

Transport and Environment Committee

10.00am, Thursday, 1 March 2018

Edinburgh's Local Transport Strategy review

Item number	7.1
Report number	
Executive/routine	Executive
Wards	All
Council Commitments	C16, C17, C18, C19, C20, C21, C22, C26, C27, C48

Executive Summary

The current Local Transport Strategy (LTS) spans the period 2014-2019 and is now due for review.

This report sets out the process by which this will happen and the key issues that will be the subject of early consultation with stakeholders and the public.

Edinburgh's Local Transport Strategy review

1. Recommendations

- 1.1 To note progress made to date through Edinburgh's Local Transport Strategy 2014-2019.
- 1.2 To agree the arrangements for engagement with stakeholders and the public outlined in this report.

2. Background

- 2.1 Edinburgh's Local Transport Strategy 2014-2019 (LTS) is the Council's fourth, each spanning a five-year period.
- 2.2 In its current format (since 2010), it contains a series of action plans focusing on Road Safety, Active Travel, Public and Accessible Transport, and Parking to take forward transport policies, and to target resources and investment to meet the relevant LTS objectives.
- 2.3 Over the course of this period, major transport achievements included:
 - the launch of tram operations between the airport and city centre;
 - citywide 20mph limits;
 - assignment of 10% of transport budget to cycling;
 - development of segregated cycle routes/ QuietRoutes network development; and
 - the outward extension of priority parking areas.
- 2.4 These build on achievements of preceding LTSs, including Edinburgh Crossrail, Safe Routes to Schools, park and ride sites, bus priority corridors, and 'green man' phases and cyclist Advanced Stop Lines at most signalised junctions.

Related strategies

- 2.5 A new LTS will not be developed in isolation. It must be developed in the context of the 2050 Edinburgh City Vision and ensure strategic alignment to other Council projects such as Low Emission Zones, and Central Edinburgh Transformation, as well as the four Locality Improvement Plans, [Edinburgh's Local Development Plan 2016-2021](#), [Edinburgh's Sustainable Energy Action Plan 2015-2020](#), and Edinburgh 2020, the Edinburgh Tourism Strategy.

- 2.6 The LTS must also ensure policy alignment with the forthcoming National Transport Strategy (due late 2019), [SEStrans' Regional Transport Strategy 2008-2025](#), and [Transport for Edinburgh's Strategy for Delivery 2017-2021](#).

3. Main report

Context and trends

- 3.1 An understanding of the current transport and mobility situation in and around Edinburgh, sets the context for this review of the LTS.
- 3.2 Edinburgh's current transport and mobility trends include:
- lowest levels of car ownership in Scotland ([Scottish Transport Statistics, 2016](#));
 - stability in-terms of households with access to a car (60%), and the number of people with driving licences (65%) ([Scottish Household Survey, 2015](#));
 - marginal increases (1%) in vehicle distances travelled in Edinburgh, compared to a greater increase in distance travelled across Scotland (6%) ([Scottish Transport Statistics, 2016](#));
 - highest levels of cycling in Scotland (for both cycling as the main mode of travel, and for cycling journeys to/from work), ([Scottish Household Survey, 2015](#));
 - highest levels of bus use, and satisfaction levels with buses in Scotland (>25% of Edinburgh's adults use buses daily/almost daily, with 89% satisfaction levels), [Edinburgh by Numbers 2017](#); and
 - the city region accounts for 25% of Scotland's plug-in vehicles ([The City of Edinburgh Council Electric Vehicle Action Plan, 2017](#)).
- 3.3 Collectively these demonstrate positive results in respect of sustainable transport for the city. However, there remain opportunities to see improvement in the following areas:
- 3.3.1 19% of peak driving time in Edinburgh is spent in congestion, which adds 40% travel time to each peak time journey ([Inrix traffic scorecard report, 2016](#)). The cost of Edinburgh's congestion to the local economy is estimated at £225M per annum ([Tom Tom Traffic Index](#));
- 3.3.2 whilst road casualty levels in the city are reducing, there is opportunity to further reduce the levels of people killed and seriously injured (see appendix 1);
- 3.3.3 whilst air quality trends show slight reductions in nitrogen dioxide (NO₂) across Edinburgh, there are a number of roadside locations which exceed legal Air Quality Objectives (see appendix 2); and
- 3.3.4 levels of public transport accessibility to/from certain areas of the city, as well as journey time improvements, especially to/from the Bioquarter and Royal Infirmary of Edinburgh (see appendix 3 for both aspects).

- 3.4 A particular challenge facing Edinburgh and its transport system is the city growth forecast. Edinburgh is a successful, growing city; the fastest in Scotland, and one of the fastest in UK, with a 12% increase in population between 2006 and 2016. By 2039 the population is forecast to grow by a further 20% to 595,000 people. Not only is the population growing through net migration, but the population is also living longer, (22% of the city region's population is over the age of 65) which poses challenges to the public transport system through concessionary travel for this age group.
- 3.5 In terms of development of the city, and the city region, the [SESplan Cross Boundary and Land Use Appraisal study](#) (2017) forecasts that if all committed (and non-committed development) in the city region materialises then by 2024 the population will increase by 84,000 (7%); the number of households will increase by nearly 83,000 (15%); and the number of jobs will increase by 76,500 (14%).
- 3.6 The highest concentrations of population growth will be to the north and southeast of Edinburgh and in West Lothian and Midlothian. 66% of new jobs in the SESplan area are predicted to be in Edinburgh. Highest concentrations of employment growth will be in the city's south east (ERI/Bio-quarter and South-East Wedge) and western corridors (around Heriot-Watt, and Edinburgh Airport/Gateway/Ingliston).
- 3.7 One-third of the 285,500 people who work in the Council area commute from other LA areas (95,000), with two-thirds of these (63,300 commuters) doing so by private car ([Scotland's Census 2011](#)), primarily from West Lothian (18,900), East Lothian and Midlothian (both 18,400), and Fife (14,500). There is therefore significant car in-commuting to Edinburgh from the city region, associated in-part with the high prices of housing in Edinburgh.
- 3.8 Assuming all planned development materialises, according to SESplan (2017), the number of trips made by car in the city region will increase 13% by 2024 which, unless addressed, will lead to increased numbers of cars commuting into Edinburgh, exacerbating existing congestion issues.
- 3.9 A survey of traffic flows on over 140 roads in Edinburgh by SEPA (November 2016) as part of the National Air Quality Modelling Framework, identified roads with the highest levels of traffic flow (primarily cars), which are those connecting Edinburgh to Fife and West Lothian (and beyond): Queensferry Road, A8, Hillhouse Road, Glasgow Road, as well as Queen Street. It can therefore be concluded that there are clear pressures on Edinburgh from in-commuting car-traffic from the city region.

Sustainable Urban Mobility Planning

- 3.10 Edinburgh is part of a European network of cities dedicated to cleaner, better transport in Europe and beyond. This gives the city access to best practice examples across Europe.
- 3.11 The Council has successfully secured funding to participate in a two-year European Sustainable Urban Mobility Plans programme (SUMP – the European equivalent of an LTS) aimed at standardising the approach to strategic planning and improving the quality of existing transport strategies. The SUMP programme comprises

knowledge transfer between cities, testing and assessment, and learning spanning concepts, approaches, tools, and methodologies for developing SUMP/LTSs.

- 3.12 The LTS review is therefore framed by this best-practice EU programme. The review framework (see appendix 4) comprises four phases:
- 3.12.1 identify transport and mobility issues and opportunities ('Preparing well');
 - 3.12.2 identify measures/policies to overcome issues and contribute to city objectives ('Rational and transparent goal setting');
 - 3.12.3 enable adoption of the strategy/document ('Elaborating the plan'); and
 - 3.12.4 assess impacts of the strategy ('Implementing the plan').

This is the process that the Council will follow in its review of the LTS.

- 3.13 This report relates to the first two phases: identify transport and mobility issues and opportunities, and identify measures/policies to overcome issues and contribute to city objectives.

Review of current LTS: policies

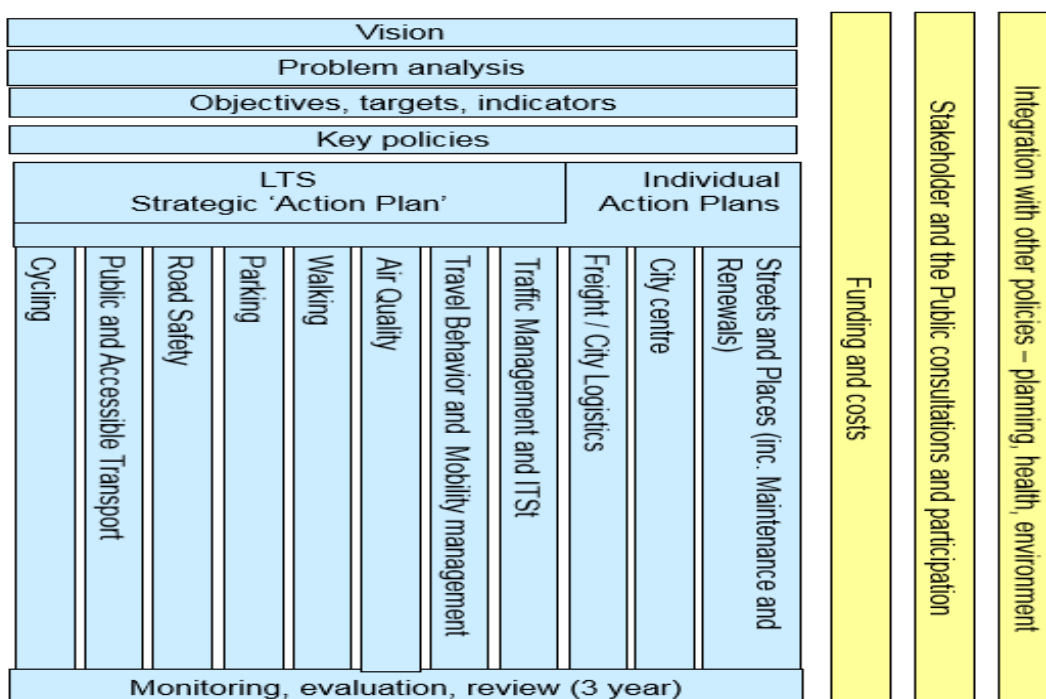
- 3.14 A starting point for a review of the LTS is an assessment of the current LTS.
- 3.15 Internal discussions and workshops and a review of the current LTS by Edinburgh Napier University's Transport Research Institute (TRI) have identified the extent to which policies address existing transport issues, highlighted above in paragraphs 3.2 and 3.3.
- 3.16 Findings include:
- 3.16.1 numerous policies exist to support a reduction in congestion and traffic levels in the city, ranging from planning and land use to influence design, to promoting sustainable and active travel, and managing levels of parking;
 - 3.16.2 road safety is relatively well covered with several policies explicitly covering safety and others including safety elements (e.g. parking policies);
 - 3.16.3 air pollution is covered by a small number of policies covering environment, freight connectivity; and
 - 3.16.4 car in-commuting is served by a small number of policies i.e. improvements to park and rides, and working with SEStran to promote car sharing.
- 3.17 The current LTS is therefore relatively strong in terms of the number of policies covering the management of private cars, and road safety. Cross boundary travel is reflected reasonably, though opportunities exist to expand on this. Similarly, there is a need to review the policies covering air pollution to reflect recent legislative changes.
- 3.18 Air quality on the whole merits a higher profile within the updated strategy, as the Scottish Government, through the [Cleaner Air for Scotland](#) action plan, proposed the introduction of four low emission zones (LEZs) in Scotland's biggest cities. This has clear implications in Edinburgh, and also for the LTS. The Council is committed to the introduction of a LEZ in Edinburgh by April 2019.

3.19 Any update of the LTS should cover LEZs in greater detail, as well as the policy areas of tram extension, and new modes of transport such as Mobility as a Service (transport services tailored to meet users’ particular needs) and ridesourcing.

Review of current LTS: processes

3.20 The SUMP framework sets out an idealised framework for an LTS (see Appendix 5) and this will form the basis of the new LTS. Essentially it emphasises the need for a golden thread between the vision, objectives, transport and mobility issues, policies, targets, indicators and action plans. This was also identified by the TRI review.

3.21 It is therefore proposed that the LTS is based on the structure below:



Vision

3.22 Scotland’s National Transport Strategy (NTS) is also undergoing a review, with an anticipated completion date of summer 2019. As part of the national review, the following draft vision for transport was proposed: *‘Scotland will have a cleaner, inclusive and accessible transport system delivering a healthier, prosperous and fairer nation for communities, businesses and visitors’.*

3.23 It is recommended that the LTS contains a draft vision which reflects the national position, to ensure a clear link between the local and national context.

3.24 The LTS also needs to help realise the evolving 2050 Edinburgh City Vision and its themes of connected, fair, inspired and thriving.

3.25 The suggested draft vision for the LTS is therefore:

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.

Objectives

- 3.26 For the most part the objectives outlined in the existing LTS will be adopted into the new one with some adaptation of the wording.
- 3.27 Updated objectives are listed below:
- reducing environmental impacts;
 - improving public health;
 - supporting economic growth;
 - improving efficiency;
 - improving physical accessibility;
 - improving safety and security;
 - improving inclusion and integration; and
 - improving quality of life.
- 3.28 This includes a new objective on 'improving quality of life'. Two others, 'customer focussed' and 'effectively maintained' will still be part of the LTS but are best fitted elsewhere in the framework.

Issues and opportunities for consultation

- 3.29 Early engagement with staff and stakeholder groups as well as a review of movement related comments from recent consultation on 2050 Edinburgh City Vision and Locality Improvement Plans has provided a significant amount of information. This has been collected into appendix 6 and is set out under the headings of Issues and Opportunities.
- 3.30 The issues are grouped under the headings of Motor Vehicles, Public Transport, Active Travel and Freight. It is proposed to use this as the basis for the next stage of engagement.
- 3.31 The consultation will be focussed on agreeing issues and a range of opportunities or actions to address the issues.
- 3.32 This consultation will be carried out as part of a wider engagement on issues impacting on Central Edinburgh Transformation and the development of a Low Emission Zone.

Next steps

- 3.33 An opportunity will be taken to undertake collective engagement on the inter-related projects scheduled to be developed during 2019; the LTS, the LEZ and City Centre Transformation, as well as very early engagement for the LDP. This collective approach would make better use of Council resources and seek more effective engagement as respondents will feel part of a process aiming towards the 'bigger picture', by helping to shape our future city.

- 3.34 This citywide engagement, pending Committee approval, will take place between March - June 2018 with earlier consultation through stakeholder groups and a later 'open' consultation. A report to the next committee will detail the latter process.
- 3.35 Engagement findings, and assessment of measures/packages will then be reported to Committee later in the year, alongside a draft updated LTS. The final version of the updated LTS is intended to be reported back to Committee by March 2019 for approval.

4. Measures of success

- 4.1 A successful LTS must make it safer and easier for people to move around the city in a manner that supports a high quality of life for Edinburgh residents and addresses issues of environmental and economic sustainability. The strategy must aim to work for everyone irrespective of age, income, disability or background.
- 4.2 The measures of success in terms of the work specified in this report relate explicitly to the identification of relevant citywide transport and mobility issues and opportunities to be addressed by an updated strategy.
- 4.3 Success will also be through the development of an effective consultation process, to ascertain the views from a broad spectrum of stakeholders and citizens. In the context of the Year of Young People 2018, their views will be actively sought. Particular efforts will be made to ensure input from the third sector, and from Community Planning partners across the four Council localities, to reflect their needs, and the needs of vulnerable groups who may not have historically been involved in transport strategy development.

5. Financial impact

- 5.1 The TRI review of the LTS cost £3000 which was funded by the Council's Smarter Choices Smarter Places allocation for 2017/18.
- 5.2 The Council will receive 13,000 Euros in funding from the European Union covering all costs of participation as a leadership city in the two-year SUMP programme.

6. Risk, policy, compliance and governance impact

- 6.1 The LTS must look beyond Edinburgh's administrative boundary, as much of the pressures on the city's transport system are attributable to people travelling into the city, especially from across the wider city region, for work and leisure purposes.
- 6.2 Responsibilities and relationships with key stakeholders representing the wider city region therefore need to be developed through the review, including SEStran and SESplan (South East Scotland's regional transport, and planning, partnerships), Transport for Edinburgh, and neighbouring local authorities.

- 6.3 Due to the LTS' strong dependencies with the LDP, the SEAP, and the Low Emission Zone and Central Edinburgh Transformation projects, the LTS review must not be viewed as an individual project. Governance of these projects is being brought together while common benefits are identified.

7. Equalities impact

- 7.1 An Integrated Impact Assessment will be undertaken for the Local Transport Strategy when potential options/policies have been formed and a consultation draft strategy is being produced.
- 7.2 However, early consultation will involve relevant stakeholder groups to ensure the needs of all groups are taken into account. One of the first of these is with the Access Panel which will take place in April 2018.

8. Sustainability impact

- 8.1 The impacts of this report in relation to the three elements of the Climate Change (Scotland) Act 2009 Public Bodies Duties have been considered, and the outcomes are summarised hereafter.
- 8.2 The proposals in this report will reduce carbon emissions as the Strategy's principal aims will include both reducing the need to travel and achieving a shift from car to more sustainable modes of transport. Where car use is considered, the Strategy will aim to increase use of zero and low emission vehicles. All of these aims will result in reduced carbon dioxide and nitrogen oxide emissions.
- 8.3 The proposals in this report will increase the city's resilience to climate change impacts because outcomes of some of the Strategy's principal aims will include lower levels of fossil fuel car use, higher levels of active and sustainable travel and increased use of zero emission vehicle use, all of which will reduce harmful transport related emissions and help Edinburgh to adapt to climate change.
- 8.4 The proposals in this report will help to achieve a sustainable Edinburgh because the Strategy will aim to ensure equal access to public transport for all citizens and communities in Edinburgh, thus enhancing social inclusion and equality of opportunity. It will also aim to increase levels of active travel which promote personal wellbeing.

9. Consultation and engagement

- 9.1 The identification of issues and opportunities outlined in this report have been informed by feedback received via myriad recent engagement exercises including 2050 Edinburgh City Vision, Locality Improvement Plans, Local Development Plan, Old and New Towns of Edinburgh World Heritage Site Management Plan, Edinburgh Design Guidance, and Public Life Street Assessments.

- 9.2 Issues and opportunities have also been informed through reviewing a broad range of European best-practice, and a range of National travel statistic sources (sourced throughout this report), participation in SUMP workshops and e-courses, and conference attendance: Scotland's National Transport Strategy, and Sustainable Transportation in Scotland.
- 9.3 Internal workshops attended by up to 80 officers from a range of Council service areas, were a primary method of early review and engagement.
- 9.4 Specific meetings were also held with:
- Transport Scotland (*National Transport Strategy, freight management, and cross-boundary transport study*);
 - SEStrans (*Regional Transport Strategy, and associated projects*);
 - neighbouring local authorities (*Sherifhall junction upgrade, and planned development to the south east of the city*);
 - Community transport providers (*community transport linkages with the LTS*).
- 9.5 Collectively, these early engagement approaches have ensured that a breadth of views, and potential approaches, have fed into the review to-date, providing an informed basis for the development of issues and opportunities that will be the main pillars of the broader citywide engagement exercise.
- 9.6 Engagement approaches to be undertaken in the proposed consultation period are:
- 9.6.1 through a spatial approach to engagement (i.e. city centre, the four localities, at the regional level), explore the identified issues and seek views on new policy options/packages available to address the issues;
- 9.6.2 seek views on the draft vision and objectives for transport and mobility in contributing to the 2050 Edinburgh City Vision; and
- 9.6.3 target young people, and community planning partners, through engagement.

10. Background reading/external references

- 10.1 [Local Transport Strategy 2014-2019](#), report to Transport and Environment Committee, 14 January 2014
- 10.2 [Developing a New Local Transport Strategy: Issues for Review](#), report to Transport and Environment Committee, 15 January 2013
- 10.3 [SUMP Self-Assessment Process \(2015\)](#)
- 10.4 [SUMP Guidelines \(2014\)](#)
- 10.5 [2050 Edinburgh City Vision, one year on](#)
- 10.6 [Transport Scotland: SESplan Cross Boundary and Land Use Appraisal](#) – Final 2017

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11. Appendices

Appendix 1: Road safety casualty trends

Appendix 2: Air quality locations

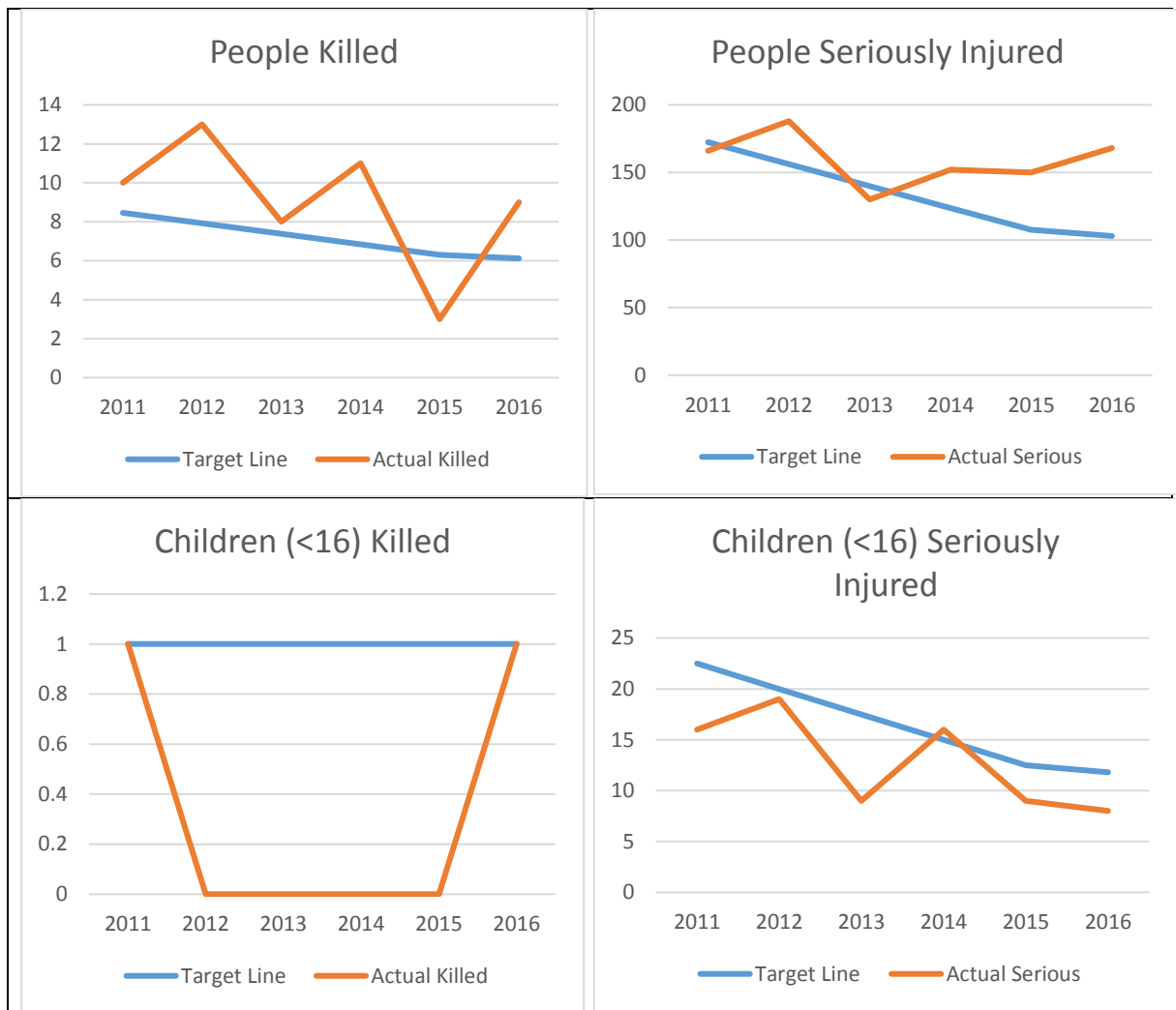
Appendix 3: Accessibility levels

Appendix 4: Sustainable Urban Mobility Planning framework

Appendix 5: SUMP LTS structure

Appendix 6: Issues and opportunities identified through early engagement

Appendix 1 - Road safety casualty trends



Appendix 2 - Air quality locations

The table below shows the roadside locations within Edinburgh's Air Quality Management Areas (AQMA) where in 2016, nitrogen dioxide levels equalled, or exceeded, Annual Mean Nitrogen Dioxide Objective (40µ/m³). This demonstrates that although levels were at the limit at six locations, levels exceeded limits at 27 roadside locations

Site ID	Site address	Data Capture (%)	Annual mean concentration µg/m ³
Central AQMA			
76b	Angle Park Terrace 74	100	44
76	Angle Pk/Harrison Rd	92	43
48c	Cowgate Blackfriars	92	40
48e	Cowgatehead 2	58	41
25	Easter Road/CH Shop	42	46
37a	Grassmarket 41	71	53
HT1	Haymarket Terrace	75	42
74g	Leith Street 35	100	59
21	Leith Walk/Brunswick Rd	75	40
20	Leith Walk/McDonald Rd	92	40
67	London Rd/Earlston Pl	100	41
81	London Rd/E. Norton Pl	83	57
70	London Rd/Wolseley Terr	100	40
135	Nicolson Street 69	92	46
27	North Bridge – South	92	53
47	Princes Street Eastbound	100	48
24	Princes Street/Mound	75	42
144	South Bridge 59	83	50
3b	Torphichen Place 1	100	44
3	Torphichen Place CH	92	50
2	West Maitland Street	100	42
28d	West Port 42	75	51
28b	West Port 62	50	59
28c	West Port Opposite 50	75	44
Glasgow Road AQMA			
58	Glasgow Rd Newbridge	100	41
15	Glasgow Rd Newbridge	83	40
Inverleith Row AQMA			
55	Inverleith Row	92	41
Great Junction Street AQMA			
9d	Commercial Street	100	42
30	Great Junction St/FV	92	42
30c	Gt Junction Street 14	75	40
St John's Road AQMA			
1d	St John's Road 131	100	45
ID5	St John's (automatic data)	97	53
Outwith any AQMA			
64	Queensferry Road 550	100	44

* Bias Adjustment Factor for Passive Diffusion Tube data = 0.77

Note: Data capture figures refer to the amount of data collected at each site over a one year period.

Source: City of Edinburgh Council, Air Quality Annual Progress Report 2017

Appendix 3 - Accessibility levels

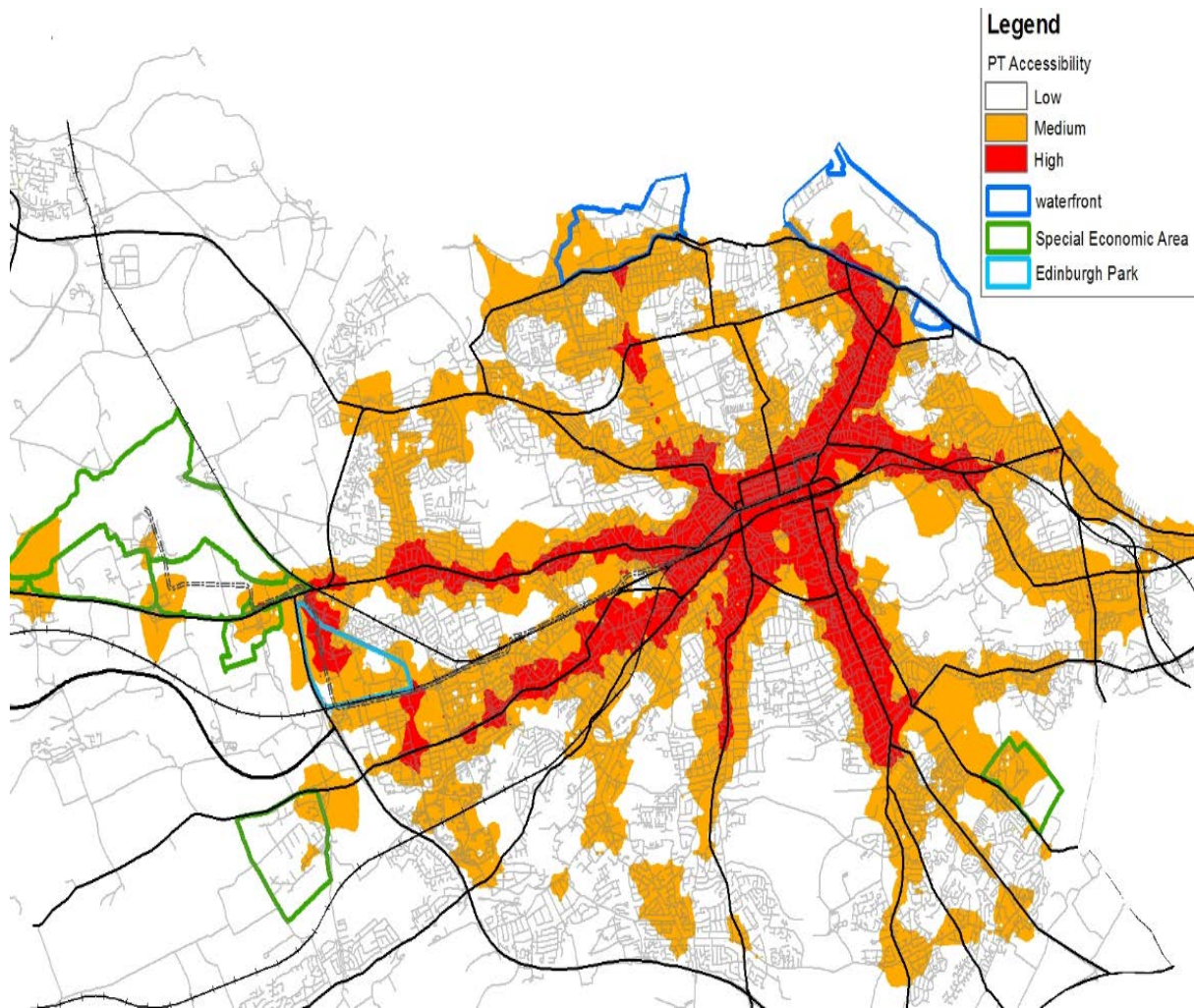


Figure 1 illustrates areas of Edinburgh with high (red) and medium (orange) levels of public transport accessibility - this is derived from a combination of a locations walk time to/from a bus or tram stop, and the frequency of services that use that stop. Importantly from an accessibility perspective are the white areas, especially the white areas where there are areas of population, as these are areas with poor public transport accessibility.

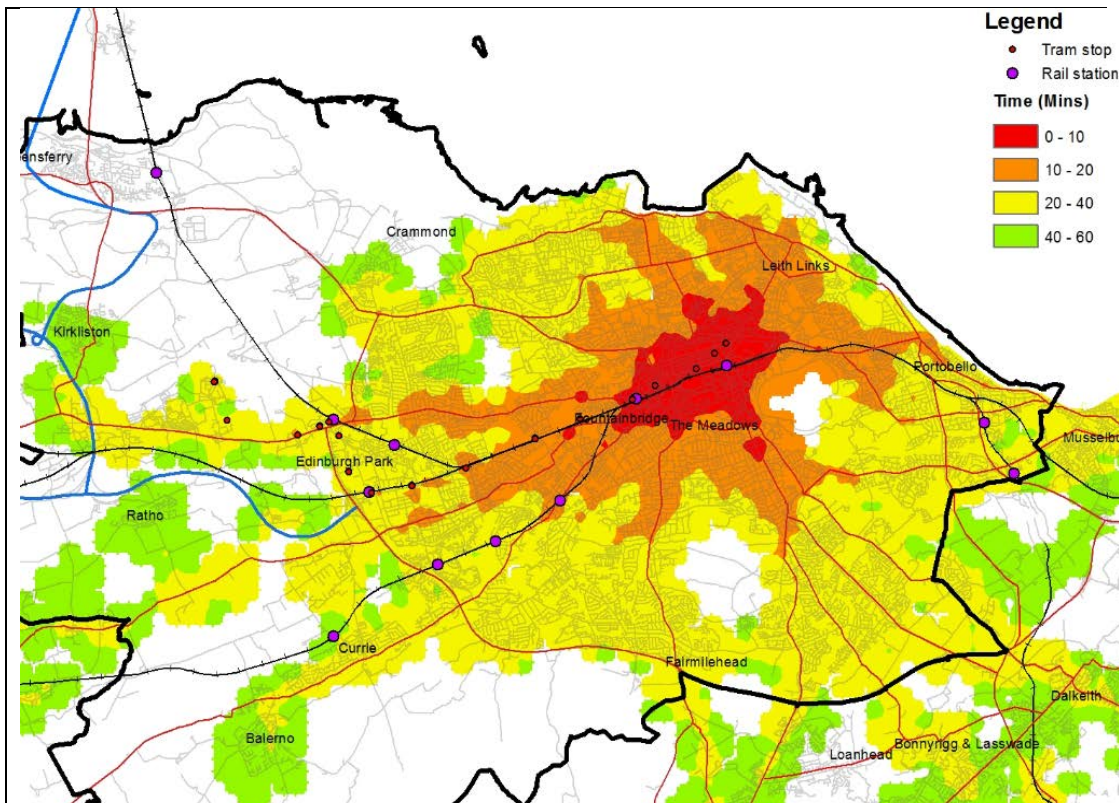


Figure 2 Public transport journey times to/from city centre: shows that the majority of Edinburgh residents can travel to/from the city centre using existing bus or tram services within 40 minutes. It highlights however some areas where such journeys take up to 60 minutes, or longer.

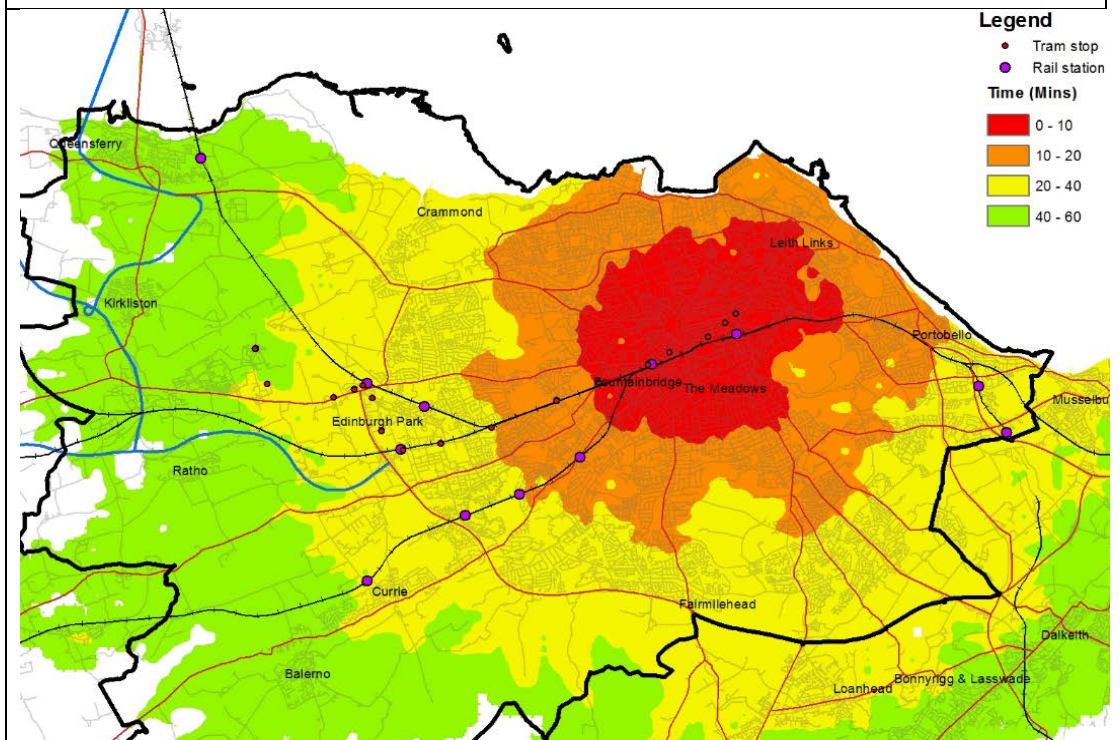


Figure 3 Cycle journey times to/from city centre: shows that nearly all Edinburgh residents can access the city centre by bicycle within 60 minutes (assuming average physical ability and average cycle speeds). It shows that most of Edinburgh's population could potentially undertake a cycling journey to/from the city centre within 40 minutes.

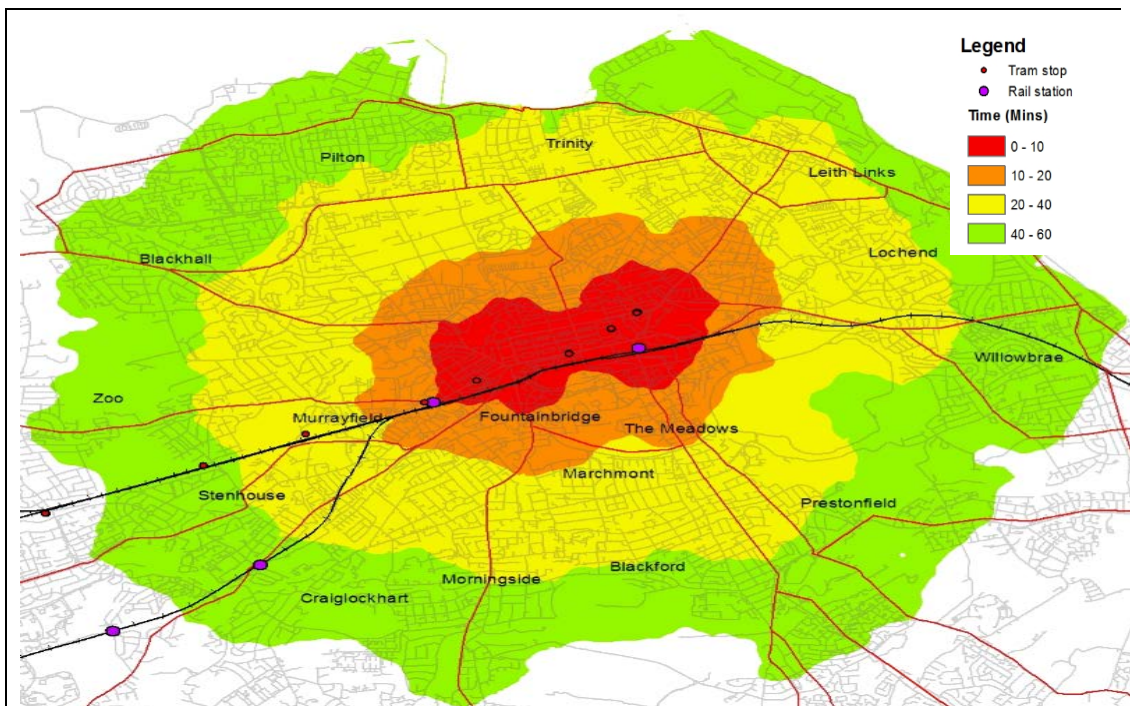


Figure 4 Walking journey times to/from city centre: highlights the extent of the city which is walkable within 60, 40, 20 and 10 minute periods (based on average physical ability and average walking speeds). For example it is possible to walk between the city centre and Leith, Granton, Craiglockhart, Craigmillar, Pilton or Corstorphine within 60 minutes.

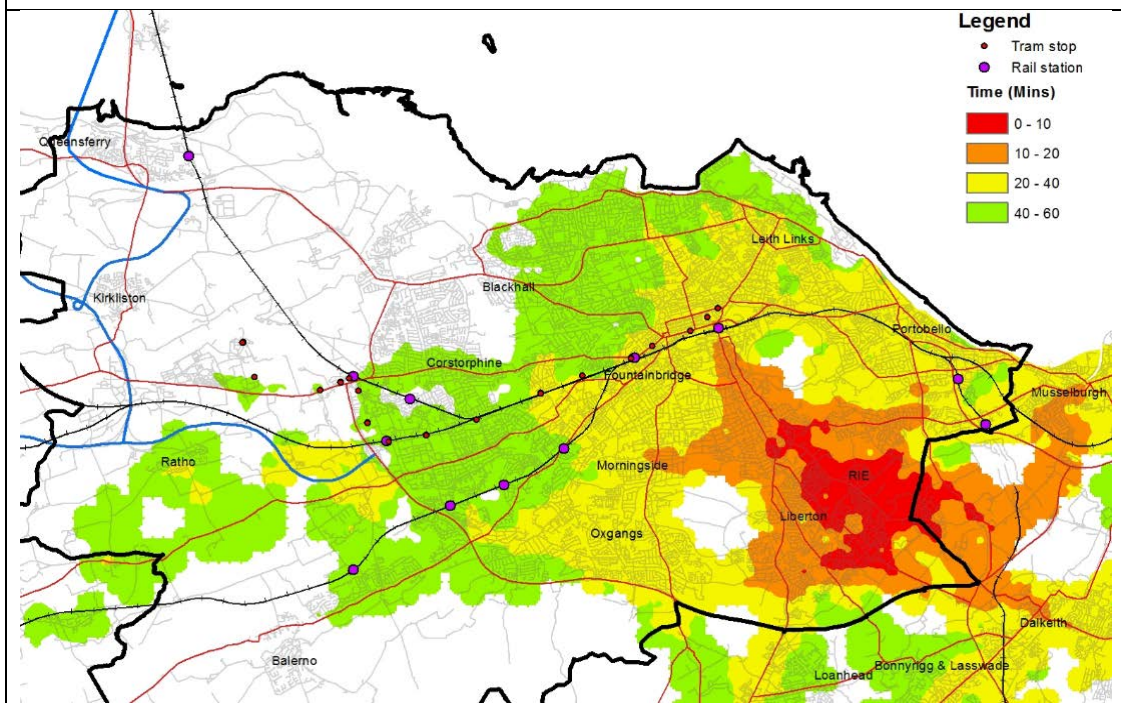


Figure 5 Public transport journey times to/from Royal Infirmary of Edinburgh: identifies significant issues with bus journey times to/from the hospital, with journeys to/from most parts of the city taking up to 40 minutes, and a large amount of the city taking up to one hour. Numerous areas to the west and north west of the city face journeys over one hour.

Appendix 4 - Sustainable Urban Mobility Planning framework



Appendix 5 – SUMP LTS structure

A revised LTS for Edinburgh should contain:

- a clearly set-out vision aligned to the 2050 Vision, which should supersede the Transport Vision 2030;
- an analysis of transport-related problems;
- objectives clearly aligned to the 2050 Vision, whilst aiming to incorporate most of the Transport Vision 2030 objectives as they continue to be relevant;
- objectives focused on the overall improvement the City wants to see, not on the means to achieve such improvement, thus 'customer focused/innovative Council services', and 'effectively maintained' (in current LTS) should not be objectives, whilst 'Quality of Life' should be;
- fewer objectives (as the current LTS includes objectives and sub-objectives), and four or five effective targets to reflect best practice (current targets are limited to modal split and road safety);
- a longer timeframe than currently to provide the strategic framework for action plans, and a sufficient period over which meaningful evaluation can occur (the National Transport Strategy, for example, covers a 20 year period);
- to be strategic in nature, and comprise two main sections: a strategic policy context, then a 'Strategic Action Plan' containing objectives, policies and key actions linked to individual action plans;
- to emphasise the ability of policies to deliver against a range of objectives;
- to focus on policies which guide how actions will be selected and implemented, as opposed to actions (many contained in the current LTS i.e. Policy Safe5 - proceed with a programme of reducing speed limits) which should feature in an implementation plan, or action plans;
- integration with other policy areas i.e. health, environment, land use planning;
- sections covering consultation, funding (potentially through the Council's Smarter Choices Smarter Places allocation), costs, and review; and
- new action plans, for example Air Quality, while existing action plans should be reviewed and updated, with all containing relevant LTS policies to explain the choice of action in each.

Appendix 6 - Issues and opportunities identified through early engagement

Motor vehicles

Issues	Opportunities
<ul style="list-style-type: none"> • Congestion / traffic • Number of cars in city / city centre • Traffic/congestion inhibits public transport • Road safety • Air pollution • Car parking pressures • In-commuting from outside Ed. • Road surfacing quality 	<ul style="list-style-type: none"> • Congestion charging • Workplace parking levy • Traffic free pedestrian only areas • Remove all, or through car traffic from key city centre streets • 'Car Free' days • City centre parking reduction • Autonomous vehicles • Speed limit review >20mph streets • Electric vehicles • Low emission zone(s) • Zero emission / quite zones • Use of GPS technology/apps to track traffic • Smart traffic management systems • Smart parking • Alternative models of ownership i.e. Mobility as a Service / car club • Road improvements / resurfacing

Public transport

Issues	Opportunities
<ul style="list-style-type: none"> • Lack of tram and bus integration • Many buses follow same routes/ same time: congestion hot spots • Gaps in bus network • Limited tram network • Cost of public transport too high • Complexities of regional public transport ticketing • Connectivity to employment centres i.e. Bioquarter 	<ul style="list-style-type: none"> • Integration of public transport systems • Tram extension/network development • Orbital bus route • Strengthen east-west bus links • Regional bus services • Reduced fares for longer PT journeys, &/or multi-mode trips • Employers: free staff bus travel • Improved PT reliability/journey times • Increased P&Rs: target in-commuting • Connectivity between existing P&Rs • Smart ticketing / contactless payment • Integrated ticketing across all PT • Flexible ticketing, not a flat rate • Electric buses & electric taxis • Community-run buses/demand responsive transport • Public transport hubs

Active travel

Issues	Opportunities
<ul style="list-style-type: none"> • Lack of pedestrian priority • Pedestrian and cyclist safety • Car dominated street design • Pavement clutter: barrier to walking/cycling/reduced mobility • Footway maintenance concern • Lack of secure cycle storage • Gaps in cycle path network • Cycle path maintenance 	<ul style="list-style-type: none"> • Prioritise pedestrians, then cyclists • Plan for people not cars: social space • Create more pedestrian only spaces • Wider pavements/wider shared paths • Strategic walking routes • Street upgrades as part of renewals • Integration of PT and cycling • Investment in wheelchair/mobility friendly pavements • Roll-out accessible road crossings • Reduce street clutter / furniture • Prevent / enforce pavement parking • Safe/accessible segregated cycling • Wheelchair use of seg. cycle routes • On-street cycle storage / lockers • Citywide bike hire scheme • E-bikes • Cargo bikes • Whole life costing for all schemes: ensures maintenance provision

Freight

Issues	Opportunities
<ul style="list-style-type: none"> • Inappropriate vehicle sizes and operations in areas of high pedestrian activity • Cycle safety • Air quality • HGVs damage streets 	<ul style="list-style-type: none"> • Night time or 'off-peak' deliveries • Reduced freight vehicle sizes • Urban/ micro distribution centres • Regional consolidation centres • Truck free deliveries – e.g. movement to bike • Low emission zones