

Edinburgh Street Design Guidance Interim Integrated Impact Assessment

Summary Report Template

Each of the numbered sections below must be completed

Interim report	✓	Final report	
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(Tick as appropriate)

1. Title of plan, policy or strategy being assessed

Edinburgh Street Design Guidance (ESDG) and Factsheets:

This interim IIA includes assessments on following approved and published Factsheets:

1. [C1 - Designing for cycling](#)
2. [C2 - Cycle lanes](#)
3. [C4 - Segregated cycle tracks - Hard segregation](#)
4. [C5 - Contraflow Cycling](#)
5. [F1 - Street furniture](#)
6. [F2 - Seating](#)
7. [F3 - Signage](#)
8. [F6 - Street Lighting](#)
9. [G1 - Street geometry and layout](#)
10. [G3 - Omitting centre lines](#)
11. [G4 - Crossings Version 1.2](#)
12. [G6 - Speed reduction and traffic management](#)
13. [G7 - Priority Junctions - Version 1.1](#)
14. [M1 - Footway and surfacing materials](#)
15. [M2 - Asphalt footway](#)
16. [M3 - Footway paving](#)
17. [M4 - Tactile paving](#)
18. [M5 - High friction surfacing](#)
19. [P1 - Street as a place](#)
20. [P2 - Promoting pedestrian movement](#)
21. [P3 - Footways - Version 1.1](#)
22. [P4 - Vehicle Crossovers](#)
23. [P5 - Pedestrian guardrail](#)

24. [P6 - Footpaths](#)
25. [P7 - Minimising Street Clutter - Version 1.1](#)
26. [PT 1 - Designing for Public Transport](#)
27. [PT 2 - Bus Stops](#)
28. [PT 3 - Bus Priority](#)

As well as the following proposed draft Factsheets:

29. C6 - Cycling in new developments
30. C7 - Cycle Parking
31. C8 - Shared cycle and pedestrian paths
32. G2 - Carriageway Widths
33. G9 - Parking and Loading
34. F4 - Waste Management
35. F5 - Street Trees

The following remainder of the Factsheets will be included in the final version of the IIA.

36. P8 Pedestrian (priority) Streets
37. P9 Play Streets and street closures (filtered permeability)
38. C3 Segregated Cycle Tracks – Soft Segregation
39. C9 Cycling and Tram
40. G2 Carriageway Widths
41. G8 Junctions
42. G9 Parking and Loading
43. G10 Road Bridges
44. G11 Road Construction Consent (RCC)
45. G12 Road Markings
46. G13 Temporary Traffic Management: Providing for Pedestrians and Cyclists
47. G14 Maintenance / Whole life Planning
48. G15 Design of historic streets
49. F4 Waste Management
50. F5 Street Trees
51. M6 Setted Streets: Providing for Walking and Cycling
52. W1 Drainage

The ESDG and its Factsheets are available to download at <https://www.edinburgh.gov.uk/downloads/download/13723/edinburgh-street-design-guidance>

2. What will change as a result of this proposal?

The ESDG sets out the overall design principles on various types of streets and provides detailed design guidance in line with the Council's and the Government's policies for streets and brings together previously separate Council guidance on street design to achieve coherence and co-ordination across the city with the ultimate goal of providing the people of

Edinburgh with a world class network of vibrant, safe, attractive, effective and enjoyable streets. The key design changes that the guidance brings in Edinburgh is detailed in the Guidance document (see above links) and to the Committee report in 2015 (City of Edinburgh Council, 2015).

3. Briefly describe public involvement in this proposal to date and planned

A programme of public and stakeholder consultation and engagement, targeted at key user groups, was employed to develop the draft guidance to its final form. Residents, key stakeholders and interested parties were asked to comment and encouraged to focus on key issues through a series of targeted questions using a survey monkey questionnaire. The consultation also sought to identify, through workshops and review sessions with groups and organisations, where there were key street issues to address.

An experts review workshop and additional targeted consultation with the key internal and external users contributed to, and informed the final version of, the Guidance document and will continue informing the detailed Factsheets. A detailed consultation report was submitted to the relevant committees in 2015 detailing all these.

Since then a series of internal feedback meetings, presentations and further 3 Edinburgh Access Panel consultation meetings have been undertaken with the Edinburgh Access Panel and other stakeholders on specific aspects of the Factsheets. The following summarises the nine key phases of the ESDG consultation activities that have been used to inform the development of the ESDG and its Factsheets since its initiation 2011.

- Phase 1 - Establishing the scope of the review (2011-2013)
- Phase 2 - Awareness raising/testing (2011-14)
- Phase 3 - Public and stakeholder consultation (2014) including the Edinburgh Access Panel presentation and feedback, 2014
- Phase 4 - Awareness raising and reviews with the interest groups and external experts (2014)
- Phase 5 - Road testing the guidance with internal and external user groups (2015)
- Phase 6 – Presentation of the ESDG to the Council Committees for their approval (2015)
- Phase 7 Factsheet consultation and feedback sessions with council officers (2016-17) and Edinburgh Access Panel members (in 2016, 2017 and 2019)
- Phase 8 – The ESDG and Factsheets drop-in surgeries and presentations (2017)
- Phase 9 –Practitioner training sessions with the help of the Access Panel members, feedback surveys and best practice site visits (2018-19)

Alongside the ESDG activities listed above, the factsheet development has been informed by the results of the on-going major projects' public and stakeholder consultation exercises. This is because similar design features (for cycling, walking, street geometry and public transport) have been proposed and/or explored by the public and stakeholders in these projects. These include but not limited to the City Centre West to East (Cycle) Link, Edinburgh City Centre Transformation Strategy and City Mobility Plan etc.

The key principles and design aspects of the first 35 Factsheets listed in [Section 1](#) were discussed with Edinburgh Access Panel over the course of three workshops as part of the equality impact assessment reviews undertaken to date. Findings of these workshops have been reflected in the content of the Factsheets.

Planned Future Consultation

Council officers' experience and feedback from their on-going projects will contribute to the understanding of the user needs to improve the quality of the guidance provided.

Further meetings with the Edinburgh Access Panel (and other targeted stakeholders) and the Consultation Phases 7-8-9 will continue when developing the future proposed Factsheets for the Council's approval.

4. Date of IIA

Initial meeting in 2015 followed by additional meetings to review emerging findings and recommendations for this IIA.

5. Who was present at the IIA? Identify facilitator, Lead Officer, report writer and any partnership representative present and main stakeholder (e.g. NHS, Council)

As this is an on-going assessment, the following external consultant and internal officers contributed in the ERIA (2015 assessment included the approved ESDG and 2017 assessment also included 22 Factsheets) and to this IIA (2020 assessment included additional 13 Factsheets) for the ESDG (dates in brackets).

Name	Job Title	Date of IIA training	Email
Clive Brown (2015)	Transport Diversity Officer		No longer employed by the Council
Nazan Kocak (2015) (2017) 2019	Facilitator Transport officer Edinburgh Napier University Transport consultant Atkins	2015 ERIA training	Kocak_nazan@yahoo.co.uk
Karen Stevenson (2015)	Planning		No longer employed by the Council
Allan Hutcheon (2015)	Transport		No longer employed by the Council
Richard Llewellyn (2015)	Edinburgh Napier University		No longer employed by the Council
Tom Rye (2017)	Edinburgh Napier University		No longer employed by Napier
April Redford (2017)	Atkins		No longer employed by Atkins
Phil Noble 2015, 2017, 2019	Lead officer Transport Active Travel	2020	Phil.noble@edinburgh.gov.uk
Lorna Henderson	Road Safety Officer	2019	Lorna.henderson@edinburgh.gov.uk
Eileen Hewitt	Transport Officer (Active Travel)	2019	Eileen.hewitt@edinburgh.gov.uk

6. Evidence available at the time of the IIA

Evidence	Available?	Comments: what does the evidence tell you?
Data on populations in need	<ol style="list-style-type: none"> 1. National Records for Scotland 2018 Mid year estimates 2. City Centre Transformation Strategy (CEC CCTS IIA Appendix A, 2019) 	<p>Population¹ City of Edinburgh had the 2nd highest population in 2018, out of all 32 council areas in Scotland. On 30 June 2018, the population of City of Edinburgh was 518,500. This is an increase of 1.0% from 513,210 in 2017. Over the same period, the population of Scotland increased by 0.2%. Between 2016 and 2026, the population of City of Edinburgh is projected to increase from 507,170 to 546,444. This is an increase of 7.7%, which compares to a projected increase of 3.2% for Scotland as a whole. Appendix A² details data on age, disability, gender, pregnancy and maternity, deprivation, race, sex and sexual orientation in Edinburgh.</p>
Data on service uptake/access	<ol style="list-style-type: none"> 3. Census 2011 – Transport and Travel (CEC, 2013) 4. Census 2011 -Travel to Work : Commuting into, out of and within the City of Edinburgh (CEC, 2016) 5. Edinburgh Strategic Sustainable Transport Study - Phase 1 (Steer-Jacobs, 2019) 	<p>In Edinburgh Access to a car³ Nearly 40% of households in Edinburgh do not own or have access to their own car or van Non-car-owning households have increased over the decade since 2001, not only in absolute numbers but also as a proportion of all households (rising from 39.5% to 39.9%). Over the decade the average number of cars per household has remained unchanged at 0.81 Travel to Work in 2011³ Travelling by bus (and coach): 28.6% of employed residents (excluding those who work at home) 27% of students Cycling 1.4% in 1981 to 1.8% in 1991, 3.1% in 2001 and 4.8% in 2011 3.3% students cycle to their place of study Walking 18% walk to work - higher than anywhere else in Scotland. 51% of full-time students (aged 4 or older) walked to their place of study. Car use (People living and working in Edinburgh) 41% drives to work and 3.5% travels as a car passenger. Car passengers account for a further 12% of student journeys in Edinburgh.</p> <p>Traveling to work – from other local authorities⁴ Of the 285,469 people working in the City, two thirds (190,743) are Edinburgh residents. The</p>

Evidence	Available?	Comments: what does the evidence tell you?
		<p>remaining 94,726 workers are commuting in from elsewhere in the UK. Nearly two thirds of workers as car drivers or passengers in cars. Rail 16% and bus (15%) of journeys Walking and cycling do not account for many cross border trips</p> <p>Public Transport Accessibility⁵ This is based on how close it is to public transport, taking into account walking time to access public transport (i.e. to a stop or station) services and how frequent services are in the area.</p> <p>Public transport accessibility is higher in Edinburgh city centre, along key arterial routes into the city centre such as the A900 (Leith Walk), A1 (between the city centre and Meadowbank), A8 (as far as Sighthill) and the A71 (as far as Saughton). Accessibility is lower in between these corridors.</p>
Data on equality outcomes	6. Equality Evidence finder. Available at https://scotland.shinyapps.io/sg-equality-evidence-finder/ Accessed 4/02/2020)	<p>Age</p> <ul style="list-style-type: none"> • Travel decreases with age for people over 60 • Over a third of bus journeys by concessionary pass. • Younger and older people are less likely to drive every day and less likely to hold a driving license. As people get older they are more likely to drive to work. • Walking as a means of transport decreases with age. Young workers are more likely to walk or take bus. • Cycling as a means of transport decreases after the age of 40. <p>Gender</p> <ul style="list-style-type: none"> • Men more likely to be involved in road accidents • Men slightly more likely to travel • A higher proportion of men walk almost every day • A higher proportion of men cycle than women. • Women are more likely to walk to work. • Men and women are equally likely to drive to work. • Women are more likely to travel by bus. <p>Disability</p> <ul style="list-style-type: none"> • Sick or disabled adults much less likely to have driving licence • Disabled adults more likely to use bus

Evidence	Available?	Comments: what does the evidence tell you?
		<p>Ethnicity</p> <ul style="list-style-type: none"> Households of African ethnic origin were least likely to have access to a car. Nearly half of people of White Scottish and White other British ethnic origin drive every day in comparison to nearly one third of those with ethnic origin Other Ethnic White and a quarter of those of British Asian ethnic origin. More than three quarters of people of White ethnic origin had walked most frequently as a means of transport in the previous week. People of Other White ethnic origin were most likely to have cycled (12%), compared to just 5% for other ethnic groups. People from other ethnic groups (not White or Asian) are most likely to have taken a bus (64%).
Research/literature evidence	<p>7. Designing Streets, (Scottish Government, 2010)</p> <p>8. Manual for Streets, (DfT 2007)</p> <p>9. Manual for Streets: Evidence and Research (TRL, 2007)</p> <p>10. Manual for Streets 2, (DfT 2010)</p> <p>11. ESDG Risk Assessments (2016)</p> <p>Other evidence used is provided in the list of references in Appendix 1</p>	<p>Designing Street, Scottish Governments policy documents, DfT's Manual for Streets, Manual for Streets: Evidence and Research and Manual for Streets 2 provides the basis for the majority of the street design principles and features in the adapted and the proposed Factsheets.</p> <p>Manual for Streets: Evidence and Research⁹ states:</p> <p>Speed is known to be a key factor in road safety and higher speeds on links increase the likelihood of injury and its severity</p> <p>Reduced road width and reduce visibility, both on links and at junctions, lead to lower vehicle speeds.</p> <p>Junction geometry can lower speeds and makes accidents less likely as well as reducing their severity</p> <p>Parking on streets reduces speed 2 to 5 mph but can obscure (crossing) pedestrians. In these case builds-out are advised for the dropped kerb crossings in the Factsheets.</p> <p>The largest effect on speed reduction is associated with reducing lines of sight.</p>
Public/patient/client experience information	<p>12. 2015 ESDG Consultation Report (Appendix to City of Edinburgh, 2015)</p>	<p>The public and stakeholder consultation in 2014 attracted a large number of responses from a wide range of individuals and organisations with a majority supporting or strongly supporting a variety of design aspects and changes proposed in the ESDG and its Factsheets.</p> <p>Some of the key findings include but not limited to:</p>

Evidence	Available?	Comments: what does the evidence tell you?
		<ul style="list-style-type: none"> • safer, comfortable, well maintained, active and easy to navigate and cross streets for prioritising walking and cycling; • reallocating road space for pedestrians' benefit e.g. for wider footways and meeting spaces and landscaping; • providing priority for public transport in general traffic; • a strong preference to segregate pedestrians, vehicles and cyclists from each other in new layouts and mixed views on shared space (concerns regarding the widespread introduction of shared surfaces from blind and partially sighted consultees); • emphasis on giving better street maintenance equal attention or even prioritising over new street design; • complementing surrounding buildings and historic environment; • in general a reduction in the amount of street clutter, but an increase in the amount of seats/benches and more trees/greenery; • stronger advice on equalities and designing for disabled people with regard to the material types and street layout; • staff training and engagement is crucial to ensure that designers take ownership of the document and adopt its principles; and • support for 20mph zones across city
Evidence of inclusive engagement of service users and involvement findings	<p>13. EAP-2, 2016 on footway obstruction and clutter</p> <p>14. EAP-3, 2017 on a list of risk assessed key design features</p> <p>15. EAP-4, 2019 additional design aspects</p> <p>All meetings have been held in accessible venues. Hard copies of consultation materials have been made available in libraries and other public buildings.</p>	<p>The following summarises the key points raised at the 2014¹² and further 3 Edinburgh Access Panel meetings^{13, 14, 15} held in 2016, 2017 and 2019 respectively:</p> <ul style="list-style-type: none"> • interaction between disabled people and cyclists on shared paths and areas. Segregation is preferred but not tactile separators; • obstruction and clutter on footways . For example: A-boards (since then in 2018 the Council adapted a city-wide ban on A-boards), overhanging trees and bushes and fallen leaves, waste and recycling bins, poles and ticket machines, tables and chairs at outside cafes, low level colour blended bollards, temporary signs and other street furniture, narrowed and not accessible footways due to building and road works; • missing or sub-standard dropped kerbs and parked cars on dropped kerbs and footways in general; • extensive removal of pedestrian guardrail; • floating bus stops and continuous footways; • Not marked or segregated contra-flow cycle on one way streets;

Evidence	Available?	Comments: what does the evidence tell you?
		<ul style="list-style-type: none"> • access to off-street footpaths for wheelchair users from car parking areas • cycle racks with a tapping rail and high vis are preferred to be on carriageway not on narrow footways. Dockless bike hire stations should not block clear footway zone and should have tapping rails at each ends • extensive walking distances due to temporarily closed bus stops; • bus shelters spilling people which block minimum clear walking zone behind them with many poles around them; • long walking distances to bus services is difficult for non-electric wheelchair user - Bike hire scheme could hire hand bikes, tricycles and electric bikes for disabled and older users. • dark sky policy should be respected but streets should still be lit enough for their safe use • non-slippery and well maintained footways and service covers to avoid slips and trips • short coming of tactile tails at crossing points; and • drainage channels and ponding on widened footways. <p>Some of the Edinburgh Access Panel members have contributed to the ESDG internal training sessions and site visits to explain some of these issues to the Council officers.</p>
Evidence of unmet need	Yes	<p>To date, the Edinburgh Access Panel members still raise concerns related issues below:</p> <ul style="list-style-type: none"> • Better organised waste and recycling bins and their collection • Frequent and well design crossing points on existing streets not only in new streets • Temporary street works provide poor or even no access facilities for disable users. • Not enough seating and resting places • Missing dropped kerbs and un-suitable vehicle crossovers on existing streets. • Conflicts on the existing shared pedestrian and cycle paths
Good practice guidelines	Yes	<p>The project seeks to follow best practice including but not limited to TSRGD (2016-18), Designing Streets (Scottish Government, 2010), Manual for Streets (DfT 2007), Manual for Streets 2 (DfT 2010), SCOTS National Roads Development Guide (2014), London Streetscape</p>

Evidence	Available?	Comments: what does the evidence tell you?
		Guidance (TfL, 2019) and London Cycling Design Standards (TfL, 2016), other UK and Scottish national guidance on issues that are referenced in the individual Factsheets and the Council's consultation framework.
Environmental data	<p>16. Edinburgh City Centre Transformation Strategy Committee Report - SEA Baseline (City of Edinburgh Council, 2019)</p> <p>17. Draft City Mobility Plan Committee Report - SEA (City of Edinburgh Council, 2020)</p>	<p>The Council has identified 21 Noise Management Areas and 20 Quiet Areas in the city.¹⁶</p> <p>Despite slight reductions in nitrogen dioxide (NO₂) across Edinburgh, there are 6 locations which exceed legal Air Quality standards.¹⁷ 6 Air Quality Management Areas include:¹⁶</p> <ul style="list-style-type: none"> • Central; • Great Junction Street; • Inverleith; • St Johns Road; • Salamander Street; and • Glasgow Road. <p>Road transport continues to be the single biggest contributor to carbon dioxide (CO₂) levels in 2017 with one-third of total emissions.¹⁷ As result of the climate change, Edinburgh winters are predicted to become wetter and milder and summers drier and milder.¹⁶</p>
Risk from cumulative impacts	Yes	<p>Cumulative impacts may come about as a result of the City Centre Transformation Strategy actions, application of the proposed Low Emission Zone, the City Mobility Plan strategy and actions, Active Travel Action Plan projects and the City Plan 2030 (in development) spatial expansion and allocations.</p> <p>Transport (Scotland) Act 2019 bans footway parking, this would also have a cumulative impact.</p>
Other (please specify)		
Additional evidence required	Yes	<p>Empirical (and monitoring) studies are required on</p> <ul style="list-style-type: none"> • continuous footways (planned to be undertaken by the Council); • bus stop bypasses (local monitoring study is on-going); • crossings closer to junctions; and • the Scottish Government's review of the shared space and its impacts on vulnerable users.

7. In summary, what impacts were identified and which groups will they affect?

It must be noted that the following impacts are based on hypothetical application of the ESDG in a general context because the ESDG is a guidance and how its advice is followed and where it is applied can lead to some uncertainties when estimating its likely impact. However, some key aspects that were highlighted as a concern as part of the consultation process were risks assessed by independent road safety consultants and mitigation measures were advised in relevant Factsheets.

While the summary findings are presented in this section, a more detailed analysis of the key aspects of the guidance factsheets are provided in Appendix 2. Appendix 1 presents the available supporting information / evidence and abbreviations used in this assessment. Appendix 3 provides an assessment overview table of the key design features (based on Risk Assessments and user benefits) on Equality, Health and Wellbeing and Human Rights and the Council's equality duty.

Please note that this interim IIA will be reviewed in the light of any new evidence or guidance that becomes available and/or when new Factsheets are produced.

Equality, Health and Wellbeing and Human Rights	Affected populations
<p>Positive <i>Equality, Health and Wellbeing and Human Rights</i></p> <p>This guidance seeks to achieve a positive impact on all street users especially for those protected characteristics through prescription of gradients, widths and crossfalls, positive use of colour, contrast, tactile paving, promotion of controlled crossing points and audible signals. Stopping places, resting and seating is also contained within the guidance which will improve the scope for longer journeys by groups with age, disability or pregnancy/maternity protected characteristics.</p>	<p>Older people, pregnant, disabled people</p>
<p><i>Right to Life</i></p> <p>The probability of fatalities on the road network should be significantly reduced through targeted segregation of users as appropriate (eg by segregated cycle ways, mandatory cycle lanes and segregated cycle/pedestrians paths etc), the application of 20mph streets and the improvement of pedestrian crossing facilities on main roads, at junctions and side streets. Better road safety – there is evidence of a ‘safety in numbers’ effect for cycling. More cycling means safer cycling. Active travel network improvements promote a healthy lifestyle and quality of life will be improved through a more integrated network, better facilities and safety improvements such as secure bike storage.</p> <p>The improvements to public transport will also promote sustainable travel opportunities for people to access work, education, social activities, healthcare and other services.</p>	<p>Older people, younger people, disabled people, cyclists.</p> <p>Deprived communities</p>
<p><i>Health</i></p> <p>In conjunction with the Edinburgh Design Guidance, the ESDG seeks to improve health through the creation of new public spaces, including greenery and water. The transport network will</p>	<p>All ages, especially young and those with poor health</p>

<p>be designed to favour active travel, enhancing the fitness and well-being of its users. Creating streets that prioritise sustainable modes of transport will lead to a reduction in vehicle use and air pollution.</p> <p>Better health – active travel is a simple, low-cost and effective way to incorporate physical activity into daily life. Human health will also be positively impacted by reductions in air pollutants and noise resulting from an overall reduction in traffic.</p>	<p>Those with mental health problems, respiratory illnesses and who are obese or overweight. Those who live and/or work in the Air Quality Management areas and Quiet Zones</p>
<p><u>Physical security</u></p> <p>New streets designed under the guidance will benefit from: increased surveillance through greater frontage access, slower speeds through street design, safer places through layout and lighting. Decreased conflict between road users promoted by the guidance will also provide physical security benefits. User groups fearful of crime will have greater access to areas with lower likelihood of anti-social behaviour.</p>	<p>Female and elderly Vulnerable users especially those with cognitive learning disabilities, female and elderly population</p>
<p><u>Right to education and learning</u></p> <p>New techniques for street design and cycle network (quiet routes and cycle friendly city) design elements introduced by the guidance will open opportunities for safer routes to school and cycle training. In addition, access to education facilities will be improved for non-car modes.</p>	<p>Cyclists, especially young and female as well as disabled cyclists. Those who walk and cycle to work and education - Edinburgh Bike Life (2017) states that 22% don't currently ride a bike. 46% would like to start riding a bike, or could ride their bike more.</p>
<p><u>Right to standard of living</u></p> <p>Access to education, employment and leisure facilities will be improved by the reduction of travel distances required of non-car modes. Public transport accessibility will improve through public transport and walking oriented new developments. The impact of motor traffic such as noise, pollution etc. will be minimized through 20mph zones, street trees, street design and the promotion of non-car modes.</p>	<p>All disability groups and elderly</p> <p>Those traveling to work by bus. Non-car households, children and young people</p>
<p><u>Right to productive and valued activities</u></p> <p>Better street design will improve access to education, employment and leisure activities. There will be opportunities for communities to be involved in the design and implementation of schemes. New streets will also provide local opportunities for spaces for trading and social exchange.</p>	<p>All street users</p>
<p><u>Right to individual, family and social life</u></p> <p>When people walk and cycle around their neighbourhood they are much more likely to meet and interact. People walking and cycling provide 'social supervision' helping make our streets safer places to be. Well designed streets improve access to local facilities, encourage children to play and interact outside and foster communication amongst all user groups through involvement in their design and ultimately their use as a social space.</p>	<p>Families with young children, disabled people and elderly</p>
<p><u>Right to participation, influence and voice</u></p>	<p>All street users</p>

<p>The processes proposed by the guidance should increase public participation in planning of street design and neighbourhoods. The resulting streets will also provide increased access to schools, community centres etc. thus opening opportunities to be part of public participation events such as consultations and democratic elections.</p>	
<p><u>Quality of life and physical security -</u> Creating a more welcoming street environment has the potential to improve the quality of life for people with learning disabilities or mental health issues. Reducing the speed of traffic permits people to go out and use public spaces safely and securely without fear of traffic conditions.</p>	<p>Those with mobility and visual impairments Children and unexperienced cyclist and family cyclist Children, elderly and those with mobility and visual impairments and learning difficulties</p>
<p>Negative The points raised regarding design elements below were either prompted by the Council officers and/or other stakeholders. They were risk assessed by independent road safety consultants and discussed with the Access Panel members). In most cases, evidence supporting these possible negative impacts was not available but it was still included in this section and prompted in the Factsheets as a possible concern that should be subjected to site specific safety and user benefit and risk assessments.</p>	
<p><u>Right to life</u> The probability of fatalities on the road network should be significantly reduced through targeted segregation of users and slowing traffic. However, this guidance does not completely rule out the use of shared surface streets. Most of the evidence suggests that shared surfaces are not favoured by visually impaired users due to safety and security issues specifically around conflict with vehicles. Similarly, application of continuous footways without tactile paving, reduced corner radii, omitting pedestrian guardrail were viewed as reducing safety for visually impaired and other vulnerable road users. There was also a concern that the steep side road carriageway entry may affect comfort in vehicle for some disabled car drivers. Floating bus stops were perceived as increasing the risk to vulnerable pedestrian users, such as the young or elderly. Reduced minimum treatment length of high friction surfacing: may be viewed as increasing pedestrian and vehicle collision risk. Omitting centrelines may be viewed as an increased risk to vehicles and cyclists due to the introduced element of uncertainty. Contra-flow cycling on one way streets may cause confusion for motorist not expecting a cyclist in the opposite direction and at the junctions. Similarly people crossing the street can also be caught off guard.</p>	<p>Visually impaired and other vulnerable users Disabled car drivers Pedestrians waking on cycle lanes Bus users crossing cycle lane to/from bus stops Pedestrians crossing on main road Cyclists Pedestrians crossing one-way streets</p>
<p><u>Right to health</u> Reallocation of road space may result in localised noise/pollution issues due to increased queuing, although this is likely to be balanced over time with modal shift. Sharing of space between visually impaired users and other vehicles, including cyclists, may result in increased levels of stress in this user group.</p>	<p>All users Visually impaired</p>

<p><u>Right to physical security</u></p> <p>The focus on creating permeable transport networks within neighborhoods may have negative implications for policing certain areas. This may be offset in some cases by the increased local surveillance possible through new street design.</p>	Police
<p><u>Right to legal security</u></p> <p>CCTV and additional electronic surveillance may be a consequence of street design in certain scenarios, which carries privacy implications. The Council policies are already in place to safeguard privacy issues with regards to CCTV and surveillance.</p>	All populations
<p><u>Right to identify, expression and self-respect</u></p> <p>In terms of presentation of the document, when using street photography, it may not be always possible to select a choice of images that reflects all ages, races, sex, and sexual orientation etc. whilst illustrating the technical issue in question.</p>	

<p>Environment and Sustainability</p> <p>Positive</p> <p>The ESDG may help to reduce carbon emissions through the priority the guidance gives to travel by more sustainable forms of transport on streets.</p> <p>It is also expected that environmental, noise and air quality benefits may occur as a result of safer, direct, welcoming and more enjoyable street conditions result in increased levels of walking, cycling and public transport use than car use.</p> <p>It will help achieve a sustainable Edinburgh through the application of values to promote sustainable design which will include measures to improve sustainable drainage, the use of better materials, planting street trees and creating landscaping, help to increase pedestrian and cycle priority thereby assisting in the reduction of car use.</p> <p>The Guidance will also increase the city's resilience to climate change impacts through the use of natural materials and sources that are local to the area.</p>	<p>Affected populations</p> <p>Pedestrians, cyclists and public transport users those who live and work in the declared Air Quality Management and Quiet Zones</p> <p>Biodiversity in the city</p>
<p>Negative</p> <p>Potential negative impacts may be associated with the ESDG's application in the World Heritage Site if there is no attention to the context and historical heritage. The ESDG includes design principles for the WHS and sensitive areas. A balance has to be struck between the user needs and the historic built environment. The guidance safeguards and requires early consultation with the key relevant stakeholders in order to identify, mitigate and/or eliminate any negative impacts at early stages in all projects concerning these areas.</p>	World Heritage Site Conservation areas

Economic Positive	Affected populations
<p>Whilst road casualty levels in the city are reducing, there is opportunity to further reduce the levels of people killed and seriously injured. Children from areas of socio-economic disadvantage have been shown to be more likely to be involved in road traffic collisions. The Guidance will create safer streets through segregating cyclist and pedestrians from motor traffic, applying 20mph new residential streets; decreasing vehicle speeds through narrower lanes or omitting centre lines, providing frequent and on-desire-line crossing facilities.</p> <p>Research by the UK Transport Research Laboratory has shown that every 1 mph reduction in average speeds can result in a 6% fall in the number of collisions. Fewer casualties results in less strain on the NHS and emergency services. In terms of future cost savings, the Department for Transport estimates are as follows per incident: Fatal - £2,053,814; Serious - £237,527; Slight - £ 24,911. (Road Casualty in Great Britain, Dft2016). In addition to this the emotional impact on the victim and their family and time spent away from school and work must also be taken into account.</p> <p>It will help achieve streets and places to be recognised as being a key to economic wellbeing. It is considered that businesses will benefit from increased 'liveability' thanks to more street trees, wider footways, seating and meeting places, slower speeds. More people attracted to spend time in shopping streets where they feel safer and the environment is generally more pleasant.</p> <p>People who travel on foot or by bike tend to be healthier, be absent less often and more productive.</p>	<p>All non-motorised users. Children and vulnerable people, especially in deprived communities</p> <p>Greater economy, especially cost to NHS</p> <p>Businesses</p> <p>Employers</p>
<p>Negative</p> <p>It is anticipated that applying the guidance to the Council's responsibility for carriageway and footway renewals will require significant change to the way this work is carried out, and to budgeting. The ESDG will influence the costs associated with the implementation and delivery of street improvements. However in the longer term it will be cost efficient to make improvements gradually as part of the renewals schemes as well as one-off projects.</p>	<p>The Council</p>

8. Is any part of this policy/ service to be carried out wholly or partly by contractors and how will equality, human rights including children's rights , environmental and sustainability issues be addressed?

The ESDG is a guidance document and will be used by all parties responsible for designing, (re)constructing, maintaining or managing streets. This will include the Council's contractors and developers agents. The ESDG and its approved Factsheets are published in the Council's website. It is the responsibility of the individual project holder to undertake a project specific IIA for their site.

There is an explicit reference in the Guidance about engaging and involving people and stakeholders in the street design process, undertaking quality audits, equality rights and impact assessments.

The Council's process for undertaking an IIA (and its guidance) as well as this IIA could help such projects to identify groups, rights and characteristics to be protected and likely impacts (including environmental and sustainability) on them.

9. Consider how you will communicate information about this policy/ service change to children and young people and those affected by sensory impairment, speech impairment, low level literacy or numeracy, learning difficulties or English as a second language? Please provide a summary of the communications plan.

Public and stakeholder involvement listening to and acting on participants' views will remain a key element of the development of a the ESDG and its Factsheets.

Due to the technical nature of the Factsheets, not all presented information and formats (technical drawings and detailed measurements etc) can be made suitable for a range of population groups. However, residents are encouraged to use our translation service if they have language/visual requirements.

Individual projects concerning existing or new streets should have their own IIA's and communication plans in which they should address how they will communicate any design features to these groups. Such plans could include, child friendly leaflets / presentation to the school pupils; simple and concise and jargon free materials for the general population. They should also consider undertaking face to face feedback through inclusive 'design surgeries or 'design workshops' which could accommodate those affected by sensory impairment, speech impairment, low level literacy or numeracy, learning difficulties or English as a second language.

10. Does the policy concern agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use? If yes, an SEA should be completed, and the impacts identified in the IIA should be included in this.

The ESDG is not a plan, policy or a strategy but a non-statutory supplementary guidance document for street design. We believe that SEA is not required but a SEA pre-screening or a screening assessment will be undertaken as part of phase 4 of the project.

11. Additional Information and Evidence Required

Undertake reviews of the key new design aspects implemented in individual projects to monitor their impacts over a period of time. For example the floating bus stops review of the Leith Walk project. Responsible service: Active travel, maintenance and road safety teams

If further evidence is required, please note how it will be gathered. If appropriate, mark this report as interim and submit updated final report once further evidence has been gathered.

12. Recommendations (these should be drawn from 6 – 11 above)

- Review literature and monitor application of the ESDG's key new design features flagged up by the Access Panel and this IIA.
- Train and further disseminate the ESDG to wider audience. Work with Sustrans to promote the ESDG's design aspects

- Work with the Edinburgh Access Panel, Living Streets, Urban Design Panel and Spokes to campaign champion good / compliant street design

13. Specific to this IIA only, what actions have been, or will be, undertaken and by when? Please complete:

Specific actions (as a result of the IIA which may include financial implications, mitigating actions and risks of cumulative impacts)	Who will take them forward (name and contact details)	Deadline for progressing	Review date
Explore possibility of a factsheet that explicitly deals with interventions in the World Heritage site	ESDG consultants, CEC leads, Sarah Feldman and Phil Noble (Active Travel)	Include in 2021 consultancy brief	2022
Determine whether to include to a SEA screening assessment in consultancy brief	Sarah Feldman, Active Travel	2020	2021
Incorporate issues raised and feedback from access panel workshop into factsheet updates and briefs for forthcoming factsheets	ESDG consultants, CEC lead, Sarah Feldman (Active Travel)	2020	Prior to publication of factsheets 2020-21 and 2022
Undertake monitoring of continuous footways. Findings to inform any future updates to factsheets.	Package of work to be procured. CEC lead, Sarah Feldman (Active Travel)	2021	2021
Continue reviewing public and stakeholder consultation responses from those projects which proposed the application of the new design aspects	Phil Noble and Sarah Feldman, Active Travel	2021	Annual
Undertake workshop with the Edinburgh Access Panel to discuss future new and/or updated design features in Factsheets	Sarah Feldman, Active Travel, with support from ESGD consultants	2021	Annual
Record IIA related concerns and recommend reviews of design aspects	Transport Design and Delivery Active Travel and Road Safety Planning	On-going	When occurs

Specific actions (as a result of the IIA which may include financial implications, mitigating actions and risks of cumulative impacts)	Who will take them forward (name and contact details)	Deadline for progressing	Review date
	Report this information to: Phil Noble or Sarah Feldman, Active Travel via the CEC Street Design Review Group		

14. How will you monitor how this policy, plan or strategy affects different groups, including people with protected characteristics?

Actions	Responsible people / teams	Deadline for progressing	Review date
Monitor evolving research on evidence gap areas and update guidance and this IIA as new evidence emerges.	CEC Street Design Review Group, Transport, Active Travel and Road Safety	Annual	On-going
Undertaking further Edinburgh Access Panel meetings on the application of the key design features	Transport, Active Travel and Road Safety	Annual	On-going

15. Sign off by ~~Head of Service~~ / Project Lead



Name: Phil Noble, Active Travel and Road Safety

Date: 14/02/2020

16. Publication

Completed impact assessment is forwarded to
Strategyandbusinessplanning@edinburgh.gov.uk to be published on the Council website.

Appendix 1 - References

- City of Edinburgh Council (2013) .Census 2011 – Transport and Travel (CEC, 2013)
Available at: <https://www.edinburgh.gov.uk/downloads/file/24269/transport-and-travel>
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- City of Edinburgh Council (2015) Edinburgh Street Design Guidance, Transport and Environment Committee report, 25 August 2015 Available at
https://democracy.edinburgh.gov.uk/Data/Transport%20and%20Environment%20Committee/20150825/Agenda/item_713_-_edinburgh_street_design_guidance_-_final.pdf
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- City of Edinburgh Council (2016) [Census 2011 -Travel to Work : Commuting into, out of and within the City of Edinburgh \(CEC, 2016\)](https://www.edinburgh.gov.uk/downloads/file/24280/travel-to-work-flows-topic-report-for-edinburgh) Available at:
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https://democracy.edinburgh.gov.uk/Data/Transport%20and%20Environment%20Committee/20170117/Agenda/item_74_-_edinburgh_street_design_guidance_-_process_for_approving_part_c_detailed_design_manual.pdf Accessed 11/02/2019
- City of Edinburgh Council (2019), Edinburgh City Centre Strategy, Transport and Environment Committee report including the final strategy and its supporting documents Available at: <https://democracy.edinburgh.gov.uk/documents/s6001/Item%207.1%20-%20ECCT%20Final%20Strategy%20with%20all%20appendices.pdf> (Accessed 05/02/2020)
- City of Edinburgh Council (2020). City Mobility Plan: draft for consultation Available at: <https://democracy.edinburgh.gov.uk/mgConvert2PDF.aspx?ID=12642> (Accessed 05/02/2020)
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- Scottish Government, Transport (Scotland) Act 2019, available at <http://www.legislation.gov.uk/asp/2019/17/contents/enacted> (Accessed 27/02.2020)
- Steer-Jacobs (2019) Edinburgh Strategic Sustainable Transport Study - Phase 1 (Steer-Jacobs, 2019) Appendix to City Mobility Plan: draft for consultation. Available at : <https://democracy.edinburgh.gov.uk/mgConvert2PDF.aspx?ID=12642> (Accessed 06/02/2020)
- Steer Davies Gleeve (2017) Public Realm Scheme Evaluation: Clapham Old Town Van Gogh Walk, unpublished report
- TSRGD, (2016) TSRGD 2016 - The Traffic Signs Regulations and General Directions 2016, Available at: <https://www.tsrgd.co.uk/> (Accessed 17/02/2020)
- TfL, (2019), London Streetscape Guidance, Fourth Edition, Available at: <https://content.tfl.gov.uk/streetscape-guidance-.pdf> (Accessed 17/02/2020)
- TfL, (2016), London Cycling Design Standards, <https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit#on-this-page-2>

Evidence abbreviated in Summary Impacts in Appendix 3

Abbr.	Reference
	Literature Review, including:
MFS	Manual for Streets (DfT, 2007)
MFS2	Manual for Streets 2 (DfT, 2010)
DS	Designing Streets (Scottish Government, 2010)
DFW	Designing for Walking (CIHT, 2015)
LTN	Local Transport Note 1/11 Shared Space (DfT, 2011)
IS	Inclusive Streets: Design Principles (Guide Dogs Association)
GPG	Good Practice Guide for Roads (Transport Scotland, 2013)
RSC	Road and street crossings for blind and partially sighted people: The importance of being certain (Guide Dogs Association)
EXR	Evaluating Performance: Exhibition Road Monitoring (MVA)
MKH	Briefing: Minimum effective kerb height for blind and partially sighted people (Institution of Civil Engineers)
RBA	Briefing: Retaining blind access in town streets and shared spaces (Institution of Civil Engineers)
AFB	Access for Blind People in Towns (National Federation of the Blind in the UK)
KB1	Analysing the perceptions of pedestrians and drivers to shared space (Kaprias, Bell et al.)
KB2	Behavioral analysis of interactions between pedestrians and vehicles in street designs with elements of shared space (Kaprias, Bell et al.)
MM	Shared space - research, policy, problems (Moody and Melia, 2014)
SBD	Secured by Design
ESDG-FS	ESDG Factsheets
ESDG-RA	ESDG Risk Assessments
EDG	Council Policy, including: <ul style="list-style-type: none"> • Road Safety Plan for Edinburgh to 2020 • City of Edinburgh Council Local Transport Strategy • Edinburgh Design Guidance
OKE	Officer Knowledge/Experience
SUF	Service User Feedback
EAP	Edinburgh Access Panel Workshops (2016), Edinburgh Access Panel Workshops (8/5/2017) and Edinburgh Access Panel Workshops (7/11/2019)
LWCIA	Leith Walk Cycling Infrastructure Analysis - Summary of key findings, 2019 (AECOM, Edinburgh Napier University and CEC)
STEF	ESDG Staff training event feedback and consultations report, 2019
CCTTP	Consultation on City Centre Transformation and Transport Plan
PRSE	Lambert Council - Public Realm Scheme Evaluation: Clapham Old Town and Van Gogh Walk, Final report

Appendix 2 Impact Assessment

Equality, Health and Wellbeing and Human Rights Positive	Affected populations
<p>This guidance seeks positive impact on all street users especially for those protected characteristics through prescription of gradients, widths and crossfalls, positive use of colour, contrast, tactile paving, promotion of controlled crossing points and audible signals. Stopping places, resting and seating is also contained within the guidance which will improve the scope for longer journeys by groups with age, disability or pregnancy/maternity protected characteristics. Available supporting information / evidence is noted as abbreviation in the headings of this section and listed in Appendix 1. Appendix 3 provides an assessment overview table of the key design features (based on Risk Assessments and user benefits) on these rights and the Council's equality duty.</p>	<p>Older people, pregnant, disabled people</p>
<p><u>Right to Life - MFS, MFS2, DS, DFW, RSP, OKE, SUF, TFL1, LSDG, CCC, RF, RFRA, TRL241, ESDG-RA Appendix 3</u></p>	<p>Older people, younger people, disabled people, cyclists.</p>
<p>The probability of fatalities on the road network should be significantly reduced through targeted segregation of users as appropriate (eg by segregated cycle ways, mandatory cycle lanes and segregated cycle/pedestrians paths etc), the application of 20mph streets and the improvement of pedestrian crossing facilities on main roads, at junctions and side streets. Better road safety – there is evidence of a ‘safety in numbers’ effect for cycling. More cycling means safer cycling. Active travel network improvements promote a healthy lifestyle and quality of life will be improved through a more integrated network, better facilities and safety improvements such as secure bike storage.</p>	<p>Older people, younger people, disabled people, cyclists.</p>
<p>The improvements to public transport will also promote sustainable travel opportunities for people to access work, education, social activities, healthcare and other services.</p>	<p>Deprived communities</p>
<p><u>Some of the design elements</u></p>	
<ul style="list-style-type: none"> • Segregated cycle tracks provide a safer environment for cyclists by reducing cycle / vehicle conflict. Floating bus stops enable safe (and controlled) interaction between bus passengers, cyclist and vehicles. They allow continuous separation from motor vehicle traffic for cyclists. 	<p>Cyclists</p>
<ul style="list-style-type: none"> • Contra-flow cycling improves the permeability, accessibility and directness of the road network for cycling; provides a journey time advantage for cycling; and avoids displacing cycle users onto busy alternative routes. Research (Federal Highway Research Institute –Germany, 2002) and UK experience suggests that permitting contraflow cycling has a number of safety-related benefits, including: encouraging cyclists to shift from arterial routes to quieter streets and reducing footway cycling. 	<p>Cyclists</p>
<ul style="list-style-type: none"> • Locating crossings closer to junctions (alongside tight corner radii and minimum distance from stop/give way 	

<p>line to crossing) brings pedestrian/cycle crossing facilities on to desire lines and this encourages the use of formal crossings. This reduces the risk of pedestrians / cyclists crossing at dangerous locations, reduces vehicle speeds and places greater emphasis on pedestrian priority, therefore increasing the overall safety of pedestrian / cyclist users.</p> <ul style="list-style-type: none"> • Omitting centrelines in residential streets and tight corner radii provides shorter crossings of side streets, further reduces traffic speeds, creates a safer environment for all users, especially for children on local streets. • Setting minimum widths for mixed use cycle and pedestrian paths and segregation reduces conflicts between pedestrians and cyclist, increases service levels and comfort. • Continuous footways and cycle lanes allow visual priority for pedestrians and cyclist and level crossing for mobility impaired users on side road crossings. <p><u>Right to Health – MFS, MFS2, DS, DFW, GPG, CCC, RSP, LTS, OKE, SUF, RF, RFRA, ESDG-RA Appendix 3</u></p> <p>In conjunction with the Edinburgh Design Guidance, the ESDG seeks to improve health through the creation of new public spaces, including greenery and water. The transport network will be designed to favour active travel, enhancing the fitness and well-being of its users. Creating streets that prioritise sustainable modes of transport will lead to a reduction in vehicle use and air pollution.</p> <p>Better health – active travel is a simple, low-cost and effective way to incorporate physical activity into daily life. Human health will also be positively impacted by reductions in air pollutants and noise resulting from an overall reduction in traffic.</p> <p><u>Design elements</u></p> <ul style="list-style-type: none"> • Wider footways, clear walking zones, seating, lighting and street trees create better environment for physical activity, play opportunities for children and meeting places for socialising and community coherence. • Segregated cycle tracks and off-street paths provide a safer environment for cyclists by reducing cycle / vehicle conflict. Floating bus stops provide continuous segregation and facilitate a safer cyclist environment around bus stops. These encourage and lead to more cycle use. <p><u>Right to physical security – MFS, MFS2, DS, DFW, TFL1, LSDG, RPS, LTS, OKE, SUF, RF, RFRA, Appendix 3</u></p> <p>New streets designed under the guidance will benefit from: increased surveillance through greater frontage access, slower speeds through street design, safer places through layout and lighting. Decreased conflict between road users promoted by the guidance will also provide physical security benefits. User groups</p>	<p>Older people, younger people, disabled people, cyclists.</p> <p>Older people, younger people, disabled people</p> <p>Pedestrians and cyclists</p> <p>Mobility impaired, push chair and walking frame users</p> <p>All ages, especially young and those with poor health</p> <p>Those with mental health problems, respiratory illnesses and who are obese or overweight. Those who live and/or work in the Air Quality Management areas and Quiet Zones</p> <p>All pedestrians but especially disabled people, elderly and children</p> <p>Cyclists, especially young and inexperienced cyclists</p> <p>Women and elderly people especially</p>
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fearful of crime will have greater access to areas with lower likelihood of anti-social behaviour.

Design elements

- **Minimising street clutter** facilitates design and management of better places and streets that discourage anti-social behaviour. User groups fearful of crime, including vulnerable users, will have greater access to areas with lower likelihood of anti-social behaviour. **Reducing minimum kerb zone** enables wider walking zones on narrow footways, which particularly benefit vulnerable pedestrians.
- **Street lighting** will improve the sense of personal security and surveillance on the street.

Right to education and learning – MFS, MFS2, DS, DFW, CCC, LTS, RSP, OKE, SUF, ESDG-RA, Appendix 3

New techniques for street design and cycle network (quiet routes and cycle friendly city) design elements introduced by the guidance will open opportunities for safer routes to school and cycle training. In addition, access to education facilities will be improved for non-car modes.

Design elements

- Quiet Routes design standards including **segregated cycle tracks** on busy streets and **crossings closer to junctions** provide a safer and convenient environment for cyclists. This will encourage active travel and improve access to education facilities for cyclists.
- **Continuous footways** (and cycleways) place greater emphasis on pedestrian priority and provide a level walking surface which is of particular benefit to pedestrians with reduced mobility. They will provide opportunities for creating interrupted/priority routes to school and other education facilities.
- **Reducing minimum kerb zone** enables increased walking zones, especially on narrow footways en-route to schools and other education facilities, which particularly benefits children and vulnerable users.
- **Bus priority and routes** penetrating into new developments will provide access to schools and education facilities for children and non-car households.

Right to standard of living – MFS, MFS2, DS, GPG, IS, AFB, TFL1, LSDG, LTS, OKE, SUF, ESDG-RA, Appendix 3

Access to education, employment and leisure facilities will be improved by the reduction of travel distances required of non-car modes. Public transport accessibility will improve through public transport and walking oriented new developments. The impact of motor traffic such as noise, pollution etc. will be minimized through 20mph zones, street trees, street design and the promotion of non-car modes.

Vulnerable users especially those with cognitive learning disabilities, female and elderly population

Cyclists, especially young and female as well as disabled cyclists

Mobility impaired and push chairs, walking frames users
School children

Same as above

Households with no access to car, disabled people, elderly, children and young people

All populations

Those who live and work in the Air Quality and Noise Management areas

Those who walk and cycle to work and education -

Design elements

- **Crossings closer to junctions** (alongside with tight corner radii and minimum distance from stop/give way line to crossing) reduce route distance by maintaining pedestrian/cyclist desire lines, enabling the creation of active travel networks so that access to education, employment and leisure facilities will be easier using non-car modes.
- **Omitting centrelines** has been recognized for reducing traffic speeds through visual narrowing. Omitting the centreline on 20mph local streets and secondary streets will create a safer environment for pedestrians and cyclists, especially on the dedicated 'quiet routes network' and will contribute to lowering pollution.
- **Segregated cycle tracks** provide a safer environment for cyclists by reducing cycle / vehicle conflict. This will encourage drivers to switch to cycling and enhance the air quality.
- **Continuous footways** (and cycleways) place greater emphasis on pedestrian/cyclist priority and provide a level walking surface which is of particular benefit for vulnerable users, for example: those with reduced mobility.
- **Reducing minimum kerb zone** enables increased walking zones, especially on narrow footways, which particularly benefits vulnerable users. Introducing **seating** will provide resting place for those who cannot walk further without a rest.
- **Bus routes** penetrating into new developments **and bus priority** will improve public transport accessibility especially in those areas between the main accessible arterials. This will improve mobility for the younger and older people and women, and especially those households with no access to a car. Enabling them ease of access to education, employment and leisure facilities.

Right to productive and valued activities – MFS, MFS2, DS, DFW, LSDG, LTS, OKE, SUF, Appendix 3

Better street design will improve access to education, employment and leisure activities. There will be opportunities for communities to be involved in the design and implementation of schemes. New streets will also provide local opportunities for spaces for trading and social exchange.

Right to individual, family and social life

When people walk and cycle around their neighbourhood they are much more likely to meet and interact. People walking and cycling provide 'social supervision' helping make our streets safer places to be. Well designed streets improve access to local facilities, encourage children to play and interact outside and foster communication amongst all user groups through involvement in their design and ultimately their use as a social space.

Right to participation, influence and voice – MFS, MFS2, DS, LTS, OKE, SUF

The processes proposed by the guidance should increase public participation in planning of street design and neighbourhoods. The

Edinburgh Bike Life (2017) states that 22% don't currently ride a bike, but would like to 46% would like to start riding a bike, or could ride their bike more.

Cyclist and especially young and unexperienced cyclists, family groups
Mobility impaired, push chair and walking frame users

All disability groups and elderly

Those traveling to work by bus. Non-car households, children and young people

All street users

Families with young children, disabled people and elderly

All street users

resulting streets will also provide increased access to schools, community centres etc. thus opening opportunities to be part of public participation events such as consultations and democratic elections.

Quality of life and physical security

Creating a more welcoming street environment has the potential to improve the quality of life for people with learning disabilities or mental health issues.

Reducing the speed of traffic permits people to go out and use public spaces safely and securely without fear of traffic conditions.

- **Narrowing carriageway width in favour of wider footway widths and/or segregated cycle tracks** will create a more accommodating street environment for other users which will allow more people to use active forms of transport to access work and services than previously. Narrower carriageway widths will help reduce speeds.
- **Bus routes, priority and bus stop facilities** - Designing new streets for making bus routes closer to where people live, work and other facilities and providing priority over general traffic through bus only facilities, bus lanes and signal priority will improve independent mobility.

Negative

The points raised regarding design elements below were either prompted by the Council officers and/or other stakeholders. They were risk assessed by independent road safety consultants and discussed with the Access Panel members). In most cases, evidence supporting these possible negative impacts was not available but it was still included in this section and prompted in the Factsheets as a possible concern subject to site specific safety and user benefit and risk assessments.

Right to life – MFS, DS, IS, RSC, EXR, AFB, MM, OKE, SUF, ESDG-RA, Appendix 3

Design elements

- **Shared surfaces-** This guidance does not completely rule out the use of shared surface streets. There is a mixed evidence base on the use of shared surfaces. Most of the evidence suggests that shared surfaces are not favoured by visually impaired users due to safety and security issues specifically around conflict with vehicles. However, other disabled users such as those with mobility impairments may benefit from such layouts due to the removal of level differences and the ability to take more direct route in the street environment. Current evidence suggests that the used of 'comfort space; and courtesy crossings within such schemes may be an acceptable compromise and this is the approach taken by the guidance. In addition, the guidance requires any such schemes to feature a strong level of consultation and a well-defined, objective-led audit process. It is believed that this approach will provide a reasonable balance to design. The Scottish Government has been looking into providing further

Those with mobility and visual impairments
Children and unexperienced cyclist and family cyclist

Children, elderly and those with mobility and visual impairments and learning difficulties

Visually impaired users

<p>guidance/recommendation on shared surfaces. This IIA will be reviewed in the light of new evidence or guidance that becomes available.</p>	
<p>Monitoring and consultation in these areas is a key recommendation of this IIA.</p>	None identified
<ul style="list-style-type: none"> • Reduced tactile width for tactile tails may be viewed as reducing safety for visually impaired users. DfT Guidance recommends 1200m width, however work undertaken by University College London, to inform the London Streetscape Guidance, concluded that an 800mm width is readily detectable as it will always capture a person's stride. Transport for London currently adopt 800mm width in their most recent Streetscape Guidance. A risk assessment was undertaken and all risks identified were categorised as broadly acceptable. Edinburgh Access Panel members stated that the width would be sufficient as long as the tail extends to the back of the footway. Consistency in layout is important. 	Visually impaired users
<ul style="list-style-type: none"> • Continuous footways without tactile paving may be viewed as reducing safety for visually impaired users. This element has been risk assessed and no significant residual risks have been identified. Steer Davies Gleave (2017) found that vehicles were more likely to give way to pedestrians at the locations in continuous footways and pedestrians are more likely to standard side road crossings. There were concerns raised by the Access Panel members in relation to their similarity to raised side road crossings - visually impaired users who use a cane will not be able to detect a car on the continuous footway waiting to join the mainline traffic until they have hit it with their cane. There was also a concern that the steep side road carriageway entry may affect comfort in vehicle for some disabled car drivers. The concept may not be clear to non-locals or tourists driving in the city. However continuous footways provide absolute priority for pedestrians (and cyclists) at priority junctions and provide an uninterrupted route for many including wheelchair, push chair or walking frame users who are traveling along the main footway. The absence of tactile paving will strengthen the visual impression of footway continuity and so is considered likely to reinforce the intended behaviours of drivers and other road users. 	Disabled car drivers Visually impaired users
<ul style="list-style-type: none"> • Tight corner radii may be viewed as risk to pedestrians due to occasional vehicle overrun of the footway. This element has been risk assessed and no significant residual risks have been identified. Designers could choose to add street furniture such as planters, litter bins or bollards to demark and protect the overrun corners (without causing obstructions to refuse or emergency vehicles). 	None identified
<p>The benefits associated with this feature are high as it enables pedestrian desire lines to be maintained and travel routes to be direct and shorter, which is crucial for the creation of active travel networks. Tight corner radii are</p>	None identified

<p>supported by government policies such as Manual for Streets 2 and Designing Streets.</p> <ul style="list-style-type: none"> • Omitting centrelines may be viewed as an increased risk to vehicles and cyclists due to the introduced element of uncertainty. This element has been risk assessed and can be mitigated to a broadly acceptable level. The further recommendations provided in the risk assessment have been incorporated into the relevant factsheet. The benefit of this element is to provide a safer street environment by slowing traffic through visual narrowing and contributing to minimising street clutter. In addition Manual for Streets 2 recognises that centreline omission/removal can slow traffic and TFL has conducted trials in various locations to build an evidence base in favour of this. • Distance of 1.7m from stop/give way line to crossing studs may be viewed as creating blind spots at the crossing point for high-fronted vehicles. The distance of 1.7m from the stop/give way line to the crossing studs is within the allowable distances provided in the Traffic Signs Regulations and General Directions – Chapter 5: Road Markings. When a vehicle is stationary at the crossing, at a distance of 1.7m from the crossing studs, visibility of the crossing from a height of 0.6m above ground level will be maintained as required. If there is additional concern, further mitigation has been included in the factsheet to widen the crossing, so that pedestrians can cross the road away from the edges of the crossing making them more conspicuous to vehicle drivers waiting behind the stop lines. <p>The benefits associated with this risk are high, especially when crossings are located near/at junctions, as it enables pedestrian desire lines to be maintained and travel routes to be reduced, which is crucial for the creation of active travel networks. This introduces a large range of benefits in the following areas: health; standard of living; physical security; education and learning; productive and valued activities; identity, expression and self-respect; and participation, influence and voice. Edinburgh has many standalone and signalised junction crossing points where stop line distance is 1.7m or less. In the last 10 years one fatal incident has occurred involving a high-fronted vehicle at such a location. However there is no evidence as to whether the stop line location was a contributory factor to this incident.</p> <ul style="list-style-type: none"> • Not providing pedestrian guardrail at staggered crossings may be viewed as reducing guidance and increasing confusion, particularly for visually impaired and other vulnerable users. For example there could be ambiguity as to whether the crossing is a one/two stage crossing or what the extents of the island are. Through proposals in the factsheet, for example simplifying the crossing layout, and through further mitigation proposed by the risk assessment, these risks can be mitigated to an 	<p>Visually impaired and other vulnerable users</p> <p>Pedestrians crossing on main road</p> <p>Pedestrians waking on cycle lanes Bus users crossing cycle lane to/from bus stops</p>
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<p>acceptable level. This scenario currently exists at various locations (for example George Street/Hannover Street) in Edinburgh and accident data was retrieved which showed that there was no evidence to support that the removal/omission of pedestrian guardrail had a negative impact on safety at these locations. The presumption against the use of pedestrian guardrail is aligned with government policies such as Designing Streets and Manual for Streets 2. In addition to this it is also aligned with the City of Edinburgh Council policies (Active Travel Action Plan), Pedestrian Guardrail Assessment, and the Local Transport Strategy (2014 – 2017) which was approved in 2012.</p> <ul style="list-style-type: none"> • Crossings closer to junctions may be viewed as increased risk to pedestrians using the crossing. The mitigation options provided within the factsheets enable the risks to be reduced to either an acceptable or negligible level. The benefits associated with this risk are high as it enables pedestrian desire lines to be maintained and travel routes to be reduced, which is crucial for the creation of active travel networks. Studies carried out by the City of Edinburgh Council on 55 crossings close to junctions in Edinburgh found no evidence of increased risk to users in these areas. • Floating bus stops: may be viewed as increasing the risk to vulnerable pedestrian users, such as the young or elderly. This element has been risk assessed and can be mitigated to a broadly acceptable level. The further recommendations (including increased floating bus stop widths and courtesy zebra crossings) provided in the risk assessment have been incorporated into the factsheet. The benefit of this element is the removal of cyclist/public transport conflict, thus providing a significant safety benefit for cyclists. Work carried out looking at floating bus stops in Cambridge and Brighton indicates low levels of pedestrian/cycle conflict at these facilities. Floating Bus Stops: experiences from the Netherlands and transferability to Scotland (2016). <p>Analysis of cyclist-pedestrian interactions at a floating bus stop site in Edinburgh (Edinburgh Napier University, 2019) suggest majority of pedestrian and cyclist interactions happened when pedestrians were walking on the cycle track. Majority cyclist pedestrian interactions were for avoiding each other one the path.</p> <ul style="list-style-type: none"> • Reduced minimum treatment length of high friction surfacing: may be viewed as increasing pedestrian and vehicle collision risk. This element has been risk assessed and can be mitigated to a broadly acceptable level. The further recommendations provided in the risk assessment have been incorporated into the factsheet. Other councils have adopted a similar approach including: Angus Council, Walsall Council and Hertfordshire Council. • Contra-flow cycling on one way streets may cause confusion for motorist not expecting a cyclist in the 	<p>Pedestrians crossings on formal crossings</p> <p>Drivers Pedestrians crossing one-way streets</p> <p>Visually impaired</p> <p>Police</p> <p>All populations</p>
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opposite direction and at the junctions. Similarly people crossing the street can also be caught off guard. Safety risks can be mitigated by Making the contraflow cycling operation clear at intersections; by using contraflow entry and exit treatments –with appropriate signing, markings and physical segregation.

Right to health – EAP, IS, RBA, IFB, KB1, LB2, MM, OKE, SUF, Appendix 3

Reallocation of road space may result in localised noise/pollution issues due to increased queuing, although this is likely to be balanced over time with modal shift.

Sharing of space between visually impaired users and other vehicles, including cyclists, may result in increased levels of stress in this user group.

Right to physical security – SBD, OKE, SUF, Appendix 1

The focus on creating permeable transport networks within neighborhoods may have negative implications for policing certain areas. This may be offset in some cases by the increased local surveillance possible through new street design.

Right to legal security - SBD, OKE, SUF, Appendix 3

CCTV and additional electronic surveillance may be a consequence of street design in certain scenarios, which carries privacy implications.

Right to identify, expression and self-respect – OKE, SUF, Appendix 3

In terms of presentation of the document it may not be possible to select a choice of images that reflect all ages, races, sex, and sexual orientation etc. whilst illustrating the technical issue in question.

Appendix 3 – summary impacts of the risk assessed key design elements on the rights and equality duty (in 2017)

	Overview of ESG Elements											
Rights Impact Assessment Right to:	Tight corner radii	Crossings at or near junctions	Reduced distance (1.7m) from stop line to crossing	Floating bus stops	Continuous footways	Reduced street furniture set back	Reduced minimum treatment length HFS	Omitting centrelines	Separators in soft segregation cycle lanes	Reducing zigzag markings at crossings	Reducing tactile paving tail width to 800mm	Removal for PGR at reverse staggered crossings
Life*	++ / -	++ / -	++	+++				+	+++			
Health	+++	+++	+++	+++ / -	-			-	+++ / -			
Physical Security	++	++ / -	++		++	++		+				
Legal Security								+		+		
Education and Learning	+++	+++	+++	+++	++	++			+++			
Standard of Living	+++	+++	+++	+++	++	++		+	+++			
Productive and Valued Activities	+++	+++	+++	+++	++	++			+++			
Individual, family and Social Life												
Identity, Expressions and Self-respect	+++	+++	+++	+++	++	++			+++			
Participation, Influence and Voice	+++	+++	+++	+++	++	++			+++			
Equality Impact Assessment Duty to:												
Eliminate unlawful discrimination, harassment or victimisation	++	++	++	-	++/-	+++		+	-	+	++	+ / --
Advance equality opportunity	++ / -	++	++	++	++ / -	+++			++			
Foster good relations	+			+ / -	-			+ / -	+ / -			

Additional benefits not captured by EIRA assessment:							Reduced initial and maintenance costs, reduction in visual impact.				Reduced initial and maintenance costs.	Reduced initial and maintenance costs.
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Benefit / Dis-benefit ratings:	+	Slight benefit	-	Slight dis-benefit
	++	Moderate benefit	--	Moderate dis-benefit
	+++	High benefit	---	High dis-benefit

* ESDG-RA Risk assessments have been undertaken on all the elements above. Only where the residual risks have a risk category of Tolerable and Unacceptable shall they be deemed to have a negative impact of right to life. Where the residual risk category is broadly acceptable this is considered as a neutral impact.