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Comparing the 20 Minute Neighbourhood and Traditional Scenarios in Edinburgh Local Development Plan: a Rapid Scoping Assessment

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About this Report

The workshops described in this report were organised jointly by the Improvement Service, Scottish Health and Inequalities Impact Assessment Network, and the Spatial Planning for Health and Wellbeing Collaborative Group, with support from colleagues in Public Health Scotland. A full list of workshop participants is included in Appendix 2.

Improvement Service

The Improvement Service is the 'go to' organisation for Local Government improvement in Scotland. Its purpose is to help councils and their partners to improve the health, quality of life and opportunities of all people in the geographic area, through community leadership, strong local governance and the delivery of high quality, efficient local services.

www.improvementservice.org.uk

Scottish Health and Inequalities Impact Assessment Network

The Scottish Health and Inequalities Impact Assessment Network aims to promote a Health in All Policies approach in Scotland, to increase the use and quality of Health Impact Assessments and improve consideration of health issues in other assessments, in order to contribute to improvements in policies and plans that will enhance population health and reduce health inequalities.

www.scotphn.net/networks/scottish-health-and-inequalities-impact-assessment-network-shiian/introduction/

Spatial Planning for Health and Wellbeing Collaborative Group

The Spatial Planning for Health and Wellbeing Collaborative Group involves public health and planning practitioners and organisations who are working to embed Place, Health and Wellbeing themes, expertise and evidence into spatial planning policy including NPF4, the Scottish Government ambition for 20 minute neighbourhoods and regulations for health assessments of national and major developments.

Summary

The Covid19 pandemic has highlighted the importance of local places for people's health and wellbeing. Spatial planning policy shapes local neighbourhoods, with significant impacts on the health and wellbeing of both current and future residents.

This paper reports key impacts of two different options for spatial planning policy: the traditional approach and a 20 minute neighbourhood approach. It presents potential impacts of each scenario on the wellbeing of people and planet and summarises the key issues, recommendations and research questions.

The scenarios, derived from City of Edinburgh Council 'Choices for City Plan 2030', were assessed for the impact the places they shape would have on different populations and their contribution to addressing Place and Health themes and National Outcomes.

Positive impacts for health were identified from the 20 minute neighbourhood scenario, but they are dependent on having in place other elements such as infrastructure, services, and design quality. Mitigation of negative impacts such as traffic and noise must also be included. The series of recommendations to maximise positive impact on populations and outcomes reflect characteristics found in 20 minute neighbourhood approaches.

The group identified both positive and negative impacts for residents in the traditional scenario, and wider adverse impacts that would affect people living in other areas.

The need for more evidence to support policy focussed around three research questions:

• How does housing and neighbourhood design affect health determinants?

• What mix and level of access to services and amenities is needed for health benefits?

• What supports the development of social capital in communities, particularly new communities?

Work is now ongoing to collate existing evidence and research and to identify gaps relating to these three areas.

Since the workshops were held, the Programme for Government has been published and includes a commitment to take forward the Scottish Government's ambitions for 20 minute neighbourhoods. The impacts identified here, and further collated evidence, should inform this work. The group made a series of recommendations and highlighted that Local Development Plans and National Planning Framework 4 should incorporate the Place and Health themes.

Features of a 20 Minute Neighbourhood

Place and Health Themes
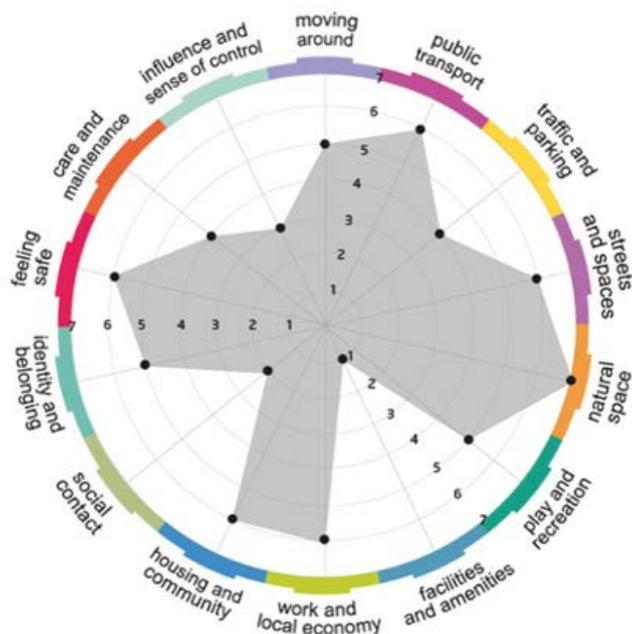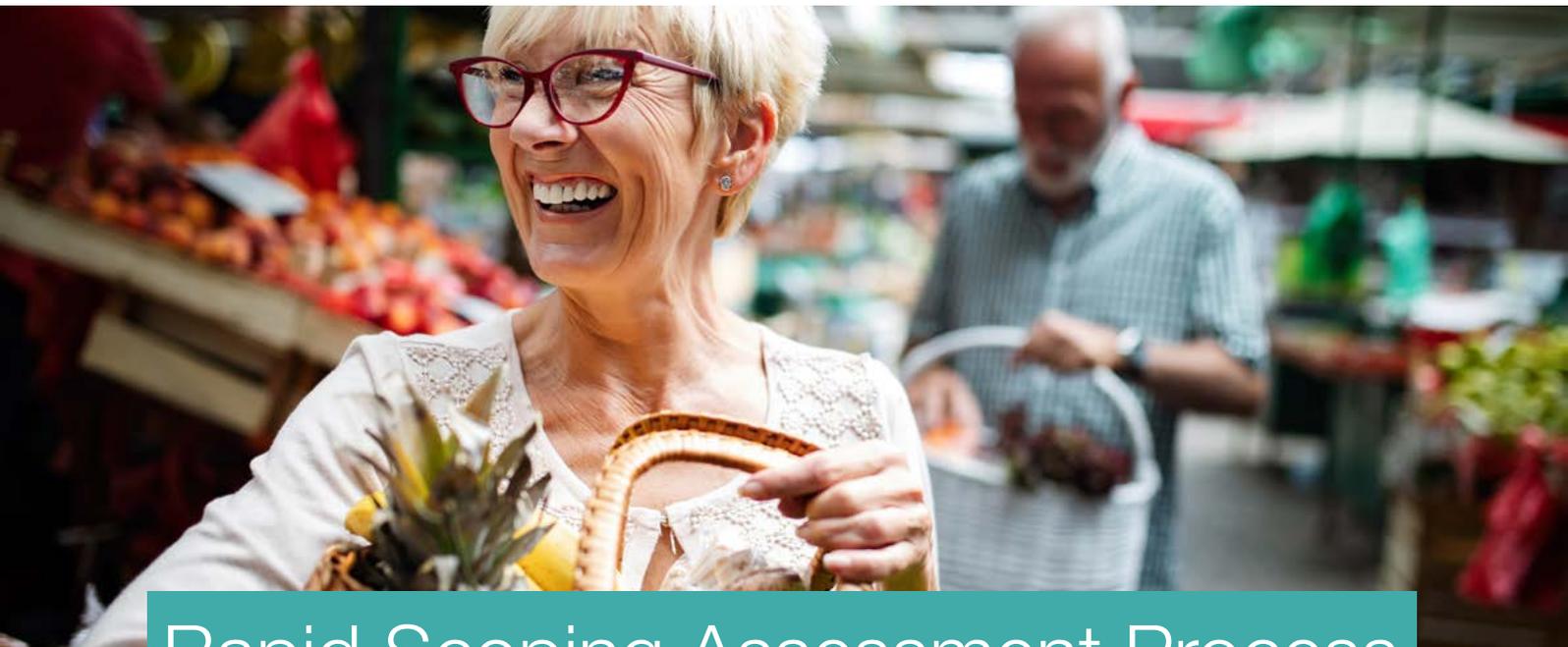
Rapid Scoping Assessment Process

This is a report of two workshops held in August 2020 to consider the impacts of two contrasting planning scenarios on different populations, on Place and Health Themes defined in the Place Standard and on the Scottish National Outcomes.

The checklist of populations and outcomes used to structure the discussion is given in Appendix 1.

Participants are listed in Appendix 2. Most participants were public health professionals. They were asked to use their knowledge and expertise to consider how each scenario was likely to impact on the populations and outcomes, including areas of uncertainty that may require further evidence.

The first workshop focused on scenario 1 and the second on scenario 2 but there were many common points made in both discussions. This report combines the discussions from both workshops, and a follow up discussion to prioritise the research questions raised.

The report describes the scenarios and gives a summary of key issues, recommendations and research questions highlighted, before a detailed report on the group's discussions on the impacts of each scenario on the populations and outcomes considered in the workshops.

The Scenarios

The scenarios are being considered within the City of Edinburgh Council document 'Choices for City Plan 2030', which sets out options for planning policy in the Local Development Plan. Once approved the final LDP will be used in planning decisions in the city over the next 10 years. Iain McFarlane, City Plan Programme Director in City of Edinburgh Council, gave a brief background to the scenarios and answered questions from participants.

Edinburgh has a shortage of homes and a target to deliver 40,000 to 50,000 new homes in the next 10 years, including 20,000 affordable homes.

Scenario 1 is the 'traditional' scenario of predominantly greenfield development at low densities of 30-35 houses per hectare, limited mix of uses and no proactive approach to brownfield development. This type of development is characterised by a large number of detached and semi-detached houses with large gardens, with some terraces and flats and open space. Low density is less likely to have the critical mass of people needed to create local markets for services, business and public transport and more likely to be road and car oriented. It is predominantly developer led housing, and equates to a lifestyle of detached and semi-detached houses with gardens. But there would still be a requirement for 20,000 affordable homes to be delivered. Some of these developments may be in relatively small pockets but others will be in large developments of 1,000 or more houses. Developments of this size would require provision of a new primary school; a new secondary school would be required for developments of 5,000 or more units.

Scenario 2 is a '20 minute neighbourhood' scenario with higher density, mixed use development that targets access to public green space, a range of affordable house types, public transport and active travel. It is estimated this may require an average density of at least 65 dwellings per hectare in new developments, although it could be higher in some areas. This is intended to provide the most effective use of land, with an emphasis on brownfield sites but development on greenfield if needed, in the same way. The higher density provides

the critical mass to support local services and amenities to achieve a mixed use area that can help reduce car usage. This aims to address the housing shortage and improve affordability and availability of housing overall. In this context, high density does not mean high rise, and can be provided by a mix of flats (5-6 storey), colonies and terraces (2-3 storey) as well as semi and detached houses. Higher density can create the demand for associated services and business, employment and public transport, with local services within a 15-20 minute walking distance at most and an emphasis on active travel. It can also allow for greater aggregation of open space around more efficient use of land. There are existing examples of high density mixed use developments in Edinburgh that are seen as very desirable, such as Stockbridge and Marchmont. There are also much higher densities in some parts of the city, such as

Gorgie at 300 dwellings per hectare, and Bonnington with flats, townhouses and colonies at 100-200 dwellings per hectare.

The group recognised that the scenarios considered are 'ideal types' which were defined to focus the discussion, but the policies adopted in the final City Plan may not conform exactly to either of these. In the discussion, the group recognised that the council had identified the 20 minute neighbourhood as its preferred scenario. However the discussion aimed to consider the advantages and disadvantages of each scenario from a neutral standpoint. The group noted that some outcomes will not arise from density alone, and it was important to try to understand the pathways by which outcomes would arise. This report will identify generic recommendations that would apply regardless of scenario.

Summary of Key Issues

Overall, the group recognised that provision of good quality affordable housing should benefit health. However, it is important that the location and form of new housing developments do not result in adverse effects, either for people who move into the developments or for other people living elsewhere. Implementing high density without ensuring provision of services and amenities within easy walking distance would have negative impacts on residents of those houses. It is important that services and infrastructure, including active travel infrastructure, are in place before residents move in. It is also important to consider the context of each individual development – the needs of city centre developments will differ from those nearer the outskirts of the city. All developments should deliver the outcomes identified in the Place and Health themes.

The discussion identified several benefits of providing a mix of housing types and styles within a development. This could be possible in either scenario although the group noted that the traditional scenario often provides mainly family housing and a more homogenous building style. Benefits of a mix

of sizes and types of housing include the potential for multi-generational communities where older people can downsize but remain in the same community, the potential to support a diverse population mix, and opportunities for informal social and practical support. It is also important to ensure suitable provision for people with mobility needs and adaptable homes for people with care needs. People with cognitive impairment may also benefit from a more mixed urban form that provides landmarks to aid navigation.

An important identified benefit of higher density is that it can provide a critical mass of population to support local services and amenities within walkable distance, and enable local business and employment opportunities – hence the '20 minute neighbourhood'. This also means, as noted above, that developments should not be solely residential but must be truly mixed use, with safeguarded space for these services and amenities. Higher density neighbourhoods could support more frequent public transport services, car clubs and bike share schemes and so are much less likely to be car dependant. These are

all particularly important for people on low incomes or people who need to fit part time work around other commitments. Critical mass could support shared workspaces, which may become important if fewer people want to commute to centrally located offices. Higher densities could also support more specialist services for people with particular needs. They may provide more opportunities for passive surveillance but design is also important to achieve this.

Traditional low density developments are more likely to encourage car ownership and use. Distances and homogeneity of land use mix are likely to discourage active travel and low density developments are less able to sustain frequent public transport services. Increased reliance on cars reduces physical activity and also has wider impacts on people living nearby and on commuting routes. Higher volumes of traffic increase air pollution, noise, injuries and severance. However, the group noted that some people, such as people with mobility problems and carers, will still need to use cars and should have priority parking provision.

High density developments may have more problems with noise, litter, and disputes over maintenance of public realm and buildings due to greater numbers of households living in flatted developments with shared maintenance arrangements. Antisocial behaviour could also arise due to the volume of people using public spaces. Developments in city centre locations may be affected by traffic and parking from commuters and visitors as well as residents. Car ownership and car usage are strongly associated with income and wealth. In both scenarios, other actions that support lower car use will be needed, to prevent new developments generating increased traffic in the city.

In both scenarios, the group noted the importance of ensuring the public realm is accessible for people with mobility and sensory needs, ensuring pedestrians are not impeded by vehicles and providing cycling infrastructure separated from both pedestrians and motor vehicles. There should also be provision of easily accessible, high quality public greenspace that allows interest and diversity of uses by different age groups, and serves multiple purposes including structured and unstructured play, biodiversity and sustainable urban drainage. All houses should have some private greenspace, which could be a garden, balcony or roof terrace.

The group noted that as well as density, other elements are also important to build community. These include facilities and design that support social interaction and mechanisms that enable people to be involved in decisions that affect their local community.

The group noted environmental problems associated with building on greenfield land including the loss of land for food growing and potential increase in flood risk downstream. In both scenarios it is important to protect greenspace, and ensure well connected green networks across the city. These will have multiple environmental and health benefits.

Although the group identified potential positive impacts for health from the 20 minute neighbourhood scenario, these are dependent on having in place the other elements including infrastructure (in particular active and public transport options), access to local services and quality greenspaces and actions to mitigate negative impacts such as noise and traffic.

The group noted that many of its conclusions were hypothetical and further research would be useful to further understand the links between neighbourhood design and health, including the impact of a combination of design features. Impacts depend on socio-economic factors, overcrowding and household composition as well as design, although the mix and types of housing, including affordable housing, will influence these.

Recommendations

During the discussion, the group identified recommendations to ensure that new developments would have positive impacts on the populations and outcomes discussed. These are summarised below.

Planning process

- The City of Edinburgh Council should work with other community planning partners to ensure that planning policy supports, and is supported by, other policies in the city. Planning and placemaking should be designed to support the needs and wellbeing of the population.

- The City of Edinburgh Council, and planning partners, should continue to bring forward guidance, policies and an action programme that pro-actively promotes measures that reduce the need for private car use, ensure everyone in the city has access to accessible, affordable, integrated public transport and ensure a safe, connected green active travel network in the city. It is important this travel network achieves at least as good a range of connection between destinations as is available by car, with integrated ticketing if changes are necessary.

- These policies and guidance should be implemented across the Local Authority area both through planning applications and also by the planning of projects for delivery by the Council and its partners.

- New developments should be designed and located with a strong emphasis on creating communities and neighbourhoods so that new housing is only built where it will be served by appropriate, local amenities and infrastructure, for example active travel and public transport links.

- Indicators for these should be identified and monitored.

- Scottish Government should incorporate the Place and Health themes, and relevant recommendations from this report, into National Planning Framework 4.

Community involvement

- Developers, planners and local organisations should support community-building and create opportunities for social interaction and new models to allow people to be involved in decisions that affect their communities before, during and after development.

- The City of Edinburgh Council will continue to produce Place Briefs and be supportive of Local Place Plans as both of these assist with increasing the objective of community involvement and creating stronger communities and placemaking.

- Developers and planners should use the Place Standard as an evidence-based tool to support community involvement in planning and placemaking, bringing stakeholders together to identify priorities for both planned and existing places.

- The City of Edinburgh Council should encourage diversity of home ownership models.

Housing

- Housing developments should avoid homogeneity of house type, size and style and ensure there is flexibility and heterogeneity of provision for different household sizes and types to increase inclusion.

- Housing developments should include adaptable housing, homes suitable for wheelchair users and lifetime homes. This should include a minimum level of provision of accessible homes.

- Housing developments should include affordable housing which is integrated across the development site.

- Houses should include sufficient space and infrastructure for home working, learning and play and bike storage.

- Where smaller homes are being designed attention should be paid to how they can accommodate home working, home study and play.

- All homes should be designed to provide some private greenspace – this could be a shared garden, balcony or roof terrace.

Public realm and local services

- Developments should ensure accessibility of the public realm for disabled people, including people with mobility and sensory impairments.

- Developments should be designed to allow passive surveillance to enhance safety.

- Car parking spaces should be prioritised for carers and people with mobility issues.

- Developments should provide bike storage and active travel infrastructure that is inclusive and separates cyclists from motor traffic and from pedestrians.

- Developments should provide broadband infrastructure.

- Developments should include provision of community resources such as workspaces, local retail, community venues.

- Developments should provide high quality, accessible public greenspace that supports both structured and unstructured play and diversity for different age groups and delivers multiple functions including biodiversity and sustainable urban drainage.

- Developments should ensure there are green networks both within and beyond the development and that these are well connected.

Critical mass of population

- Developments should ensure critical mass to support public transport at a sufficient frequency of services to make this a realistic choice.

- Developments should ensure sufficient critical mass to support services, local businesses and anchor institutions within a walkable distance.

- It is important this critical mass of population is particularly focused around the centres of these neighbourhoods, where these amenities, businesses and infrastructure are likely to be located, to maximise the use of these. This will be important for sustaining a wider range and level of services and infrastructure as well as creating a sense of place with a recognisable centre and identity.

Environmental impacts

- Contractors should ensure the highest standards of safety performance and workforce development and support, minimise disruption and risk to adjacent communities and minimise their environmental impacts.

- The use of greenfield sites should be restricted for environmental reasons.

- New developments should maximise the opportunity to provide green and blue infrastructure on-site (e.g. green roofs) to provide a range of benefits, including health benefits to future and existing residents.

Evaluation

- The impacts of different models of development should be evaluated to build the evidence base for future planning.

Research Questions

The group identified several areas where more evidence would help better understand impacts of the two scenarios, summarised in the research questions below. The group prioritised three of these for further work. The group noted that many of the relationships will be confounded by wealth and other factors.

The three priority research questions are as follows:

How does housing and neighbourhood design affect health determinants including:

- transmission of infectious disease (including impact of size of travel bubbles)?

- social capital, social support, cohesion or isolation?

- mental wellbeing?

- crime and antisocial behaviour?

- perceived safety?

- cultural expression?

- air quality?

- physical activity?

- delivery of different forms of infrastructure and district heating?

Elements of housing and neighbourhood design to consider include: density, the mix of size and types of units, the mix of services and amenities within walking distance, and combinations of these. The link with transmission of infectious disease is a particular priority given the covid19 pandemic.

What mix and level of access to services and amenities, and within what distance, is needed to benefit health and reduce inequalities?

What supports the development of social capital in communities, particularly new communities?

The other research questions identified during the discussion were:

- What elements of access, size and quality of greenspace do people value and how do they affect health?

- How does availability of affordable homes affect transmission of infectious disease?

- What are the health impacts of multi-generational households?

- What are the health impacts of multi-generational and mixed communities?

- How does gender affect experience of place?

- How does disability affect experience of place?

- What is required to 'poverty proof' developments to allow low income residents to be able to access employment and maintain a decent standard of living?

- What is the cost of changing from homogenous housing types and style to a mix of house size and styles and how does this affect affordability?

- What lessons should be learned from research on high mortality in West Central Scotland, which has been linked to post war urban planning decisions?

Next Steps

The group agreed it would be useful to use the same approach to scope the potential impacts of plans in other parts of Scotland and at different scales – eg a master plan and a regional plan. It is important to link with colleagues in local Boards and CoSLA to do this.

Additional work will seek to identify existing research, collate available findings and identify evidence gaps relating to the three priority research questions above. Evaluation of 20 minute neighbourhood developments in Edinburgh and other cities will also contribute to the evidence base.

Members of the group are keen to work with Scottish Government and other colleagues on ways to integrate these recommendations into National Planning Framework 4 and other relevant plans.

Detailed Discussions of Populations and Impacts

This section presents the detail of the group's deliberations on the impacts of the scenarios on the population groups and outcomes considered in the checklists.

Affected populations

The group identified several populations that would be affected by new housing developments in either scenario:

- People moving in to new developments

- People living or working near new developments

- People who use amenities that would be used by new residents – Iain clarified that developers would contribute to schools if developments would add significantly to the number of pupils, which would mitigate this for education. Some other infrastructure may also be supported by similar contributions

- Providers of services that would be used by new residents, including utilities, primary care, businesses and others

- People who currently use the development sites for leisure, physical activity or other uses

- Construction workers and others working on the developments

The traditional scenario 1 would also impact on:

- People living on, or currently commuting on, roads that were main routes into the city from new developments

- People who move into new developments who cannot drive or cannot afford to run a car, including young people - if developments do not have the critical mass to support frequent public transport; people on low incomes who may have financial pressures from 'forced car ownership'

- People who move into new developments who require smaller properties to meet their needs

- Traditional scenario 1 is more likely to impact on those using greenspaces and

rural areas around Edinburgh given the greater level of greenfield land needed to provide housing at lower densities.

The 20 minute neighbourhood scenario 2 would also impact on:

- City centre businesses

- Tourists

- People living near to brownfield development sites would be more affected by construction due to greater proximity, but could also benefit from redevelopment of vacant and derelict sites

- People living near to brownfield development sites may be affected by changes in house prices if some areas become more/less desirable

- Local businesses and services would also be more affected by construction, and there could be more competition for the use of space, but they could benefit from increased critical mass to support them.

The group then discussed the populations identified on the checklist as follows:

Older people

Older people are more likely to live in single person households. In the traditional scenario, if development is predominantly family housing, it is more difficult for older people to downsize if they wish to. This may also reduce availability of family housing as there will be less turnover and existing family homes will not be made available.

Older people are more likely to need adapted housing – in either scenario it is important to ensure there is provision of lifetime homes to allow homes to meet changing needs, and to ensure that some housing is ground floor, single level and accessible. Disabled people may need an additional bedroom for a carer.

People with care packages may need a carer to be able to drive and park nearby, which may be easier in low density developments. However, low density developments may be less likely to provide a critical mass to support care hubs. There is more potential for people who become unable to drive to become socially isolated if there is a lack of public transport.

The 20 minute neighbourhood scenario would benefit anyone who cannot or does not want to travel by car to access local services and amenities. The group noted that in either scenario, a 20 minute walk for a young, fit person might take longer for an older person. In either scenario it is important to plan and design for people with mobility issues, to ensure there is vehicle access for people who need this, but also that vehicles do not obstruct or dominate so that walking and wheelchair access are difficult. Pavements should also enable movement and be wide enough to accommodate people passing each other. Cycling infrastructure similarly should not compete with walking and wheeling routes.

In both scenarios, provision of public seating will be required to enable older people and people with mobility issues to rest.

The group noted that older people often contribute to civic infrastructure, which suggests housing should be developed to support mixed generation and mixed need communities.

The group discussed potential benefits of multigenerational households and neighbourhoods such as informal childcare, support for older people and inter-generational sharing, and the need for evidence to support these.

Young people

In the traditional low density scenario, young people may be less able to be independent and access support and services if local services and activities are limited and public transport links are absent or low frequency. Limited amenities for young people is more likely to lead to complaints about them 'hanging around' or perceptions of anti-social behaviour. They are more likely to be able to travel independently in the 20 minute neighbourhood scenario, which could reduce social isolation and promote personal independence in this group.

Children

Children need sufficient play space, including facilities for unstructured play. Families with young children benefit from private gardens so it would be important for the 20 minute scenario to include some housing with access to private space in its mix of house types. Without this, families would benefit more from the traditional low density scenario. Families with young children may also require access to parking if they are unable to access childcare, services etc nearby.

All sizeable developments are likely to include a requirement for playspaces and greenspaces but with lower density build the spacing between houses may make them less accessible and more distant from homes that are not in their immediate proximity. This greater travel distance will increase inequality in access to these play opportunities. Parents may be more concerned about children playing on the street and about cycling with children in the high density scenario, if traffic is busier. Children and young people may be more able to walk to school and to access play, social and leisure opportunities independently in the 20 minute neighbourhood scenario due to the reduced

distance between these destinations and children's homes. The interventions needed to ensure safe routes to school may vary between scenarios.

The low density scenario may be less able to provide flexible local childcare options because of the lack of critical mass, and access may be more dependent on car use if public transport is insufficient.

Women

Although men are more at risk of violent crime, women are more likely to be a victim of sexual crime. As a result women tend to be particularly concerned about personal safety, particularly at night. In either scenario, it is important to design to allow passive surveillance, but this may be more difficult where there is less non- vehicular traffic. The group was unsure of evidence about the optimal density for personal security and perceived safety.

Similarly, women are less likely to cycle, in part because of concerns about safety where there is a lack of cycling infrastructure.

Women are more likely to be primary carers and need to make 'trip chains' that combine multiple journeys, so need frequent reliable public transport to enable this.

Disabled people

Disabled people may require adapted housing. In both scenarios, there should be high standards of accessibility, and an appropriate target for wheelchair accessible homes. People with mobility issues may need to be able to park or be dropped off next to their homes, which may be easier in the low density scenario unless specific consideration is given to this in the 20 minute scenario.

People with sight impairment cannot drive, so rely more on taxis and on public transport, which is likely to be less available and frequent at low density. They also have difficulty navigating shared spaces and pavements without kerbs, and need accessible pedestrian crossings.

Monotonous developments with less diversity may be more difficult for people with cognitive impairment to navigate. The 20 minute neighbourhood scenario is more likely to provide diversity of uses, buildings and landmarks.

The group noted that disabled people may feel disconnected from communities of place and identify more with a community of interest, which requires them to be able to engage with people from other parts of the city. Broadband infrastructure is important to help them access services and amenities but it is also important to ensure homes and neighbourhoods are accessible to reduce the likelihood of people being housebound.

People with mental health problems may benefit from informal social contact, which may be less likely in car dominated developments. The size of living space and access to greenspace were also important for mental health – in either scenario it was important to ensure sufficient good quality space for the household size, and access to high quality greenspace. The group identified a need to review evidence on the links between density and mental health. The group noted that high density developments may be noisier due to street noise, mixed use and traffic and this could have adverse effects on mental health.

The group debated how well the traditional low density scenario would support social interaction and support, including inter-generational mixing and support. It noted that informal unplanned interactions were less likely in car dominated environments, but there are low density places that have a strong sense of community and other factors like perceived safety are also important.

Single people

Developments that are predominantly family housing will not meet the needs of single people. In the traditional low-density scenario there is a greater proportion of larger homes. A higher density scenario may redress this balance somewhat, although planning guidance and policies will have to be retained to ensure there remains a mix of dwelling sizes.

People in minority ethnic groups and of different faiths

People in some ethnic groups, and with some faiths, may be more likely to live in multi-generational households. These would be supported by the larger house types in low density developments, but should also be possible in high density scenario with a mix of house types – the group noted that in both scenarios it was important to provide a mix of housing for different sizes and types of household. This allows for greater adaptability of homes to suit a more diverse population mix. The colonies were an example of a form that can support people of different age groups and needs, and enhance community cohesion (although they may not meet everyone's needs).

Higher density developments are more likely to have the critical mass to support services for people with specific needs and allow diversity of services, such as places of worship. It also makes it easier to provide specialist services, culturally appropriate foods etc.

Refugees and asylum seekers

In the 20 minute neighbourhood scenario, the ability to move around independently without a car may benefit asylum seekers.

However greater ethnic diversity is also associated with higher levels of discrimination. Estate management and involvement of existing residents is important when integrating asylum seekers and refugees.

Traditional low density single use developments would be unlikely to provide specialist retail and services to support local communities of interest for people of different needs, potentially including different ethnic groups, faiths, lesbian, gay, bisexual and other groups.

People on low incomes

In both scenarios, there is a requirement to provide 25% affordable homes. These are likely to be provided on site. There could be stigmatisation of the affordable houses on developments. They should be integrated well into the development. Affordable housing is important to reduce poverty, as rents and the availability of social housing are strong determinants of poverty. Insufficient affordable housing may lead to house sharing, overcrowding and increased transmission of infectious disease.

People on low incomes in developments with poor or infrequent public transport links may face transport poverty or forced car ownership, impacting on household finances. High density sites are more likely to have critical mass for car clubs and bike share schemes. Similarly, utilities and other services may be more affordable if there is critical mass and economies of scale. The 20 minute scenario may be more likely to create the critical mass to support district heating schemes in some high density sites, which would help alleviate fuel poverty. Conversely, local inner city retail is often more expensive than supermarkets that require a car to access them.

People on low incomes could also benefit from better access to local employment in the 20 minute neighbourhood model, as mixed use would provide very local employment opportunities and public transport would be more accessible.

Access to some specific services that are only provided in a small number of locations may need a change of bus, adding to the time and cost needed to access these. For example Edinburgh has only three job centres and travelling to hospital may also require a change of bus. Better orbital bus services are needed to improve accessibility to these services.

The cost of some elements of the school day, and out of school costs, may be lower in the 20 minute neighbourhood scenario as the school, after school clubs and other activities will be closer and there may be more potential to access a range of low cost activities.

The group discussed the need to 'poverty proof' developments – as well as affordable homes this includes ensuring high quality building standards to reduce fuel poverty, access to public transport, access to affordable food retail, access to employment.

Homeless people

Provision of affordable homes including social housing (in both scenarios) will benefit many people who are homeless or at risk of homelessness. The group noted that this depends partly on the drivers of homelessness. Some homeless people have support needs that are less likely to be met in low density developments with less access to services.

Criminal justice

In both scenarios, it is important to design spaces that are inclusive for all populations

and allow passive surveillance, in order to reduce antisocial behaviour.

The group noted that in high density areas, just by virtue of having more people in these areas, there could be greater problems with litter, disputes over maintenance of public realm and antisocial behaviour related to the volume of people using public spaces. It was important to design to support community cohesion but also to consider these issues as part of a whole system approach as the LDP cannot address these issues in isolation.

Carers

Carers, particularly paid carers who travel between clients, may need parking near to clients, which may be easier in the low density scenario. They may need to work unsocial hours and feel unsafe to travel on public transport, even if services are frequent. Unpaid carers may benefit from informal social support, which may be more difficult in low density developments (but see comments above about density and social capital). If public transport is

infrequent they depend on car use to access formal and informal support. Young carers in particular may be at risk of isolation if public transport is poor.

Workers

The pandemic has highlighted the need for homes to have suitable space and digital infrastructure for homeworking. This may be easier to provide in the low density scenario and on greenfield sites. However homeworkers may also benefit from having amenities nearby, and provision of working 'hubs' which may be more likely in the 20 minute neighbourhood scenario.

The 20 minute neighbourhood is more likely to provide local part time work for people with other commitments.

Access for tradespeople and deliveries may be more difficult in high density developments.

The higher density scenario may also increase work opportunities for those without access to private car travel.

Place Standard — Place and Health Themes

The group then considered how well each scenario would meet the outcomes identified in the Place Standard.

Movement

Traditional low density developments are more likely to encourage car ownership and use. Distances and homogeneity of land use mix are likely to discourage active travel and they are less likely to sustain frequent public transport services. They are also less likely to be able to sustain car clubs or bike sharing schemes. This will increase the overall volume of traffic and so also impact on people living elsewhere in the city, particularly along main roads and city centre areas with already limited parking.

In the 20 minute neighbourhood scenario, parking may not be next to each dwelling and there may be less opportunity for bike storage. If car ownership and use remained the same there would be more pressure on space for parking. However, with less need to drive to access amenities, there may

be fewer cars per household which would reduce traffic and parking overall. The group identified a need to quantify the reduction in car use relative to density. There is a need to consider secure parking for cars parked away from home, consider need for and location of charge points for electric vehicles and to prioritise parking for carers and people with mobility issues.

City centre brownfield sites are more likely to be impacted by traffic coming into the city. Traffic calming measures, speed restrictions and parking restrictions may be needed to manage this. It is important to protect pavement space for pedestrians and ensure sufficient space for wheelchairs and buggies.

Parents may need to drop children off at school then travel onto work. If they live near enough to the school it may be possible to walk then take public transport, but this requires integration of bus timetables with school hours.

The group noted the need to ensure both

orbital and radial public transport routes, to ensure people could access these and to prevent people having to change buses. The City Mobility Plan is looking at how to develop more orbital routes.

Low density developments can be designed to include walking and cycling routes within them but longer distances may discourage wider connectivity. It is important to ensure green networks are genuine networks, which do not have gaps and are well connected across all areas.

In either scenario, cycling infrastructure should be separated from pedestrians. Bike storage should be considered in either scenario and integrated into the design where there is no private outdoor space. The NICE guideline on Physical Activity and the Environment provides more detailed recommendations on encouraging physical activity through improvements to the environment.

In both scenarios, there will be impacts from construction traffic that affect people living nearby.

Spaces

The group noted that provision of playparks would be a requirement depending on the size of developments, but provision of shared space to allow unstructured play was also important. In both scenarios, it is important to consider opportunities for street play and other spaces for unstructured play and recreation as well as formal play spaces – this may be restricted by higher volume of traffic in more urban settings. The street scape should be accessible for disabled people and prams.

Traditional low density developments are more car dependent with severance effects separating neighbourhoods from each other. Developments with more homogenous

housing styles and types provide for less sense of place and may discouraging leisure walking.

Low density may be less able to support community resources including community open space and venues, district heating. It is possible to require provision of community spaces and venues but the distances resulting from low density developments means these may be located a less walkable distance from some dwellings.

City centre developments may lack access to high quality greenspace, and parks have been overcrowded. However, there is potential for regeneration of vacant derelict land and reallocation of road space to provide community benefits, and for communities to influence how it is used. In higher density areas, balconies, green facades and roof gardens can provide important small areas of private greenspace. It is important that greenspace is provided close to homes rather than in other locations.

In both scenarios, it is important to provide high quality public greenspace of sufficient size to support a diversity of uses for people in different age groups. Shared greenspaces may provide greater biodiversity and should also provide a diversity of functions. They should provide for both formal and informal play space as well as areas for older people, community food growing, individual and community leisure, outdoor learning, contribution to sustainability. There is a need to ensure that newly created spaces are not restricted in access as many current spaces are restricted for use by certain residents.

The group noted that people could benefit from blue and coastal space in some parts of Edinburgh.

The traditional low density scenario uses greenfield land and so reduces availability of land for food growing – including

commercial agriculture and community growing.

Brownfield sites may be more difficult to develop and some may need remediation. Some development costs may be higher in mixed developments that include non standard house types. The group was unsure of the overall impact on house prices, which also depend on land prices and housing availability. The opportunities for Public:Private partnerships on some sites was discussed as a means to keep housing more affordable.

Development on greenfield land may increase the risk of flooding downstream. Any increase of hard surfaced development area will also increase the likelihood of surface water flood risk events in and/or immediately adjacent to the development site itself – especially in areas which are prone to flooding already.

Creating more car dependant developments which increase the overall volume of traffic across the city will increase air pollution and have a negative impact on Edinburgh's net-zero carbon emission targets.

Resources

Traditional low density developments are less able to support provision of services and amenities, so people will need to travel outside the development to access these. This disadvantages people without a car.

Conversely, the group noted that small food stores in city centres are usually more expensive than larger supermarkets. Online ordering of both healthy and unhealthy items may mitigate the impact of the local environment on food and other choices but this disadvantages people who have less access to online resources.

The group noted the importance of ensuring

services and amenities are in place before people move in to a development, so they do not get used to travelling elsewhere.

Single use developments do not have an active local economy so all working residents need to commute. This is likely to limit employment options for some people, for example those who need to fit working hours around other commitments.

Civic

The homogeneity of traditional low density developments may reduce community identify and sense of place. Car dominance is also likely to reduce informal unplanned social interactions. However as noted above, many low density developments do retain strong social capital.

The group discussed the need to support ongoing maintenance of developments, particularly for low income residents. This may include grant schemes and other support.

The group noted that holiday lets would impact on the sense of community in city centre areas.

In both scenarios, perceived personal safety can be improved by design that allows passive surveillance, as noted above.

Stewardship

The group discussed the importance of people being able to be involved in decisions that affect their local area. There was a view that current structures for this are not sufficient and do not enable all groups of the population to contribute. There should be structures to enable involvement during planning, development and maintenance phases. Both formal and informal mechanisms may be important and should be supported. Participatory

Budgeting is a useful way to involve people. The Place Standard is also useful tool to involve communities.

Equity

The group thought that higher density developments with a mix of housing types and mix of uses is likely to allow more flexibility and diversity of residents and services, and support communities of interest. This is likely to be able to meet the needs of more groups.

Sustainability

It is important to protect existing greenspace and develop new urban greenspace for water management, carbon capture and other environmental and health benefits. Connecting private and public greenspace can support biodiversity and connected green networks can support active travel and development of wildlife corridors. Green

and Blue infrastructure should be integrated into all developments wherever possible, for example with green roofs wherever visually and practically appropriate.

Low density developments use greenfield land and encourage car dominance and so are less environmentally sustainable.

High building standards should be encouraged for all developments. Integration of SUDS and district heating into developments would have a positive environmental impact and benefit both health and sustainability, so should be encouraged.

Creating an environment that supports home-based/local community working with reduced requirements for commuting would have a positive impact if the reduction in traffic emissions outweighs increased emissions from home heating.

National Outcomes

Finally the group considered how well each scenario contributes to the national outcomes.

Children and young people

The group noted that providing high quality places for children to grow will contribute to this outcome. The traditional low density scenario will supply family homes with gardens which will benefit families but homogenous housing types may restrict the potential for informal family support.

The 20 minute neighbourhood scenario is more likely to enable access to other services and public transport which helps young people to be more independent and improve affordability of other resources in low income families.

In both scenarios, it is important to provide indoor and outdoor public spaces that allow interest and diversity of uses by different age groups.

Communities

The 20 minute neighbourhood scenario is likely to have more diversity and flexibility to meet different needs. It may enable more informal interaction with neighbours and so support social capital, although design features are also a strong influence.

The group noted that Edinburgh has a lot of private gardens and there may be potential to create more shared spaces that are more likely to support social capital and ensure more inclusive access. There is also public land that could be used differently as a community resource.

Culture

The group noted that higher density developments, with a critical mass of people and more potential for local venues, were more likely to enable participation in cultural activities. Regular access to cultural events can benefit mental health. It was also important to maintain local heritage.

Economy

In either scenario, good broadband infrastructure is needed to support entrepreneurialism.

The group discussed whether a greater diversity of ownership models could provide a better balance between the needs of shareholders and the needs of communities. There are examples of self-building and co-housing which should be encouraged, although it is accepted this could only fulfil part of the scale of housebuilding required.

A greater level of locally accessible work opportunities may be available in a walkable neighbourhood scenario.

A walkable neighbourhood scenario may result in those without private car access having a greater number and range of jobs may available to them given a potential rise in locally based jobs and also the increase in active and public travel that would accompany a higher density, walkable neighbourhood scenario.

Fair work and business

The group thought that the 20 minute neighbourhood with higher density and mixed use was more likely to create opportunities for local businesses, and encourage small business start-ups. This could create employment local to people's homes. In the traditional low density scenario, some people with other commitments may not be able to work, and lack of frequent public transport may mean that others are unable to access work.

Working from home is supported by local amenities and shared workspaces where people can work locally. The 20 minute neighbourhood scenario offers more potential for these hubs and potentially small business opportunities supporting people who are working from home.

Education

It may be more difficult for young people to access further and higher education in the low density scenario because public transport is likely to be unavailable or less frequent. The development of more orbital bus services may also be important to support this access.

Environment

Overall, the 20 minute neighbourhood scenario is likely to contribute to better environmental outcomes. The traditional low density scenario will use greenfield land, make less efficient use of land overall and promote car dependence. As noted above, it is important to protect greenspace for biodiversity, water management and carbon capture. Green networks within each development should be well connected to each other.

Human rights

The group identified several rights that may be affected by the types of development provided:

- Children and young people's right to play and leisure – which requires suitable spaces for structured and unstructured play - and the right to have their best interests taken into account.

- Rights to work, education, adequate standard of living, rest and leisure – which require accessible services and amenities.

- Disabled people's rights to health, education, employment, personal mobility and to being included in the community – which require good standards of accessibility, avoiding

development on steep hills, and access to transport and services.

- Environmental rights – including environmental justice.

International

This outcome includes trust in public organisations, which could be affected by the overall quality of living space and the ability for people to be involved in decisions that affect their community.

The group noted some adverse effects from a high level of international connectivity including pandemic risk, and effects of holiday lets.

The group also discussed the potential for Scotland to share good practice, highlighting the colonies as a model that could be shared. There is also potential to learn from good practice elsewhere.

Poverty

As noted above, the group identified several impacts on poverty. The provision of affordable homes, in both scenarios, should reduce housing poverty. However the 20 minute neighbourhood scenario is more likely to support people in poverty as they would be better able to access services and employment, within walking distance or by public transport.

Health

All of the above outcomes influence health. There are impacts that arise for the people living in the new developments and also wider impacts on other people in the city. The distribution of these impacts will affect health inequalities.

- In either scenario, the provision of good quality affordable housing would benefit the health of people who gain new housing.

- High quality greenspace and access to employment, services and amenities are also beneficial for health.

- Environments with antisocial behaviour, traffic, litter or other incivilities have adverse effects on health.

- A car dominated environment leads to poorer health outcomes due to physical inactivity, poor air quality, injuries and severance. These would affect not only the people who live in the development but also others in nearby communities and along transport routes.

- Reliable, accessible, available and affordable public transport is important for health, as a mediator to employment, services, facilities and social opportunities when these are not accessible by active travel modes

- The 20 minute neighbourhood scenario may enable more diversity of housing size and type, with potential benefits for inequalities.

The group discussed whether population density affects the risk of transmission of infectious disease. At the moment evidence about population density and the risk of Covid19 is mixed. Other important factors contributing to risk include poverty, underlying health conditions which are socially patterned, and overcrowding linked to unavailability of affordable housing. Population mixing may be more important than density by itself, so it may be beneficial to encourage people to spend more time in smaller community bubbles rather than encouraging wider city wide travel patterns. It is important that houses enable people to work from home.

APPENDIX 1
Checklist of Populations and Outcomes

Populations

Population Groups (Remember many people are in several of these groups which may add to their vulnerability)	How could these groups be affected differentially by the proposal?
• Older people, children and young people • Women, men (include trans men and women and issues relating to pregnancy and maternity) • Disabled people (includes physical disability, learning disability, sensory impairment, long term medical conditions, mental health problems) • Minority ethnic people (includes Gypsy/ Travellers, non-English speakers) • Refugees & asylum seekers • People with different religions or beliefs • Lesbian, gay, bisexual and heterosexual people • People who are unmarried, married or in a civil partnership • People living in poverty / people of low income • Homeless people • People involved in the criminal justice system • People with low literacy/numeracy • People in remote, rural and/or island locations • Carers (include parents, especially lone parents; and elderly carers) • Staff (including people with different work patterns e.g. part/full time, short term, job share, seasonal) • OTHERS (PLEASE ADD):	

(The white spaces in each checklist are for you to write down your ideas if you wish, just as a reminder for the discussion.)

Place and Health Themes

How will the proposal impact positively or negatively on these outcomes? Do you feel uncertain about any of these? Which groups of people will be affected?

Place Standard – Place and Health Themes			
Movement	Moving Around	It's easy to move around local areas around using good-quality routes	
	Public Transport	Everyone has access to an affordable, reliable and well-connected public transport service	
	Traffic and Parking	Traffic and parking arrangements allow people to move around safely and meet the community's needs	
Spaces	Streets and Spaces	Buildings, streets and public spaces create an attractive place that is easy to get around	
	Natural Spaces	Everyone can regularly access and experience good-quality natural space	
		No-one is exposed to environmental hazards	
		Adequate land is protected to grow food	
	Play and Recreation	Everyone can access a range of space with opportunities for play and recreation	
Resources	Services and Support	Good quality, accessible facilities and amenities meet the needs of local people	
		Access to products and services that harm health are restricted and those that enhance health promoted	
	Work and Economy	There is an active local economy and the opportunity to access good-quality work	

Place Standard – Place and Health Themes			
Resources	Housing and Community	Everyone has access to a house that is affordable and health promoting	
		Houses are designed and built to meet both current and future demand and are adaptable to changing needs	
	Social Interactions	There are a range of spaces and opportunities to meet people	
Civic	Identity and Belonging	The place has a positive identity and people feel like they belong	
	Feeling Safe	People feel safe and secure in their local community	
Steward-ship	Care and Maintenance	Buildings and spaces are well cared for	
	Influence and Control	People feel able to take part in decisions and help change things for the better	
Under-pinning	Equitable outcomes for all	All of the principles consider the needs of different populations and are applied in a way that ensures they achieve equal outcomes for all.	
	Climate change, sustainability and biodiversity	All of the principles are applied in a way that contributes to carbon reduction and enhances environmental sustainability and biodiversity	

National Outcomes

How will the proposal impact positively or negatively on these outcomes? Do you feel uncertain about any of these? Which groups of people will be affected?

National Outcomes		
Children and young people	We grow up loved, safe and respected so that we realise our full potential	
Communities	We live in communities that are inclusive, empowered, resilient and safe	
Culture	We are creative and our vibrant and diverse cultures are expresses and enjoyed widely	
Economy	We have a globally competitive, entrepreneurial, inclusive and sustainable economy	
Education	We are well educated, skilled and able to contribute to society	
Environment	We value, enjoy, protect and enhance our environment	
Fair work and business	We have thriving and innovative businesses, with quality jobs and fair work for everyone	
Health	We are healthy and active	
Human Rights	We respect, protect and fulfil human rights and live free form discrimination	
International	We are open, connected and make a positive contribution internationally	
Poverty	We tackle poverty by sharing opportunities, wealth and power more equally	

APPENDIX 2
Participants

6th August 2020 – Discussion of Scenario 1

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