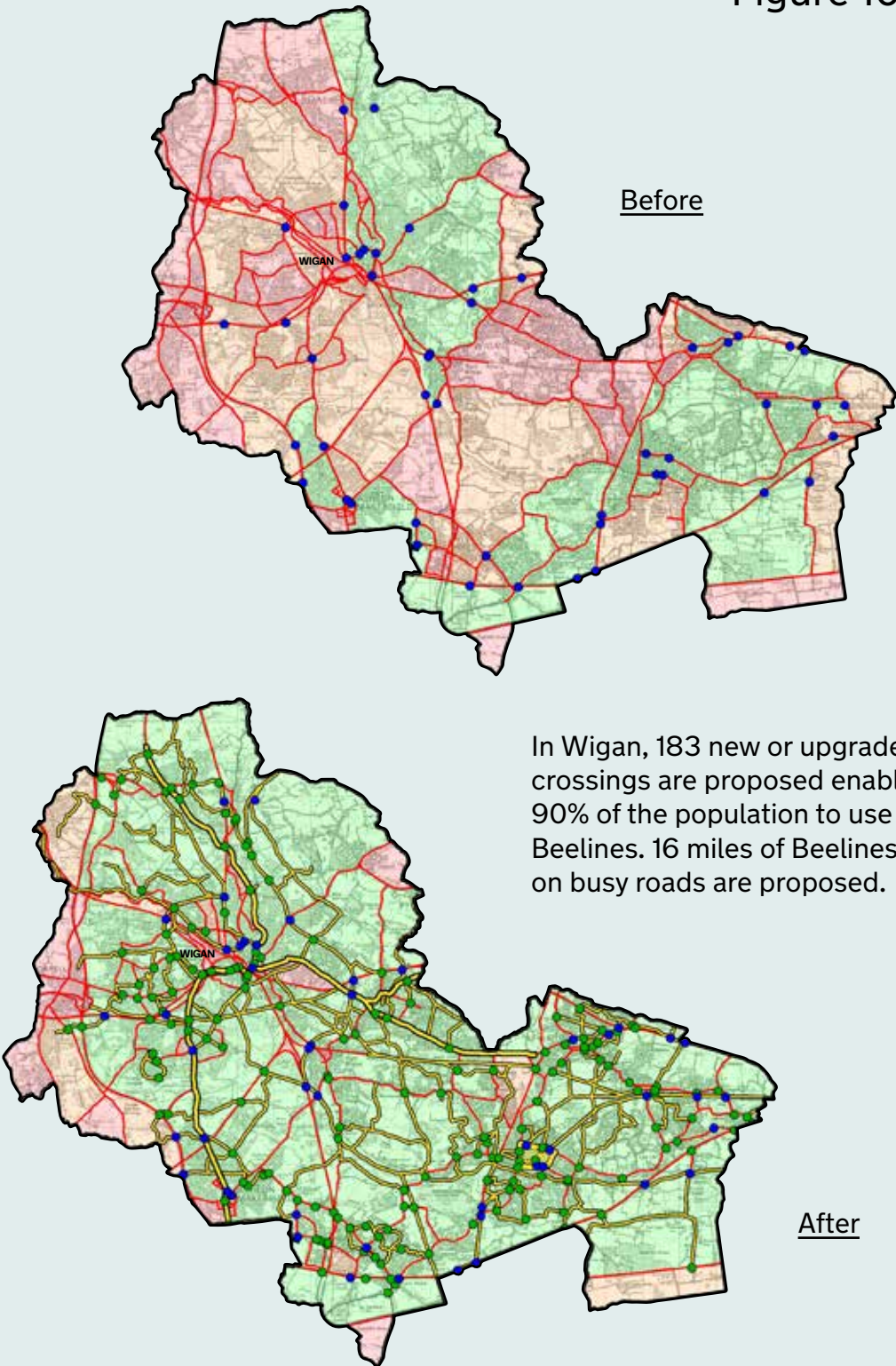


Figure 09: **Trafford**



In Trafford, 155 new or upgraded crossings are proposed enabling 91% of the population to use Beelines. 12 miles of Beelines on busy roads are proposed.

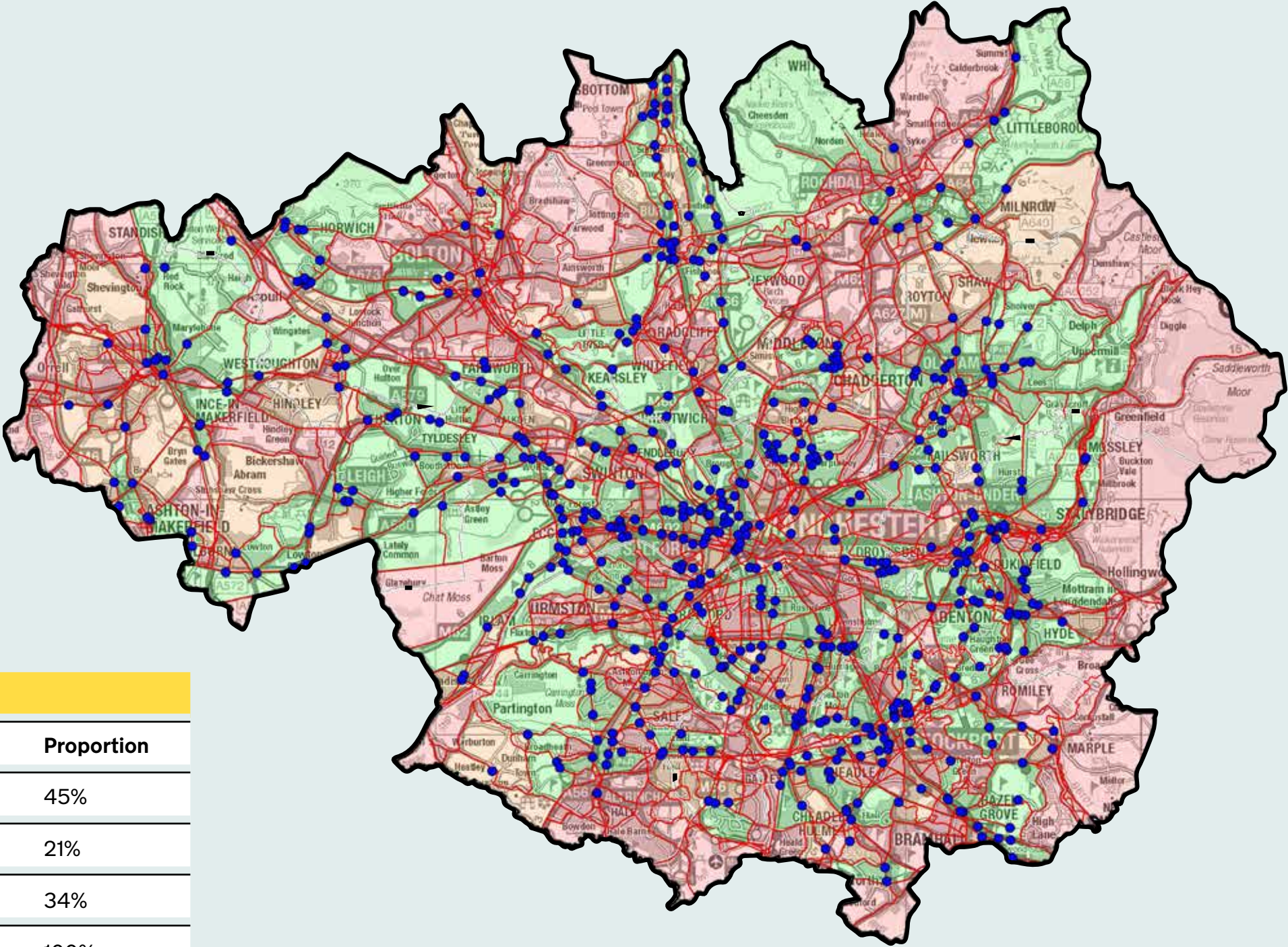
Figure 10: **Wigan**



In Wigan, 183 new or upgraded crossings are proposed enabling 90% of the population to use Beelines. 16 miles of Beelines on busy roads are proposed.



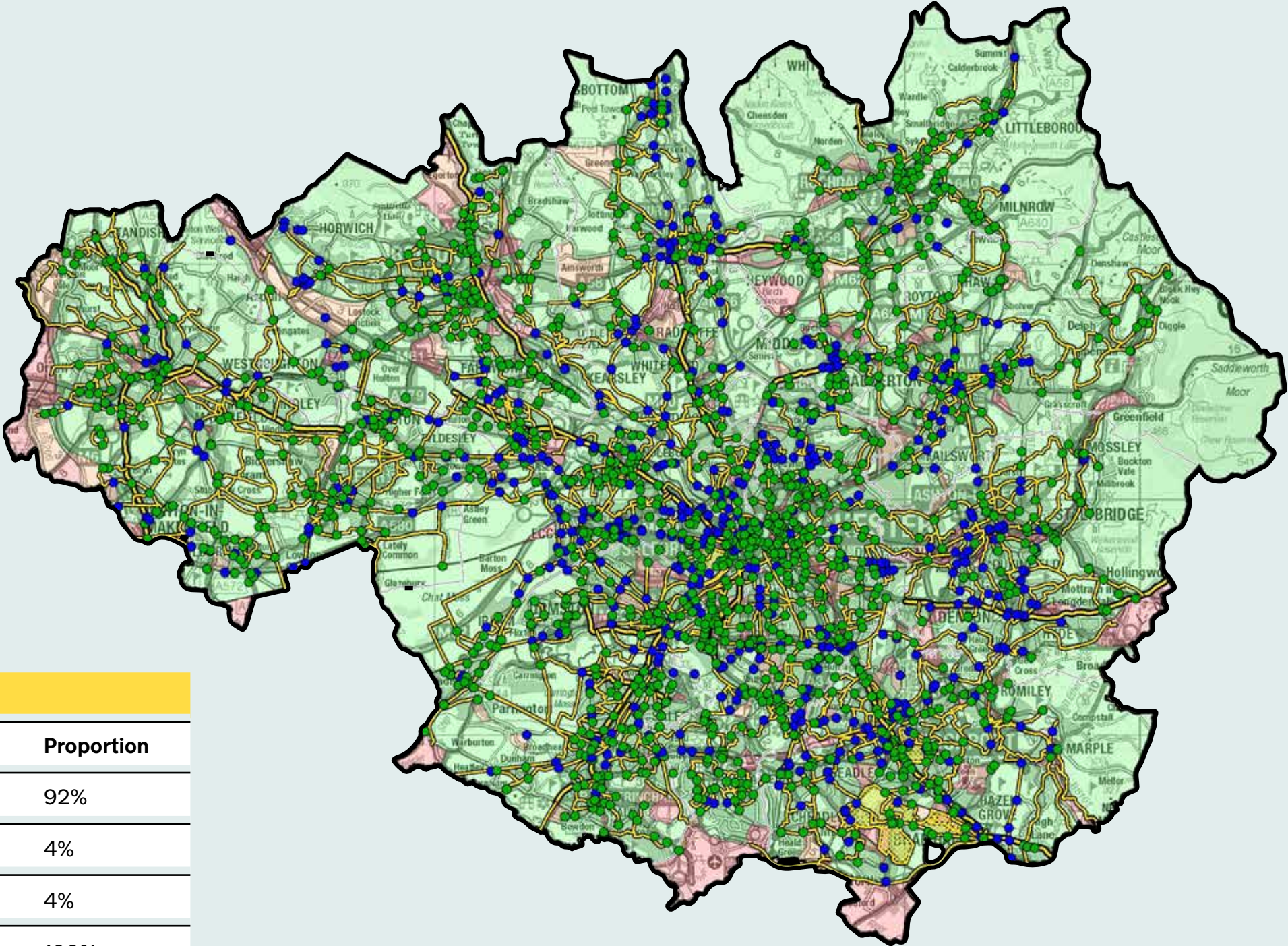
Figure 11: Greater Manchester – Before



| GM Wide | | |
|----------------------|------------|------------|
| Existing | | |
| Neighbourhood Status | Population | Proportion |
| Open | 1,246,034 | 45% |
| Partially Open | 595,894 | 21% |
| Closed Off | 950,265 | 34% |
| Total | 2,792,193 | 100% |



Figure 12: Greater Manchester – After



| GM Wide | | Proposed | |
|----------------------|------------|------------|--|
| Neighbourhood Status | Population | Proportion | |
| Open | 2,575,982 | 92% | |
| Partially Open | 118,281 | 4% | |
| Closed Off | 97,930 | 4% | |
| Total | 2,792,193 | 100% | |



Figure 13: **Beelines. Greater Manchester.**

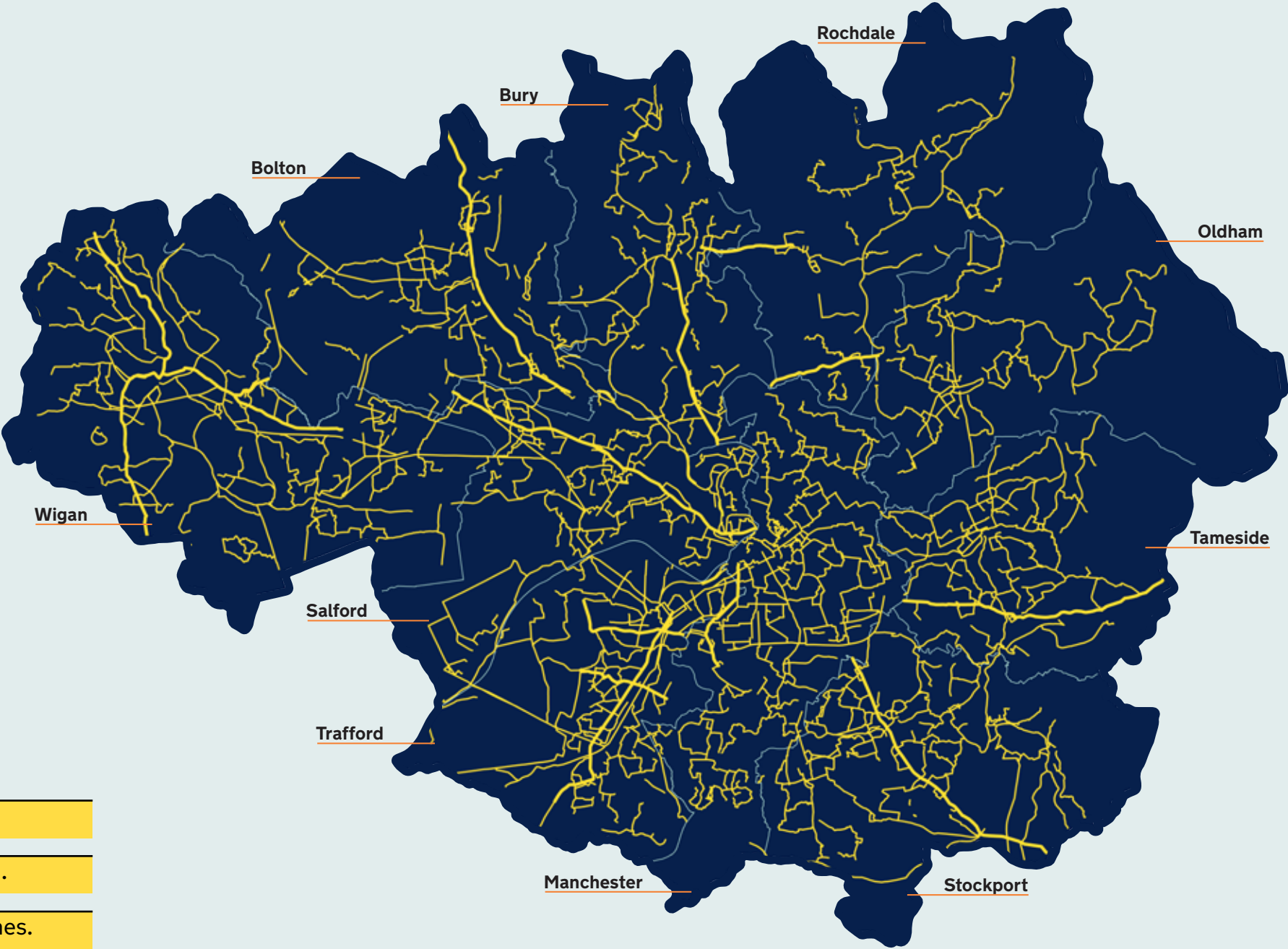
Key

- Yellow lines:** Beelines
- Thicker yellow lines:** Beelines on a busy road, offering full segregation and public realm improvements

Beelines is a vision for Greater Manchester to become the very first city region in the UK to have a fully joined up cycling and walking network; the most comprehensive in Britain covering 1,000 miles.

We've outlined plans for over 75 miles of segregated cycling and walking routes, plus 1,400 new crossings that will connect every community in Greater Manchester.

- 1,408 new or upgraded crossings proposed.
- 75 miles of Beelines on busy roads proposed.
- Enabling 92% of the population to use Beelines.



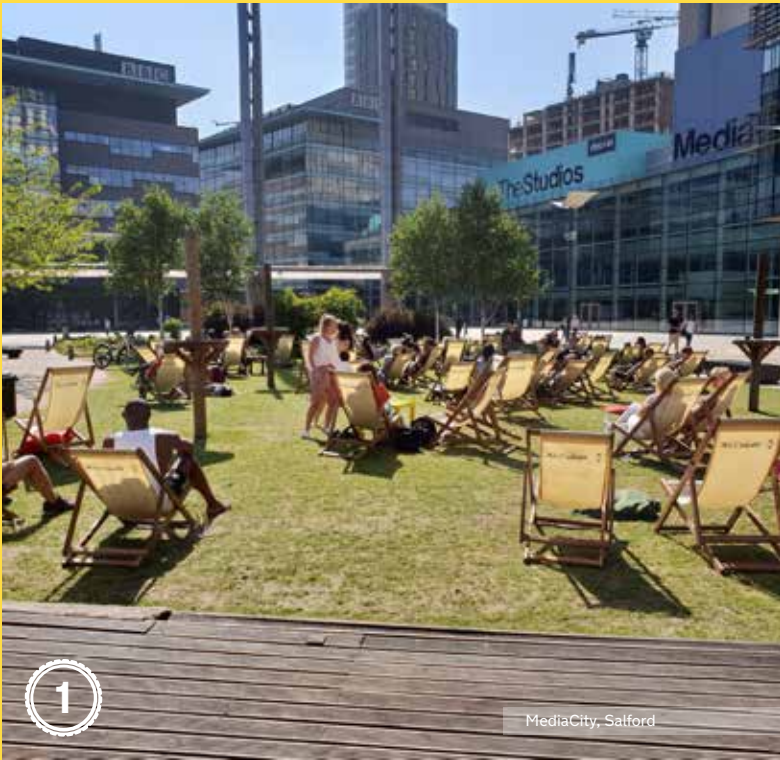


03. Design

Design principles

The aim of *Made to Move* was to deliver transformational change in the way our streets operate and, in doing so, enable a significant shift away from private car use in favour of cycling and walking.

The following design principles support this ambition in a practical way and are intended to help frame options around humans rather than vehicles.



1

Streets should be places where people choose to spend time socialising rather than just save time passing through

Opportunities should be identified to improve our streets to make them more pleasant places for people to spend time in. Creating filtered neighbourhoods and reducing traffic speeds and volumes can allow opportunities for play streets, parklets or new seating areas, improving the quality of life in our towns and neighbourhoods.

2

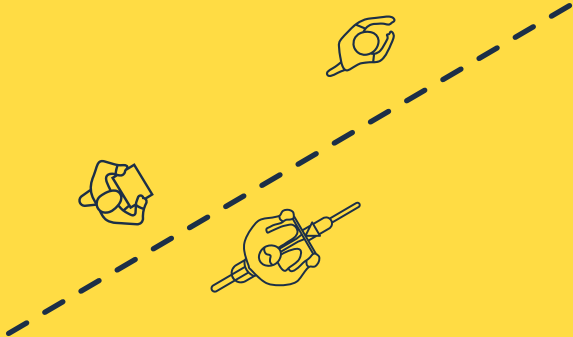
Street design should focus on moving people rather than traffic

Installing protection for cyclists or introducing straight-across crossings for pedestrians at busy junctions can slow down motor vehicles but also make more efficient use of the available road space. Reducing capacity for motor vehicles should not be the reason to abandon the measure. Other design techniques can mitigate impacts on motor traffic, creating a better balance between movement and place.

3

Dedicated separate space should be provided for walking and for cycle traffic

Providing for cycling by converting footpaths to shared use is an approach that can deter people from both walking and cycling and it is an approach that we plan to avoid. However, it can be appropriate to encourage considerate cycling in existing shared public spaces.





4

People should feel safe, relaxed and secure on the street and not just in a car

People travelling by bike on key corridors should be given appropriate safe space that functions as part of the main carriageway. Footpath widths should be appropriate to the number of people using them. The Dutch safe systems approach should be used to maximise safety. Personal security is also important, and streets should be well-lit with as much activity as possible so that people feel comfortable using them at all times of day and night.



5

People should feel like they can stroll without delay and linger without issue

This is especially important in places such as high streets, near rail stations and in town and district centres where there are more people walking.

6

Protection and priority should be given to people cycling and walking at junctions

At main junctions with traffic lights, people walking and cycling should have time and, where appropriate, dedicated and protected space to cross to improve safety and to make crossing or turning at junctions less stressful.





7

Health benefits should be highlighted and quantified for all street improvements.

Health benefits derived from reduced mortality should be standard calculations for all highway schemes so that designers can see the benefits they are bringing, rather than focusing solely on journey time and traffic impacts.

More high-quality cycle routes mean more people being able to ride to train stations to make longer trips. The Dutch planning system is based on residential properties being within a 15 minute cycle ride of a train station. In the UK, the situation is not always friendly for people travelling on foot or by bike and therefore people chose to drive very short distances, creating a vicious circle of traffic



8

Walking, cycling and public transport should go hand-in-hand

Public transport cannot work efficiently if people cannot walk or cycle to it in pleasant conditions. Evidence shows that if the distance to public transport from residential properties is greater than a 15-minute walk, most people will not consider it. However, nearly all train stations, Metrolink stops and bus stations are within a 15-minute cycle of residential areas in Greater Manchester.

around active travel hubs. Active travel is a system, requiring all three elements — walking, cycling and public transport — to work together. On main corridors it is important to balance the competing demands of different road users and to ensure that space for buses and cyclists is designed effectively. Bus and cycle provision can work harmoniously on main road corridors if it is prioritised over private car use.





What will it look like?

Figure 14.
Beelines visualisation of a side road zebra



Figure 15.
Beelines visualisation of a filtered neighbourhood



Figure 16.
Beelines visualisation of a busier road



Figure 17.
Beelines visualisation of a crossing





What will it look like?

Figure 18.
Example of a parallel zebra crossing



Figure 19.
Example of pedestrian priority



Figure 20.
Example of placemaking on a busier road



Figure 21.
Example of a SUDS segregated cycle track



Figure 22.
Example of segregated cycle track



Figure 23.
Example of a place being created to socialise and relax



Figure 24.
Example of a footpath level cycle track





To bee or not to bee?

To help ensure consistency across Greater Manchester's network, we are proposing a single identity applied across all ten districts. We hope that, over time, this identity will become a mark of good quality, and will also be a crucial aspect of the wayfinding system.

The worker bee was originally the symbol of a hard working society and of industrial ingenuity. It is now visible across Greater Manchester, featuring on numerous coats of arms, and symbolising our collective togetherness, of hope for the future.

The bee now has features to represent all of these things: it seeks to connect a large community in a fun, healthy and sustainable way, taking the most direct route for users. It is an emblem that evokes nature and pollination to reflect our aspirations for Greater Manchester to become more biodiverse, greener and cleaner. Our bee has been adapted slightly, to signify walking and cycling, with handlebar antenna and striped wings that give a gentle nod to the zebra crossing users will find along their route. There are ten stripes in total, one for each of the ten Greater Manchester districts.

We can think of no other emblem to better represent what the Greater Manchester community intends to achieve with this endeavour: the worker bee, figuratively and literally, leading the way.



Naturally, the signature colour is yellow. This fits with the bee, of course, but it also acknowledges the visibility of Metrolink wayfinding on our streets. A pilot project will see our zebra crossings brought to life out in Salford initially.



The Beelines network

The Beelines wayfinding system relies on visually connecting quiet routes to form a network.

There are three wayfinding elements to the Beelines network:

- Vertical signs on posts at turning and key decision points.
- Zebra crossings at all side roads along the route.
- Cycle symbols on the road to advise on appropriate positioning.

Decision points will be found where two or more Beelines meet. People will travel along Beelines following the zebra crossings and vertical signs, which show how long it will take to get to the next neighbourhood. At a decision point, a vertical sign will show the name of the next neighbourhood and a number will be used as a decision point reference.

As shown in figure 25, if someone was riding from the start of one area of the city region to the finish, they would only need to remember the numbers 4, 7 and 8. Using this approach, people could plan long trips by simply writing down or remembering a few numbers.

This approach mimics the Knooppunten system used in the Netherlands and Belgium and could be extended beyond the region. Figure 26 shows a plan view indicating where wayfinding elements will be placed along a Beeline.

Figure 25:
Schematic of the Beelines wayfinding system

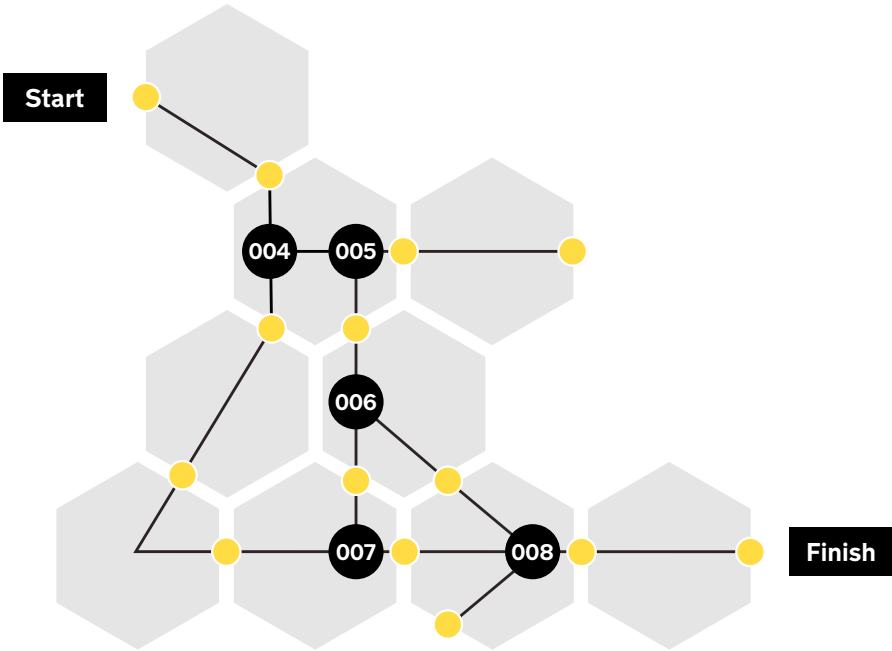
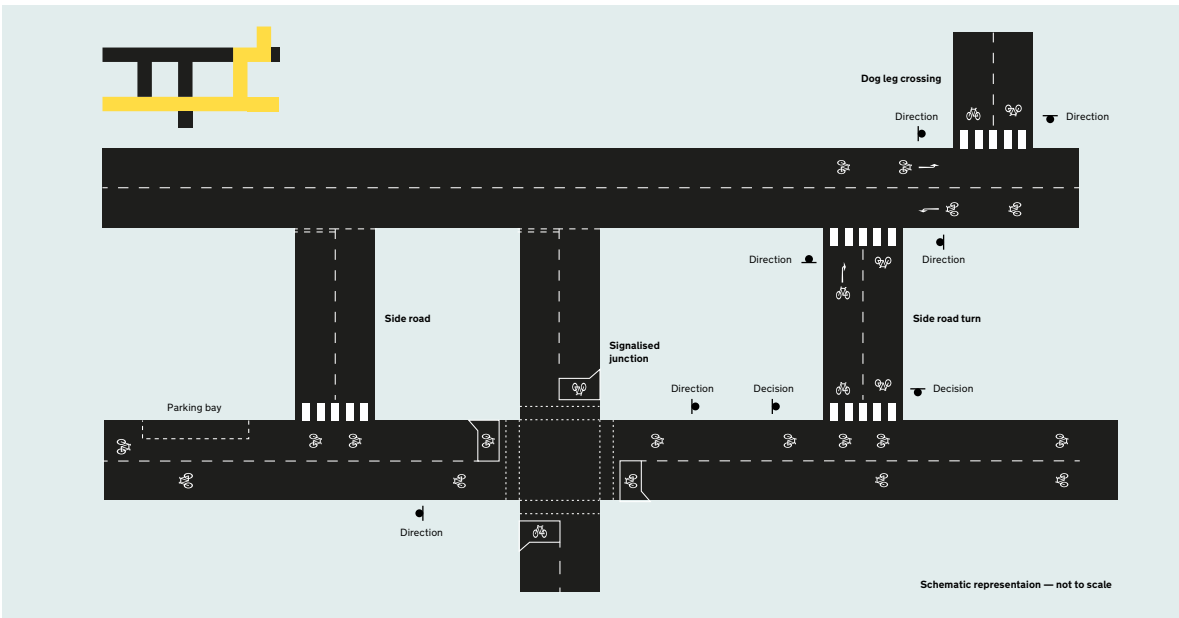


Figure 26:
A plan view indicating where wayfinding elements will be placed along Beelines.





What the signage will look like

Direction signs will be used along the Beelines route where there is a direction change. It is intended that every time there is a turn, there is a sign. As zebra crossings will effectively line the route, they will also act as wayfinding elements. The times shown are walking and cycling times to the most recognisable position in the next neighbourhood.

Figure 28 shows the technical specifications for the Beelines signage. The signage features the Beelines motif and the form of information. **It is important that all signage and wayfinding information across the whole of Greater Manchester is consistent.** This will also create the potential for a Beelines app and an interactive website which would provide online bespoke route planning.

Figure 27:
Beelines sign specification

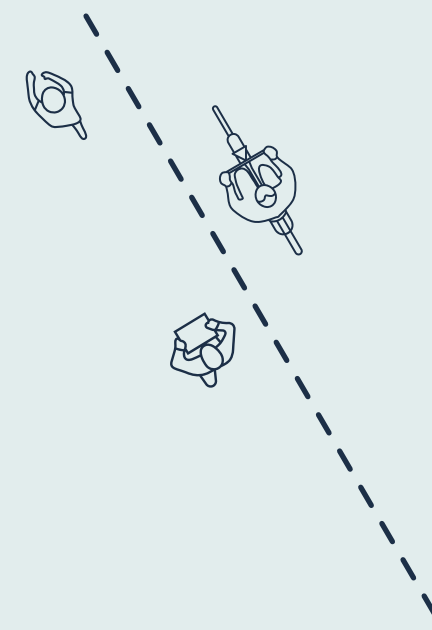


Figure 28:
Example decision point Beelines signs



Figure 29:
Example direction Beelines signs





Ensuring good quality design

A Streets for All Check is being developed to assess design quality for the network and a proforma will be made available to all those interested or involved in the delivery of the network. Stakeholders will be able to highlight design issues where necessary.

The Streets for All Check will be the key determinant as to whether the 'competent 12-year-old' and 'double buggy' tests have been passed. All schemes will conform to the Equalities Act to ensure that the needs of visually and mobility impaired people are met.

For signal-controlled junctions, a Junction Assessment Tool will be used. This approach asks designers to think of all possible movements for people travelling on foot or by bike and considers how well they are catered for.



04.

Delivery

How investment in walking and cycling will be prioritised

To ensure maximum return on investment, schemes and networks will be prioritised based on both need and the ability to change travel habits. It is essential that everyone in Greater Manchester feels the benefit of the schemes that are delivered.

Schemes will be prioritised for investment based on:

| |
|--|
| Their contribution to building a wider network of walking and cycling improvements |
| Quality of design |
| Levels of community and political support, feasibility |
| Whole-life costs |
| Ability to secure local contributions |
| The need to deliver a balanced programme of improvements for walking and cycling across Greater Manchester |

The Mayor's £160million Cycling and Walking Challenge Fund provides the opportunity to kick-start delivery of the proposals set out in this proposal. Decisions on how this funding is spent will be approved by the newly established Greater Manchester Cycling and Walking Board, overseen by Greater Manchester Combined Authority.

Monitoring and evaluation

Monitoring and evaluating the benefits of investment in walking and cycling will be critical, and will enable us to make the case for future investment in our streets. Monitoring will be carried out for individual schemes and the whole programme of network improvements. More detailed guidance will be prepared on monitoring and evaluation, but it will be important that the programme demonstrates a range of economic, quality of life and environmental benefits (in support of Greater Manchester's 2040 Transport Strategy).

Maintaining the network

Active travel corridors need special consideration in terms of maintenance. Defects that may be acceptable for motor traffic can unseat people travelling by bike or trip people on foot. The maintenance of Beelines is crucial and will be an essential commitment in any funding agreements. All assets delivered should be maintained by the local authorities. Further to this, it is proposed that key walking and cycling routes are prioritised in maintenance programmes. Traditional highway surveys may flag defects such as rutting and spalling as being minor in nature, but these could seriously affect walking and cycling safety and comfort. As most Beelines on major roads will feature segregation of one type or another, the riding surface should not wear as quickly as the main carriageway, which is being used by heavier motor vehicles.

Enforcement

TfGM and Greater Manchester's ten local authorities will work closely with Greater Manchester Police to collaborate and explore enforcement of footpath parking and speed limits, both critical to success. Discussions with national government regarding the potential for local authority enforcement of moving traffic offences will also continue.





05. Engagement

Stakeholder and community engagement

Interested local people will be invited to participate in project planning and delivery to ensure that each scheme is owned locally and supported by the delivery team, not the other way around. It is vital that local communities are involved in decisions that affect them. Most elements of the programme will provide benefits for all users of the street, but some aspects may lead to changes in travel patterns for some people in a community. The ten local authorities and TfGM will work closely with communities to keep them engaged in the process.

Involving local people and groups in planning from the outset

It is critical to involve local people, who will by nature have the most detailed knowledge of their streets, at every stage of the network's creation. To that end, and to ensure that TfGM and local authority planners create the best possible network, the first iteration of the Greater Manchester network map will be published online using the mappingGM.org platform. It is hoped this approach will ensure that the best solutions are identified for the 1,000 mile network from the outset.

How we will consult on schemes

The Beelines programme will result in some travel network change, with the potential for some to alter their travel patterns. Consultation offers a chance for all those affected to be heard. However, political leadership may also be required to ensure weight is given to positive change supported by the majority. Only by ensuring that evidence guides decisions can the best ones be made for each local authority.

Creating more local experts

Training will be held for all delivery partners as well as specific technical workshops covering innovative approaches including data analysis, making the economic case for walking and cycling interventions, and how to approach street design.

Behaviour change

A comprehensive behaviour change programme, across a wide range of audiences, will be delivered by TfGM in partnership with the local authorities. This may include, but is not limited to, marketing and behaviour change advertising campaigns; community and school workshops; business engagement; bike maintenance courses; and cycle training. Delivering and embedding a walking and cycling culture across Greater Manchester cannot focus solely on infrastructure; behaviour change programmes go hand-in-hand and are a key enabler.

TfGM will develop engagement programmes with schools and businesses to ensure that any infrastructure put in place is maximised locally.



How Beelines will improve all of our lives

Greater Manchester has a fascinating history of reinvention and industry, of doing remarkable things and doing them first.

Historically, the city-region has never been afraid to take bold steps about how people and goods move around. The Manchester Ship Canal cost the equivalent today of £1.65 billion and quickly became the largest river navigation canal in the world, enabling the newly created Port of Manchester to become the third busiest in Britain, despite being 40 miles inland. The Liverpool and Manchester railway was, in 1830, the world's first inter-city passenger railway. And, more recently, our tram system is the biggest light rail network in the UK.

Now, Greater Manchester is set to add the next link to the truly modern integrated transport system we are striving for. Beelines is a vision for our city-region to become the very first in the UK to have a fully joined-up cycling network, the most comprehensive in the country, covering 1,000 miles.

By giving people a true alternative to the car, we will tackle many of our health, congestion and air quality issues in one go. Environmentally-induced inactivity alone is costing our NHS in Greater Manchester more than £500,000 per week. Health and where people live have often been linked in worldwide studies — and people who live in walkable places are much less likely to be overweight.

The Beelines network will connect every community in Greater Manchester, opening up our neighbourhoods and making it far easier to travel on foot or by bike to school, to the shops, to work.

This vision is not anti-car; it is about giving people an attractive alternative, especially for short journeys within our communities.



This is what a city in America — Portland, Oregon — started doing in the 1990s, going against the grain. Now they are reaping the benefits. Portland residents now drive 20% less than the rest of the USA, saving them money which they instead spend locally on recreation, contributing to their local economy.

Young people have been moving to Portland in droves — a 50% increase in the last 10 years, a rate five times higher than the national average. So not only has making walking and cycling easier in Portland saved their residents considerable money in their daily lives, it has also transformed their city into a healthier, more pleasant place where people want to be. This economic strategy focused on people and place has more than paid off.

Our vision isn't just about walking or cycling, it's about quality of life. Beelines, Chris Boardman and the districts' network vision for Greater Manchester simply makes sense. The evidence behind this proposal is overwhelming. Now let's make it a reality and enjoy the benefits that it will bring to us all.

Andy Burnham
Mayor of
Greater Manchester





Photography and visualisations
TfGM, Urban Movement, Planit-IE
Design
Creative Concern

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