



Edinburgh: ***connecting our city,*** ***transforming our places***

*Ideas for a more active and connected city,
a healthier environment, a transformed city
centre, neighbourhood streets and civic life.*

Foreword

Edinburgh is one of the fastest growing cities in the UK and by 2040 will have a population of almost 600,000. The way we travel, shop, socialise, work and play is also changing, reflecting global trends and new technologies.

Edinburgh's growth will provide new jobs, homes and amenities but it must be carefully balanced to provide a high quality of life, access to services and opportunities for all residents, in particular communities that experience inequality.

Reducing congestion and vehicle-borne air pollution, improving journey times by public transport, realising the lifelong health benefits of walking and cycling, and creating streets and public spaces that support city living for all are key to sustaining our inspiring capital city.

This prospectus sets out bold, ambitious ideas that will help achieve the Edinburgh 2050 vision, a fairer, thriving, connected and inspired city. These ideas focus on **better places designed with people at their heart**, with space for human connections; a city that is enabled by technology driving a stronger economy.

This document has been informed by wide ranging discussions with community groups, transport users and operators, public, private and third sector interests; lessons learnt from cities across Europe; and develops emerging themes from the 2050 Edinburgh City Vision.

Please take this opportunity to tell us what matters to you and help develop the best solutions for the city.



Councillor Lesley Macinnes
Convener Transport and Environment

Contents

1	The case for change	5
	<i>Why our growing city must work to create better places and a transport network that enables people to make sustainable travel choices in order to ensure all communities benefit from the city's economy and access to an attractive city centre and liveable neighbourhood streets.</i>	
2	Summary of Ideas	7
	<i>At-a-glance guide to the potential options for change.</i>	
3	A fair and inspiring capital city	11
	<i>Enhancing quality of life and opportunities for all to access work and services and creating a city centre environment for business, culture and civic life to flourish.</i>	
4	A healthy city and environment	17
	<i>Promoting the lifelong health benefits of walking and cycling, reducing ill-health of citizens from traffic-borne air pollution and cutting carbon emissions by promoting clean fuels and vehicles.</i>	
5	A smart and thriving city	23
	<i>Supporting inclusive growth by improving the efficient movement of goods and services, managing traffic volumes and freight, and creating a fully integrated public transport network.</i>	
	Learning from other cities	30

How to be involved



The best way to provide your feedback is by completing the online survey.

**City of Edinburgh Council
Consultation Hub**



Print copies of the prospectus, survey and collection boxes are available in city libraries and Council buildings. Or you can respond in writing to:

**Spatial Policy,
The City of Edinburgh
Council,
G.3 Waverley Court,
4 East Market Street,
Edinburgh EH8 8BG**



You can explore specific issues in more detail by attending events being held across the city.

Event list



You can also stay up to date and share your ideas with others on social media

**Facebook/Twitter
@planning edin**

Your views will shape multiple projects

This prospectus combines three major projects being prepared over the next 12 months.

Edinburgh City Centre Transformation – an action plan for a vibrant and people-focussed capital city centre to improve community, economic and cultural life, working to the following vision.

'An exceptional city centre that is for all, a place for people to live, work, visit and play. A place that is for the future, enriched by the legacy of the past.'

The City Mobility Plan – setting citywide transport policy and actions based around the following vision.

'Edinburgh will have a cleaner, safer, inclusive and accessible transport system delivering a healthier, thriving and fairer capital city, and a higher quality of life for Edinburgh residents.'

Low Emission Zones – the Council is taking a comprehensive approach to developing Low Emission Zones (LEZs) as a step towards protecting Edinburgh's citizens from the harms of poor air quality. This is in line with Scottish Government priorities to introduce LEZs in Aberdeen, Dundee, Edinburgh, and Glasgow by 2020.

Following public feedback on the ideas in the prospectus, detailed proposals will be developed for each project, followed by public consultation in early 2019.

Introduction

Edinburgh is one of the world's great cities: not in size, but through the contribution of its people to knowledge, science and technology, the arts and culture, and its distinctive urban form, laid out between the Pentland Hills and Firth of Forth.

A combination of people and place support the city's high quality of life, a successful economy and the city's role as the gateway to a wider region and country.

A successful Edinburgh is critical to a successful Scotland.

Edinburgh city centre powers our economy and is the base for over 100,000 jobs, including the flourishing financial sector.

The centre of Edinburgh is home to over 60,000 people, who support the vibrancy of its streets, local services and cultural life, making the city an attractive place to spend time in.

The history and culture of the Edinburgh World Heritage Site comprising of the Old and New Town draws many of the city's 4 million annual visitors. The city has an international duty to maintain and manage the Site's unique qualities.

Beyond the centre, from Marchmont and Bruntsfield to Leith and Granton and from Corstorphine and Cramond to Portobello and Craigmillar, our distinctive communities all contribute to the unique character and appeal of the city as a place to live, work and visit.

However, like many comparable cities, Edinburgh faces a number of challenges as it readjusts to the 20th century. The world around us is changing rapidly as the way we shop, socialise, work and play responds to

new ideas and technologies. At the same time, issues around congestion, air quality and lifestyle have put the health agenda at the heart of decision making. Levels of obesity, diabetes and heart disease are directly linked to the kinds of places we create and inhabit.

If Edinburgh is to retain its position as a leading city that attracts inward investment and has a world class environment for its residents, it must tackle these problems. It must address congestion and poor air quality and consider the impacts of allowing large vehicles into the heart of the city.



It must face up to the health impacts of insufficient investment in walking and cycling. Like other cities across the world Edinburgh must make a step change to the way people and goods move around the city for the sake of it's economy, people's health and to showcase it's beauty. The first choice for any journey should be a sustainable one, whether on foot, bike or public transport.

Visitors will always be spellbound by Edinburgh, but the visitor experience needs to be constantly improved and refreshed, both in the 'real' and online worlds. If our pavements are too cramped and if legibility is weak, people won't feel safe on our streets and visitors will be tempted elsewhere.

And for residents, those who live in the city centre, and in the wider city, this is their city.

They need to know they can get to work, explore the city's green spaces, do their shopping, enjoy the city's culture and their children can go to school safely.

Conditions for those with any kind of disability, sensory impairment or frailty can be challenging. We need to ensure that the city remains diverse and welcoming to all people, regardless of age, gender, ability and race.

By 2040, Edinburgh's population will be close to 600,000, an increase of 100,000 over today's figure. The city-region is also growing, accounting for a quarter of the Scottish population. This growth and the anticipated strain on the transport network and city spaces needs to be managed to improve access to public transport, increase journeys on foot and by bike, and prevent unsustainable increases in car travel.

We must join leading cities like Copenhagen, Oslo and Barcelona (see page 30) in reshaping how our city works if we are to meet the economic, social and environmental challenges we face.

And lastly, as befits our claim to be the data capital of Europe, we must ensure decisions are based on accurate information where we can. And where we are weak on data, we must set out plans to improve through new partnerships and new technologies.

No change is not an option.

The core question of this Prospectus is what level of change and innovation should we embrace to achieve the kind of city we aspire to be by 2050.



Summary of Ideas

This prospectus sets out **bold and ambitious ideas to improve the quality of places** across the city and within the city centre, it seeks to identify the best form of change for Edinburgh's people and the city's future prosperity. These options also highlight transport as an enabler of transformational change - by reprioritising how we use our public spaces, roads and streets, using smart technology and integrated services, we can help create a more active, resilient and inclusive city.



Edinburgh: connecting our city, transforming our places

There are different ways we could approach change.

Business as usual

Business as usual means the city would carry on much as now.

The Council would continue to deliver a range of separate projects which prioritise outcomes for people on foot, bicycle and public transport. This could help to create some change with less disruption than other options.

Conditions for walking would improve gradually as there would be more accessible footways and crossings with longer signal timings. The continued delivery of segregated cycling routes in the city centre, and extensive on-road cycling infrastructure, would be supported by Edinburgh's bike hire scheme.

Bus lanes in peak hours would be maintained on selected roads and ticketing across both bus and tram could be improved through contactless card payment. There could be stronger control zones for parking and better enforcement for parking, loading bays and freight.

There would be limited change in the vehicle penetration of the city centre and investment in public spaces would depend upon enabling developments and restricted budgets.

A strategic approach

Under this approach, a more ambitious and strategic plan to create a greater impact would be developed. Instead of bringing forward individual projects, particularly in the city centre, a co-ordinated short, medium and long term programme would be created.

There would be controls on the levels of general traffic with restrictions on through traffic within certain areas. Priority would be for people on foot and bicycle on specific streets including George Street and the Royal Mile. Gaps in the existing walking and cycling networks would be completed.

There could be increased capacity at existing park and ride sites with amenities including charge points, bike hire, click and collect. Improved integrated payment arrangements across all public transport modes and strategic provision of car club access across the city would help to enable people to make different travel choices.

There would be intelligent systems to exercise control on large vehicle access based on vehicle weight, type, size, emission standards and the time of day. There would be co-ordinated delivery and servicing arrangements in the city centre to optimise movements and reduce impacts.

Transformational change

A transformational approach would involve a radical rethink of how the city moves and operates. The city centre would become a largely traffic free zone with controls in place to allow for essential traffic and with pedestrian priority in the city, town and local centres.

You would be able to go to, but not through the city centre by car. A series of hubs could be developed where buses would drop off and other forms of less impactful transport would take over.

Pavements would be significantly widened and public spaces improved. Key streets would be pedestrianised.

There would be strategic walking routes and segregated cycle routes across the city with a citywide wayfinding network to guide pedestrians around the city.

Public transport could be fully integrated with smart contactless payment. New park and ride interchanges could be provided at key points around the city, linked to public transport, with a series of new bus priority corridors.

Urban and regional consolidation centres would be created for freight rationalisation, and green onward travel with last mile delivery hubs served by electric cargo bikes or electric vans.

These three approaches are not mutually exclusive and we could initiate change by applying a range of approaches to any individual situation.

Here we set out **fifteen ideas** linked to further information on each, grouped under three themes. We would like your views and thoughts on these ideas as well as any others you have that will help shape the change we need and lead to a fairer, healthier and better-connected Edinburgh.

Following public feedback on the ideas in the prospectus, detailed proposals will be developed for each of the three projects. Further Public consultation will follow in early 2019.

Delivering these ideas will require a partnership approach with communities, small and large businesses and industry bodies.

Collectively these ideas would be transformational and some will have significant financial implications and potentially longer time scales for delivery.

Some proposals would need changes in legislation which require more detailed exploration. A wider understanding of the use of the city centre network will require extensive traffic modelling to understand the implications of different scenarios.

Similarly, a more strategic approach to the use and location of parking controls will have to be examined as part of any preferred strategy.

Additional enforcement would be needed as part of a package of measures to support the successful management of the city centre and wider city.

A fair and inspiring capital city

A walkable city centre

Reducing the dominance and impact of traffic and prioritising access on foot, by bike and public transport.

Improving our streets, gardens, spaces and places

Renovating existing and creating new civic spaces.

Strengthening our town centres

Supporting local business and creating neighbourhoods based around walking and cycling.

Creating better accessibility

Better connecting different modes of transport and developing a wayfinding system that signs people around the city.

Making it easier to use public transport

Introducing integrated ticketing that allows seamless changes from bus to tram, bike hire or car club with a single contactless payment.

Making individual journeys easier

Introducing bespoke transport services based on the use of data and technology.

A healthy city and environment

Creating a more active city

Developing strategic walking and cycling routes across the city.

Improving air quality

Creating low emission zones, restricting polluting vehicles.

Encouraging the use of clean vehicles

Expanding the network of electric vehicle charge points.

Giving people in new developments healthier transport options

Setting specific modal targets by location.

A smart and thriving city

Widening the reach of public transport

Extending and realigning public transport to better serve a range of origins and destinations.

Offering more sustainable choices for longer journeys

Expanding the park and ride network and connecting it with other transport choices.

Protecting the city's environment while supporting businesses

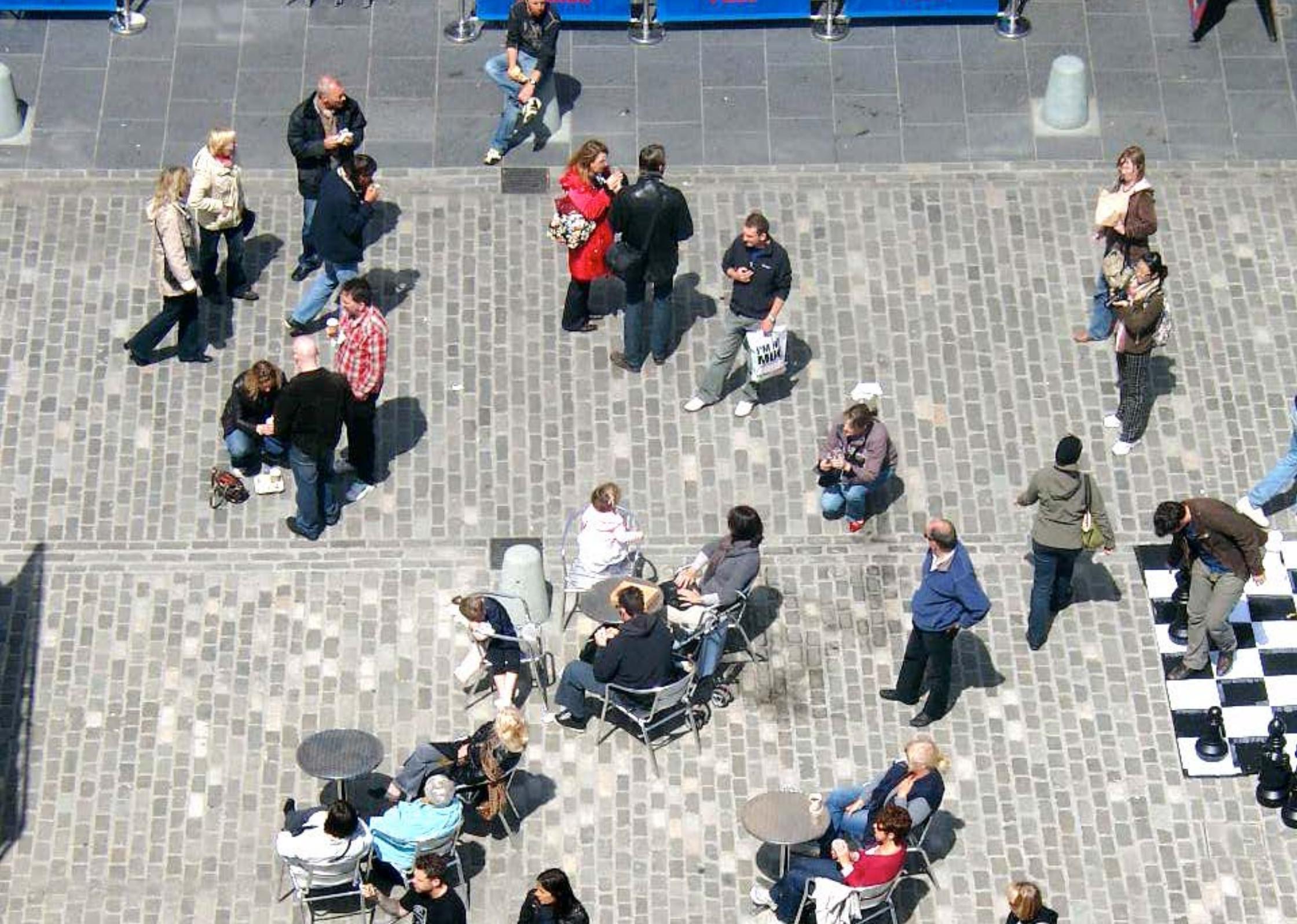
Creating freight hubs to reduce the impact of large vehicles on the city centre and neighbourhood streets.

Controlling the impact of commuter parking

Extending controls and introducing a workplace levy to fund sustainable transport.

Looking to the future

Use of data-driven innovation and smart technology across a range of transport initiatives.



3 *A fair and inspiring capital city*

A transformed city centre, renewed town centres

Reducing the dominance of vehicles and making our city centre and town centres pleasant places to live and welcoming places for people of all ages and abilities is a key challenge.

In addition to air quality and public safety impacts, large volumes of traffic generate noise, reduce the enjoyment of spending time outdoors and the appreciation of Edinburgh's unique heritage.

Edinburgh City Centre Transformation aims to deliver a city centre that is at the heart of Edinburgh's communities, its cultural and civic life and the focal point for its economy. In parallel, improvements to our transport system and environment must support the mutual renewal of our local and town centres.

Transport as an enabler

Many areas of the city are well served by public transport meaning journeys are fast, simple and cost-effective. However, for those living in more peripheral areas of Edinburgh, and for many living in neighbouring authorities, public transport journeys can be long and expensive.

Car ownership in the city is the lowest in Scotland. Whether levels of ownership are due to affordability of households and/or lifestyle choice, it is essential that all residents are supported by frequent public transport services or strategic walking and cycling routes close to their home.

Community transport operators, taxis and private hire cars have a critical role in Edinburgh's transport services. They help to serve those with particular needs, as well as those who are not well served by Edinburgh's public transport network.

Affordability is an important issue for young people and others who are reliant on public transport for access to health services, employment or social opportunities. Families, and others travelling in groups, can also find pricing a disincentive to using public transport.

Providing low-cost and accessible amenities and opening up easier access to employment, education and our cultural heritage is crucial to creating a more inclusive city. Travel choice is also informed by information provision.

Through Transport for Edinburgh, some ticketing, payment, and information provision is integrated between Lothian Buses and Edinburgh Tram services. Technology is now available to better meet the needs of more complex trips.



A walkable city centre

Reducing the dominance of vehicular traffic would free up space to provide wider footways, safe cycling infrastructure and efficient public transport. Essential access for residents and servicing would need to be maintained via key routes.

Edinburgh already operates pedestrian priority zones on the Royal Mile, Rose Street and Grassmarket. Change could be **street-by-street** or **area-based** in distinct parts of the city centre, providing a wider zone for walking, cycling, community use, retail and leisure.

Creating a **walking network** that offers pedestrians sufficient space and priority over vehicles at junctions, whilst completing a high quality, direct, connected and **safe cycling network** will enable more people of all ages and abilities to get around the city centre on foot and by bike.

This approach could be complemented by freight hubs and last mile delivery hubs served by electric cargo bikes or electric vans (refer to section 5 - A smart and thriving city).



The city centre road network contains **three key north-south connections** (the Bridges, the Mound and Lothian Road) with **five key east-west connections** (Queen Street, George Street, Princes Street, The High Street and Cowgate). Better understanding of the city centre network will require detailed traffic modelling to understand impact on traffic movement. Improving our streets in this way would also benefit those with physical or sensory impairments and movement of pushchairs and buggies, creating a more inclusive city centre. In addition, the impacts on health and wellbeing, spatial quality and equalities and rights will be assessed.

Improving our streets, gardens, spaces and places

The city centre is fortunate to have a number of high quality public spaces from the Grassmarket, the Mound precinct and St Andrew Square to Lister Square at Quartermile and Bristo Square at the University of Edinburgh.

However, a number of other spaces would benefit from **renovation**. This could include improving cleansing and maintenance, reducing clutter, provision of public seating and cycle parking, opportunities for play, public art, feature lighting and urban greening.

Potential for **new public spaces** could also be explored where routes converge, views can be enjoyed or our heritage interpreted. Creating new public spaces could also help to provide calmer places for relaxation within the built up area. This could allow Edinburgh to be a leading city for supporting those with autism or age-related mobility and cognitive impairments.

A joined up network of public spaces and greenspaces, including formal and natural heritage parks, cemeteries and burial grounds, would not only provide places for people to enjoy but link up habitats, supporting urban biodiversity.



3 Strengthening our town centres

The city centre and surrounding town and local centres are mutually dependent upon one another.

To support our urban communities we must protect and nurture town centres across the city. In particular, this can help to eliminate areas of 'dead frontage' as changes in retail habits and business rates affect the retail environment.

Town centres include Gorgie/Dalry, Leith Walk/Great Junction Street, Bruntsfield/Morningside, Portobello, Stockbridge, Nicolson Street/Clerk Street, Tollcross and Corstorphine.

Positive changes could be achieved by improving the local environment and facilitating access by public transport, on foot and by bike, simplifying junctions and street layouts.

A key aim would be to support footfall and create more conducive spaces for social interaction, temporary open-air markets and community events.

Improving access for walking and cycling close to people's homes with a reduction in noise and air pollution can produce an uplift in active lifestyles as part of daily routines.



4 Creating better accessibility

Edinburgh's city centre is the focus for retail, leisure and entertainment for South East Scotland and beyond.

We could find better ways of physically connecting modes of transport, including rail, bus, tram, bike hire, taxi.

Our streets need to cater for large volumes of people of all abilities. This can be supported by **improved wayfinding and travel information**, on-street and online, giving clear advice on accessible and barrier free routes.

Improving **access and egress to bus and train stations**, in particular Waverley Station, is essential to providing a better experience for commuters and visitors and allowing residents to travel to and from the city.

The development of **public transport interchanges** around the periphery of the city centre could reduce the number of bus services passing through the city centre. Accessibility could be maintained by the tram and zero or low emission buses.



5 Making it easier to use public transport

Transport authorities, such as in London, are increasingly adopting integrated smart payment systems. Bank cards or mobile payment can be used to pay for travel on buses, trains, or the underground without having to buy a ticket for every trip.

Back-office systems between providers must be in place to ensure travellers pay no more than they should by applying limits on maximum rates charged.

The particular public partnership model in Edinburgh, with Transport for Edinburgh, Lothian Buses and Edinburgh Trams lends itself to the development of an integrated smart payment system. This could use existing contactless technology to cover trams, buses, taxis, bike hire, and potentially car sharing across the city.

The Council could continue to work with Transport Scotland, regional transport partnerships and transport operators to combine and provide information about services (online, through apps, at stations and on services). This could make it easier for people to decide how they are going to make their journeys beyond Edinburgh.



Image courtesy of Lothian Buses

6 Making individual journeys easier

'Mobility as a Service' (MaaS), is growing in stature across the world's major cities. It is designed to improve travel choices for those without access to a private car, or who are poorly served by public transport.

Often enabled by app-based technology, users of this type of service are connected to a tailored package of options to provide their journey from start to finish using a range of transport modes. A single and competitively priced payment is required regardless of how many modes are used.

Travel options that could feature as part of MaaS include car clubs (a fleet of vehicles available to members); peer-to-peer car clubs (where customers rent other people's vehicles); lift sharing (sharing journeys/ costs i.e. UberPool); and bike hire (including e-bike options). These are in addition to vehicle rental, taxis and private hire cars. All offer a range of benefits covering access, equality, inclusion, affordability, flexibility and choice.

While Edinburgh already has many of the constituent travel options available, these operate in isolation to one another. By facilitating the use of data and information sharing the Council could help support emerging MaaS services.

The Council could support the expansion of car clubs across the city, by attracting and developing a wider range of car sharing options. Options could include market driven (including commercial car club operators) as well as community-based clubs, facilitated by communities and employers.



4 A healthy city and environment

Walking and Cycling

Edinburgh is facing significant public health challenges. Physical inactivity and air pollution-related illnesses have a significant effect on residents' wellbeing and the economy of the city.

Increased uptake of walking and cycling can have a positive impact on illnesses such as heart disease, cancer, diabetes, and mental health, as well as improving people's access to employment, education, health services, food and social support networks.

Over 70,000 people live within a 20 minute walk of Princes Street and in the wider city centre walking represents around 40% of all journeys to work. A cycle trip of around 30 minutes connects approximately half of Edinburgh to the city centre.

Infrastructure for walking and cycling is being improved through footway resurfacing and the introduction of continuous footways using high quality materials and a number of committed segregated cycle routes.



Setting modal share for health

To grow the city in the most sustainable locations, Edinburgh's Local Development Plan (2016) directs new jobs, homes and services to locations with good access to existing or planned public transport and which are accessible by foot, bike and public transport. Spatially, this means a focus for growth in the four strategic development areas of the Waterfront, West Edinburgh, South East Edinburgh and the City Centre.

The Core Paths, in particular the Union Canal and former rail lines are essential components of the green walking and cycling network. However, more could be done to raise awareness of their convenience, natural amenity and to develop further cross boundary routes as the city expands. Setting higher targets for walking and cycling within development areas is crucial to designing places that achieve a healthier and more active city.

Cycling in Edinburgh



Walking in Edinburgh



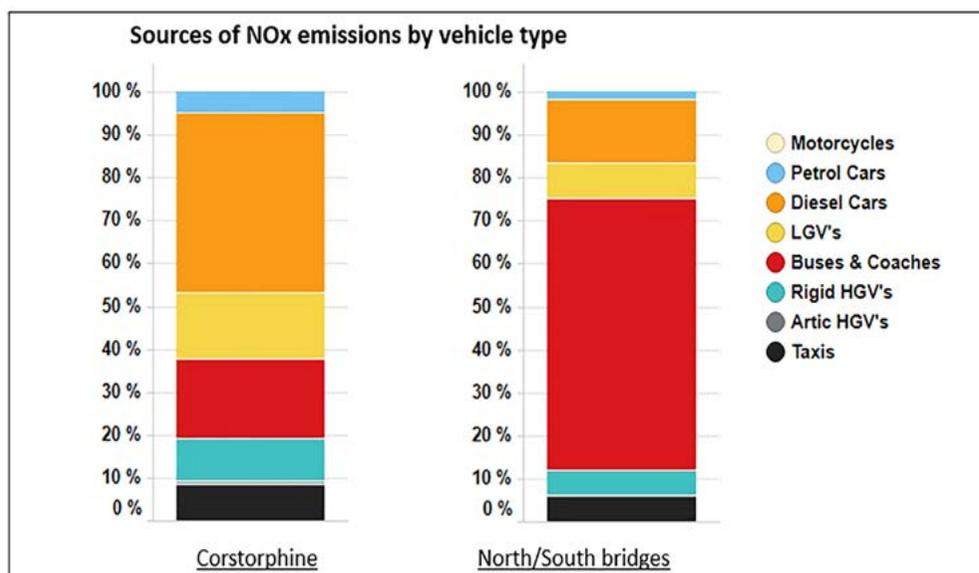
Air Quality

The Council has a responsibility to protect citizens from the impacts of poor air quality which can have a significant impact on people's health, particularly children, the elderly and those with respiratory and cardiovascular conditions.

The most immediate air quality challenge is tackling the problem of nitrogen dioxide (NO₂) concentrations around roads, largely due to traffic. Diesel exhaust emissions are a particular health concern, having been listed by the International Agency for Research on Cancer as a Class I carcinogenic.

Edinburgh has five Air Quality Management Areas where legal standards for NO₂ are exceeded. These are in the city centre and the West End, St John's Road, Inverleith Row, Great Junction Street, and Glasgow Road (Newbridge).

Different types of vehicles contribute to pollution in different parts of the city. The tables below show the sources of nitrogen oxides (NO_x) by vehicle type for Corstorphine and the Bridges, both of which fail legal standards.



To date, managing transport-related air pollution in the city has included; working with bus companies to improve fleets, controls on taxis, controls on engine idling, improvements to the Council's fleet, investment in electric vehicle infrastructure, supporting sustainable travel planning and developing the ECOSTars programme to improve freight fleets operating in Edinburgh. These actions have brought some improvements to the quality of air in the city.

Even with these initiatives and vehicles becoming cleaner over time, if nothing more is done, Edinburgh's air quality will still exceed legal standards, and the health of our residents will suffer.

Cleaner Vehicles

Edinburgh has set an ambitious target of reducing carbon emissions by 42% by 2020 to reduce the effects of this greenhouse gas on global warming and its impact on climate change. Carbon emissions resulting from transport account for more than 26% of the city's emissions. Edinburgh has recently launched an Electric Vehicle Action Plan to develop a network of charging hubs to suit different user groups.

Electric Vehicle (EV) charging hubs will encourage the uptake of electric vehicles, reduce carbon emissions, improve air quality and unlock wider economic benefits. This aligns strongly with the Scottish Government's aim to phase out the need for petrol and diesel vehicles by 2032.

It is recognised that private vehicle use will remain essential for businesses and people with complex mobility/journey needs. However, where vehicles are used in Edinburgh, we want them to be as clean as possible.



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7 Creating a more active city

Edinburgh could develop strategic walking and cycle routes across the city, incorporating a citywide wayfinding network to guide people around the city. Providing high quality infrastructure for people on foot and bike would enable people to walk or cycle for short and medium distances (such as within the city centre and around local town centres).

An audit of the walking and cycling network would need to be carried out and gaps in provision identified and completed. Specific streets could be adapted to give greater priority for people on foot and bicycle, including segregated routes, wider footways, improved crossings and longer signal timings.

Achieving high quality and safe routes would require investment and reprioritisation of existing road space to ensure lanes are safe and useable by people of all abilities.

Networks would link residential and employment areas, connect with city centre routes, link with park and ride sites and cross-boundary green networks.

8 Improving air quality

The Scottish Government and the Council are committing to implementing a Low Emission Zone (LEZ) in Edinburgh by 2020. LEZs would restrict vehicles from entering a zone by imposing a financial penalty where they do not meet minimum emission standards.

The Scottish Government has proposed these standards to be Euro 4 for petrol vehicles (approximately 12 years old depending on the vehicle) and Euro 6/VI for diesel (most cars and vans approximately 3-4 years old). This is consistent with the London's Ultra Low Emission Zone and the UK Government's Clean Air Zone Framework.

A 'grace period' of between two to four years could be allowed to give people and businesses time to upgrade their vehicles. Residents living within the zone could have an additional grace period.

To have maximum impact, LEZs will need to be implemented along with other ideas in this document.

Work is underway to determine which types of vehicles will be restricted in Edinburgh. We also need to consider the potential LEZ boundary options, including:

- targeted at pollution 'hotspots' across the city;
- focused on the city centre; or
- Edinburgh-wide.

A targeted pollution 'hotspot' LEZ may present practical operational difficulties and may displace traffic to neighbouring populated areas. A LEZ focussed on the city centre would help to address many of the worst polluted streets and support many of the city centre focussed ideas in this prospectus but would also risk displacing traffic into neighbouring areas. An Edinburgh-wide LEZ could help to ensure the greatest overall reduction of pollution across the city.

The Council must balance the critical need to take action to minimise citizens' exposure to pollutants against the impacts of LEZs on individuals and businesses that may be reliant on older and high-emission vehicles.

9 Encouraging the use of clean vehicles

A key strategic objective within the [Electric Vehicle Action Plan](#) is the development of EV charging hubs across the city.

This recommends the provision of a range of charge points to suit different user groups within the following zones:

Zone 1- City Centre. Rapid charging hubs in both on and off-street locations, with some hubs restricted to certain groups, e.g. taxi trade, car clubs, public sector fleets.

Zone 2 – Residential. Aimed at tenement areas where residents have no access to off-street parking. Fast chargers are more appropriate for on-street locations and rapid chargers in off-street locations.

Zone 3 - Periphery. Charge points at park and ride facilities to encourage commuters to leave their vehicles and choose public transport or active travel options to continue their journey.



Giving people in new developments healthier transport options

The Sustainable Urban Mobility Plan for Malmo, Sweden (2016) sets a modal split for the city, together with targets by 15 sub-areas to assist the city in becoming healthier, more accessible and to reduce transport emissions.

For example, in Malmo, the city centre target is for 15% trips by car, 25% by public transport, 35% by bike and 25% on foot.

Edinburgh could set out requirements for new developments, taking account of the existing and planned capacity and the varying characteristics of each part of the city.

This could highlight where car-free development would be appropriate, such as brownfield sites with good public transport accessibility.

Modal targets by area could have a stronger bearing on the design of new developments and streets, and provision for cycle access and storage, thereby improving conditions for people to live healthier lifestyles.

Such an approach would also provide an impetus for change in travel behaviour within existing communities, through initiatives and projects that support walking and cycling.





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City economies do not stop at local authority boundaries. To fully deliver on their potential, a city region needs efficient and effective transport and mobility networks.

Such efficient and effective local networks support city centres with their clusters of high value jobs, retail and cultural offerings, as well as serving secondary centres and suburbs. Connectivity with other cities, and with the wider world, attracts investment and skills and enables access to domestic and international markets.

This section looks at improving the efficiency of how our road network is used, by aiming to reduce the impacts associated with how people and goods currently move between the city-region and the city, as well as into and through communities across our city.

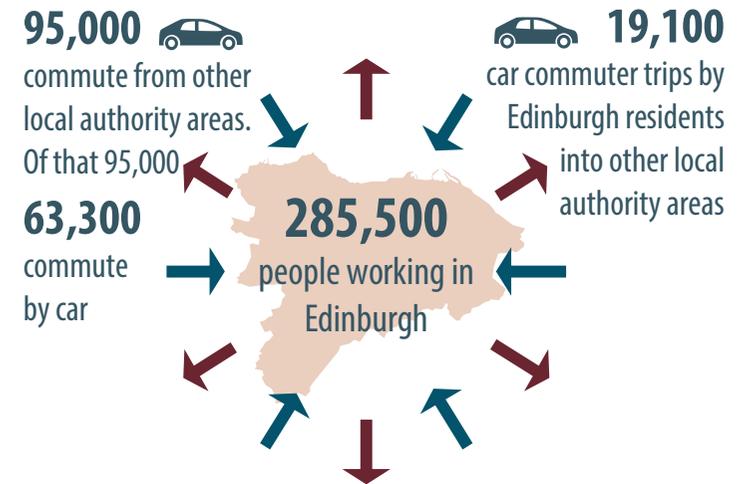
The impacts of road traffic

One-third of the 285,500 people who work in the Council area commute from the surrounding city-region (95,000), with two-thirds of those doing so by private car (63,300).

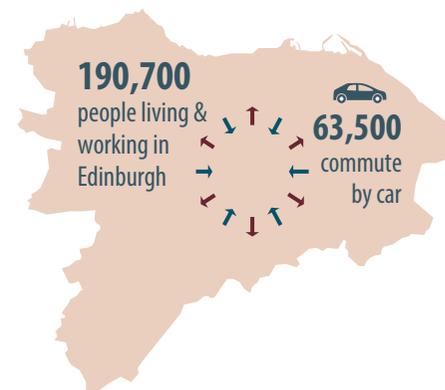
Roughly the same amount of Edinburgh residents (63,500) commute to jobs in Edinburgh by private car, meaning 45% of Edinburgh's employees (126,800 people) travel to work by car.

Use of Ingliston Park and Ride has tripled in the past five years to around 250,000 vehicles per year and Hermiston and Straiton park and ride facilities attract 100,000 and 30,000 vehicles respectively each year. However, the scale of traffic travelling into and through the city remains high, causing negative impacts, as set out here:

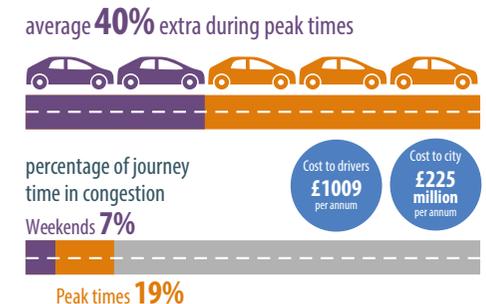
Cross boundary commuting



Commuting within Edinburgh



Traffic congestion during peak times



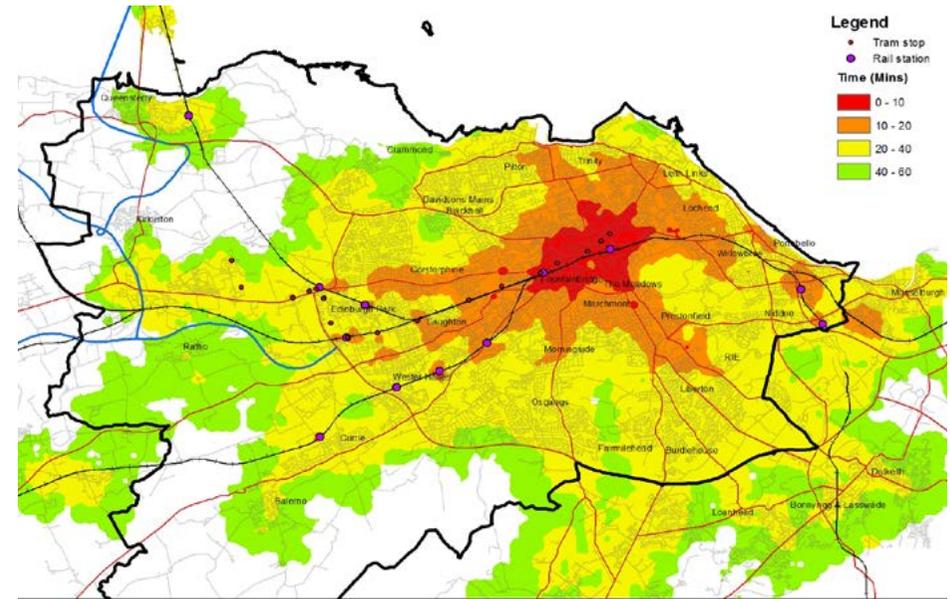
- road safety - driver behaviour is a main causation factor cited in accident reports, with congestion and driver frustration exacerbating conditions for potential accidents;
- vehicular emissions that affect our health, quality of life, and natural environment;
- journey time delays which impact on personal wellbeing and quality of life increase costs for industry and the economy; and
- the condition and liveability of our streets and communities, with motor vehicles, notably large vehicles, dominating city streets, deteriorating road surfacing, and where pavement parking occurs, affecting the safety and overall experience for those of all abilities.

For these reasons, many cities are moving away from dependence on motor vehicles. Edinburgh's approach will provide the opportunity for everyone to have access to a range of transport options dependent upon their need.

Wherever they live in the city or within the wider city region, people need to have real choice as to how they travel. Too many vehicles on our roads affect the travel choices we can make and our ability to make efficient use of the space available in the city to move people and goods.

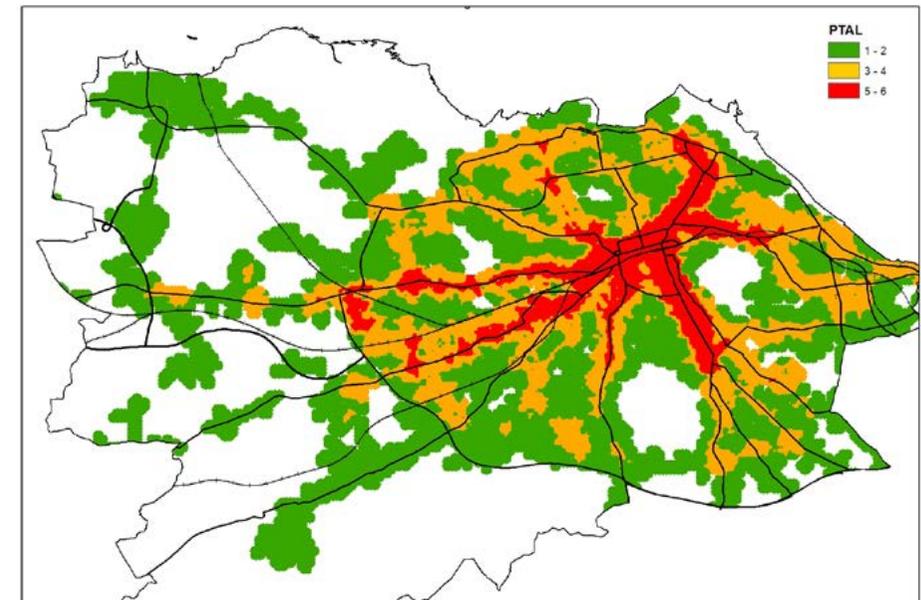
Public Transport

Edinburgh's public transport system has been ranked as second only to London in the UK, with modern, high quality and highly accessible tram and bus fleets. The majority of Edinburgh's population is well served by public transport in terms of both journey time and frequency of services, especially for journeys to/from the city centre. Travel by rail, both within the city and from outwith, has also increased over recent years.



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Time of journeys by public transport to/from city centre (red 0-10 mins., green 40-60 mins)



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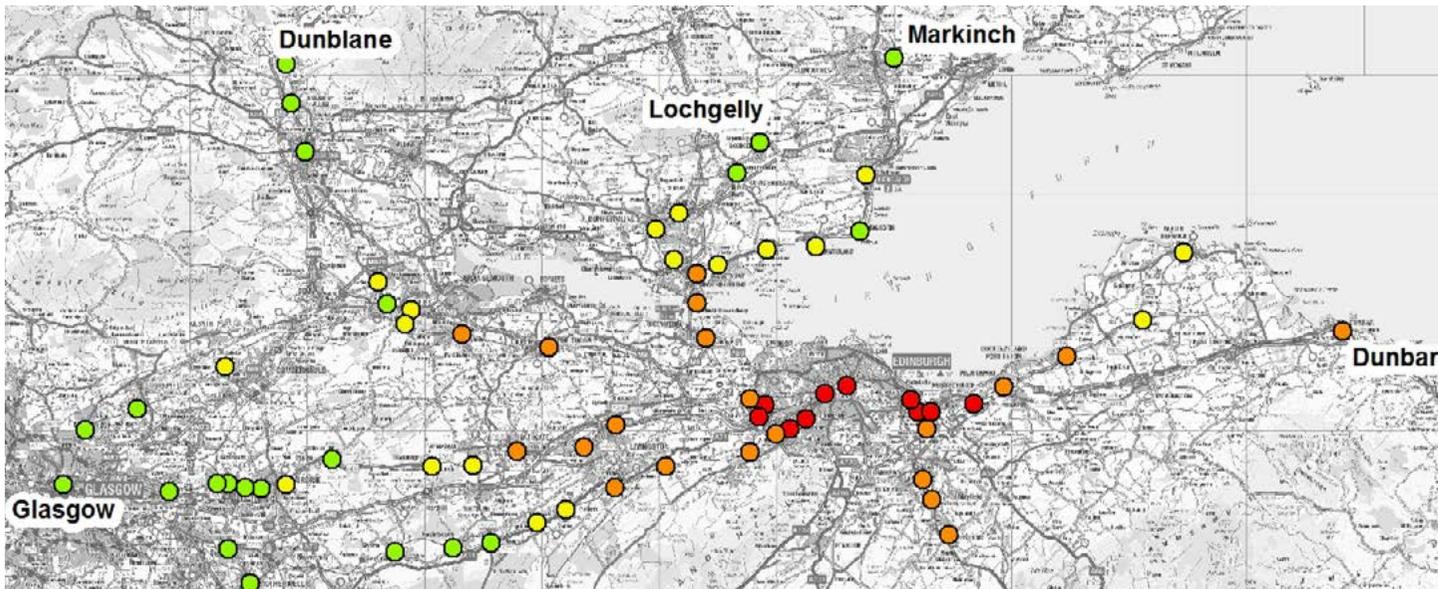
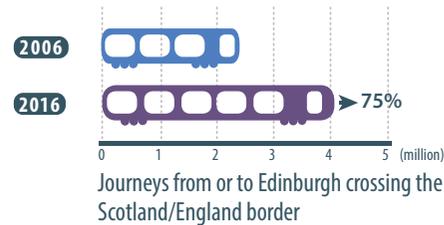
Areas very well served by public transport (red) to less well-served areas (green)

The bus and tram networks are effective in their own right. However the tram currently offers limited coverage of the city and the success of current bus operations has notable impacts upon the city centre, as virtually all services converge in the city centre. This contributes to congestion and journey time delays on key routes and impacts upon the environmental quality and attractiveness of the city centre.

Technology is having an impact on the way we use all forms of transport, driven by open data and smart devices that revolutionise transport information, access and planning. Automation and information can deliver significant efficiencies in the way we use and manage the existing transport network, resulting in cost savings for local authorities, residents, and businesses.

Vehicle automation is one of the leading discussion topics in transport technology. Autonomous vehicles are designed for safe and efficient journeys without the need for a driver. Advanced driver assistance systems, a step towards autonomy, are already built into most new cars and include self-parking, lane control and autonomous emergency braking systems.

Travel by rail



Rail journey times to Edinburgh city centre (red 0-15 mins., green 45-60 mins)

Widening the reach of public transport

To support journeys to and from work and reduce the need to travel in and out of the city centre, further orbital connections would be developed. By considering the areas of the city where employment is most densely concentrated, the non-central nature of many employment areas is clear (see map).

This could reduce the number of bus services passing through the congested city centre and journey times would be improved for communities living on the outskirts of the city by linking with park and ride and other de-centralised functions such as Edinburgh Royal Infirmary and the Bioquarter.

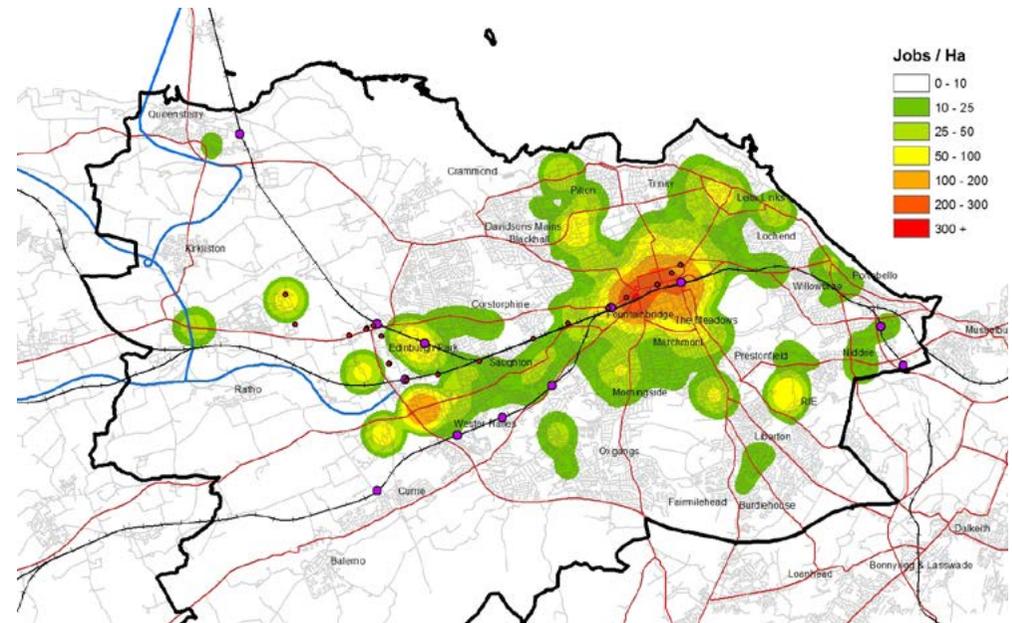
The city could incrementally realign how the public transport network operates, creating better connectivity between locations and modes of transport based on a better understanding of origin and destination data.

To maximise the potential benefits and reach of the tram, there is a need to **create a tram network serving key destinations**, which would mean connecting the four strategic development areas of the City Centre, West Edinburgh, the Waterfront and South East Edinburgh, including the Royal Infirmary/Bioquarter.

This would support growth in these key locations, while offering high capacity and high frequency public transport journeys across the city, reducing the volume of traffic coming into and across the city on a daily basis, particularly if the tram was further extended into the region.

The expansion of the tram network offers the opportunity to **realign the overall bus network** so that the two networks are co-ordinated in terms of routing and scheduling and better serve the needs of the city.

Bus services could be maximised in areas not served by the tram, and in time could be extended out into the growing city region. To support this, new bus priority corridors with extended timing and junction priority, would be provided.



Employment density across Edinburgh (jobs per hectare)

Offering more sustainable choices for longer journeys

Working with regional colleagues and the business community, the region's park and ride network could be expanded. New park and ride transport interchanges would be established to provide a more efficient route into the city centre and key employment centres for commuters. They would be based at key points around the city and would be linked to the regional bus, tram and rail networks.

Park and ride sites could be transformed to become transport interchanges which not only support public transport by increasing services at such locations, but could also provide charging infrastructure, electric bike hire and ancillary facilities such as kiosks and 'click and collect'. Such interchanges could also act as hubs for those living in peripheral areas which are currently less well-served by public transport.

13 Protecting the city's environment while supporting businesses

Management of freight and goods could be co-ordinated and integrated to reduce the impacts of large vehicles servicing different areas of our city.

Urban and regional consolidation centres for freight rationalisation are not new but could significantly reduce traffic congestion and pollution in Edinburgh.

A requirement for consolidation centres could be a condition of planning consents for new large commercial developments, as has been done elsewhere for example, in London.

Greener onward travel into the city and its communities could be achieved using smaller, lower emission delivery vehicles (such as low emission or electric vans, or cargo bikes) serving click and collect style delivery hubs close to where people live or work.

Access controls based on vehicle weight, type, size, emission standards and time of day could facilitate the removal of large vehicles from the city centre, and potentially local and town centres, Trader associations and Business Improvement Districts could adopt co-ordinated delivery and servicing arrangements to optimise movements and reduce impacts on residents and customers.

Whilst transformational, these approaches rely on partnerships between city-region authorities, operators and small and large businesses. They could initially result in increased operational costs, and might also require changes to legislation.



Image courtesy of Sustrans

Controlling the impact of commuter parking

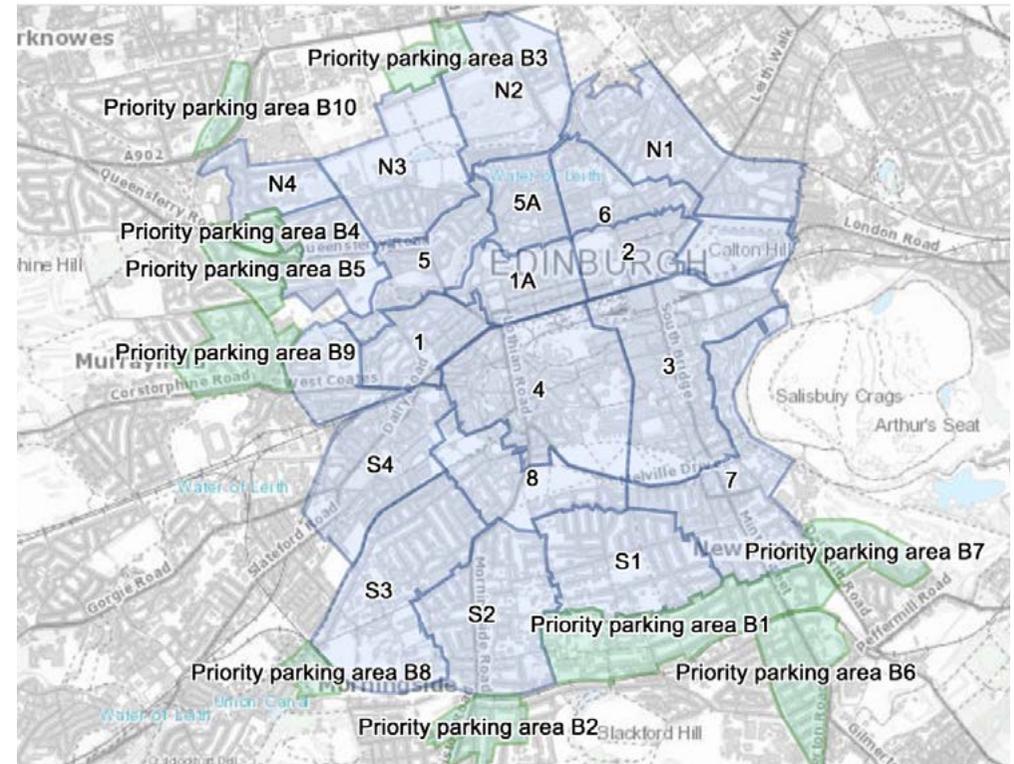
A **workplace parking levy** is an effective way of funding high quality public transport and facilities for active and sustainable transport. Businesses which provide free parking for employees pay an annual levy for every parking space they provide – any revenue collected is then used to provide alternative transport options to the car.

Nottingham was the first city in the UK to introduce a workplace parking levy. Introduced in 2012, the Nottingham scheme raised £25 million in its first three years - all of this was used to fund transport improvements such as extension of the tram system, improvements to the city's main railway station, creation of Europe's largest fleet of electric buses and funding for supported bus services.

To further reduce the impact of private car use across the city, and to help influence travel choices for those who have a choice, the existing **controlled parking zone** could be extended from its current coverage – surrounding the city centre – to cover a far broader area of the city.

This would help to manage the levels of on-street parking by those driving into, or across the city, who informally park for free on many of our residential streets around the boundary of the controlled zone, often using residential streets as informal 'park and ride' locations for onward public transport trips to places of work. This could also free up our streets for potential options such as car club spaces, charge point provision, or wider footways.

Both would dissuade non-essential driving trips into and across the city, while also raising vital funds to support public transport alternatives. The introduction of a workplace parking levy in Edinburgh would require a change in legislation in Scotland.



Edinburgh's Controlled Parking Zone

Looking to the future

The use of data and communications is already used strategically through traffic light systems, smart street lighting systems, variable messaging signs, and the provision of real time information in bus shelters and phone apps.

Connected vehicle technology allows vehicles to communicate with one another or with highway infrastructure and other appropriate technologies. Combining the connected and autonomous elements within vehicles potentially allows for safer, quicker and more efficient vehicle movement and infrastructure management.

Such changes in technology are taking place and Edinburgh should be prepared to play a more prominent role in the development of policy around connected and autonomous vehicles. The focus of this could be to encourage and provide infrastructure to support connected and **autonomous vehicles** that carry larger volumes of people or goods.

A more joined-up City Operations Centre could be created that uses technology and data to allow more proactive management in the city. This technology could provide an oversight of how the transport network is working and intervene to prevent congestion and ensure road safety.

Other technological advances guide drivers to parking spaces and reduce traffic circulation. One of the most common smart parking solutions is offered by app developers who embed smart parking sensors into road surfaces.

We could promote **smart app based services** such as a smart parking system. Such services could also be extended to identify electric charge point spaces in the city.

The use of sensor technology could be used to manage the collection of waste in order to have a more positive impact on the quality of our public spaces.



Image courtesy of Lothian Buses

Learning from other cities

Oslo

To reduce traffic emissions and provide for a 30% increase in the city's population by 2040, Oslo has introduced its 'Car Free City Life' programme. This will see vehicles restricted from a 1.3 km² area of the city centre within the city's inner-ring road.

The priority is to create a greener and more liveable environment in the city, where pedestrians and cyclists have priority over cars and public space is given to outside dining, culture, play, community groups and businesses. Oslo already has a high number of electric vehicles and low levels of car-based commuting, with 64% using public transport, 22% walking and 7% cycling to work.

Source: City of Oslo, Car Free City

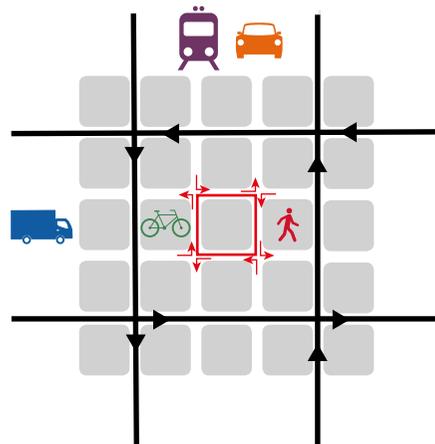


Barcelona

Barcelona is in the process of creating 300 km of new cycle lanes, aligning the bus network to within 300m of all homes, reducing road accidents and improving air quality and public health, including reducing levels of physical inactivity.

Through its Superblock Plan (Superillas) Barcelona's iconic 19th century city grid will be adapted to restrict traffic to the outside of every 9 city blocks, creating Superblocks. Inside each Superblock there will be one way entry for residents and businesses at 10 km/h and new public spaces for community life.

Source: Barcelona Urban Mobility Plan 2013-18



Copenhagen

The City of Copenhagen is using city growth and investment to modernise and continue to improve quality of life for residents. By 2020 it aims to create 20,000 new jobs, by 2025 it will be carbon neutral and by 2027 it will be home to an additional 100,000 Copenhageners.

Copenhagen began to pedestrianise its city centre in the 1960s, when its 1.15 km main street, Strøget, was closed to vehicles. This proved a huge success for public life, health and footfall in the city centre and gradually more streets and squares were pedestrianised. Today, Copenhagen is known for its cycle network and aims for 1/3 of journeys to be made by bike, at least 1/3 by public transport and no more than 1/3 by car.

Source: City of Copenhagen Municipal Plan 2015



Edinburgh: connecting our city, transforming our places