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## The potential of low traffic measures for healthy active ageing

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## The potential of low traffic measures for healthy active ageing Project Report

### Introduction

The most common form of physical activity among older adults is walking, which is reported to have a number of health benefits. Research suggests, however, that most older adults are not as active as they would like to be, which can be because of poor health, lack of support, or a lack of opportunity among other factors<sup>1</sup>. Many older people report traffic-related issues, such as noisy and speeding traffic and lack of pedestrian crossings, as affecting their active travel choices, including walking behaviour, as they feel unsafe walking or wheeling within their local area<sup>2</sup>. Reducing or removing high levels of traffic may make people feel safer when out and about in their area and may increase levels of physical activity amongst older adults. One method of achieving this is the implementation of Low Traffic Neighbourhoods (LTN).

### *What is a Low Traffic Neighbourhood?*

LTNs consist of measures to reduce or calm traffic in residential areas. Some of these measures include:

- Modal filters – bollards or planters placed at the end of roads to stop vehicle access.
- Pocket parks – two sets of modal filters at either end of a road to create a pedestrianised area, often filled with greenspace.
- Bus gates – areas where only buses are permitted, often monitored by cameras.
- One-way streets – streets in which traffic can only flow in one direction.

Sometimes referred to as 'active neighbourhoods', these measures aim to encourage physical activity by making it safer for people to walk, wheel or cycle<sup>3</sup>. LTNs can be found throughout the country, with many installed during the Covid-19 pandemic to allow people to maintain physical distance while walking within their local area.

### *Do Low Traffic Neighbourhoods work?*

Public opinion is divided on the effectiveness of LTNs, but research suggests that they have had the following positive impacts:

- Travel, including walking, cycling and driving has been found to be around 3 to 4 times safer in LTNs compared to areas without these measures.<sup>4</sup>
- Low traffic measures increased active travel (walking, wheeling, cycling) by around 41 minutes per week.<sup>5</sup>

LTNs are not always easy to implement. In some areas, their introduction might negatively impact certain groups, including people with disabilities. Our neighbourhoods and towns are often not designed with disabilities in mind, and so getting around without a car can be difficult

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<sup>1</sup> Leiononen, R., Keikkisen, E., Hirvensalo, M., Lintunen, T., Rasinaho, M., Sakari-Rantala, R., Kallinen, M., Koski, J., Möttönen, S., Kannas, S., Huovinen, P. and Rantanen, T. (2007). Customer-oriented counseling for physical activity in older people: study protocol and selected baseline results of a randomized-controlled trial (ISRCTN 07330512). *Scandinavian Journal of Medicine & Science in Sports*, 17, pp. 156-164.

<sup>2</sup> Department for Infrastructure (2020). *Attitudes to Walking, Cycling and Public Transport in Northern Ireland 2019/2020*. Available: <https://www.infrastructure-ni.gov.uk/system/files/publications/infrastructure/attitudes-to-walking-cycling-public-transport-northern-ireland-2019-2020.pdf>

<sup>3</sup> Sustrans (2020). *What is a low traffic neighbourhood?* 2<sup>nd</sup> November 2020. Available: <https://www.sustrans.org.uk/our-blog/get-active/2020/in-your-community/what-is-a-low-traffic-neighbourhood>

<sup>4</sup> Laverty, A. A., Aldred, R., and Goodman, A., (2021). The Impact of Introducing Low Traffic Neighbourhoods on Road Traffic Injuries. *Transport Findings*. Available: <https://findingspress.org/article/18330-the-impact-of-introducing-low-traffic-neighbourhoods-on-road-traffic-injuries>

<sup>5</sup> Aldred, R., Croft, J. and Goodman, A. (2019). Impacts of an active travel intervention with a cycling focus in a suburban context: One-year findings from an evaluation of London's in-progress mini-Hollands programme. *Transportation Research Part A: Policy and Practice*, 123, pp. 147-169.

for some. Reducing the number of cars on the roads could inadvertently result in disabled people having more limited travel options, which could affect their independence<sup>6</sup>. Older people may be in a similar position, with driving reported as being the most common form of transport for older people in the UK.<sup>7</sup> Studies suggest that not being able to drive would lead to a loss of independence for many older people, particularly in more rural areas.<sup>8</sup> With an ageing population, it is necessary to look at the impact that LTNs may have on older people.

### *This study*

This report presents the findings of the *Ageing in Low Traffic Neighbourhoods* study. The aim was to explore the potential of low traffic neighbourhoods to support healthy and active ageing. Focus groups with older adults aged 60 and over explored experiences of being and remaining active with age, with a particular focus on barriers associated with navigating traffic. Discussions also considered perceptions of low traffic measures and the impact that these have had, or could have, in their local area. The focus groups took place in one area identified as a low traffic area and four high traffic areas across central Scotland. Follow-up walking interviews took place in one low and one high traffic area, which explored the barriers and enablers to staying active within the context of the physical environment in more detail.

### **Methodology**

This study focused on five areas across Central Scotland:

- One low traffic area in Dennistoun, Glasgow
- Four high traffic areas in Slateford, Edinburgh; Musselburgh, East Lothian; Camelon, Falkirk; East Kilbride, South Lanarkshire

These areas were identified through online traffic data maps and council documentation. Low traffic areas are defined as those with traffic calming or traffic reduction measures in place. Focusing on both low and high traffic areas allowed for comparison between different locations and an exploration of the perceived impact or potential impact of low traffic measures.

Within these areas, adults aged 60 and over who were retired or no longer in full time employment were recruited<sup>9</sup>. Recruitment materials outlined the purpose of the study, key information for participants and inclusion criteria. Flyers were shared on local community social media pages and with organisations within the area who worked with or had links to older people. Recruitment also took place within the communities, with visits to local facilities such as community centres, churches and local groups including choirs and 'tea and coffee mornings'. During these visits, the study was explained, and individuals were given the opportunity to participate.

*Focus Groups:* Those who volunteered were invited to the organised sessions and provided an information sheet and consent form to confirm their agreement. Within these sessions, participants were asked to discuss their experiences of being active within their local area, and any aspects of the neighbourhoods that may help or prevent them from staying active, with a particular focus on traffic. Discussions also considered the concept of low traffic

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<sup>6</sup> Transport for All (2021). *Pave the Way: The impact of Low Traffic Neighbourhoods (LTNs) on disabled people, and the future of accessible Active Travel*. January 2021. Available: <https://www.transportforall.org.uk/wp-content/uploads/2021/01/Pave-The-Way-full-report.pdf>

<sup>7</sup> Holley-Moore, G. and Creighton, H. (2015). *The Future of Transport in an Ageing Society*. Available: [https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb\\_june15\\_the\\_future\\_of\\_transport\\_in\\_an\\_ageing\\_society.pdf](https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_june15_the_future_of_transport_in_an_ageing_society.pdf)

<sup>8</sup> Independent Age (2017) *Many older drivers concerned about loss of identity and independence if they have to stop driving, new survey reveals*. Available: <https://www.independentage.org/news-media/press-releases/many-older-drivers-concerned-about-loss-of-identity-and-independence-if> [Accessed on 9th December 2022]

<sup>9</sup> This study focused on those aged 60 or over in order to exclude employment-based activity, though it is recognised that 'older people' can refer to those from the age of 50.

neighbourhoods, with participants being presented with a number of images of low traffic measures and asked to explore the impact that these have had, or could have, in their local area. Focus group sessions lasted up to 1.5 hours. Each of the sessions was audio recorded.

A total of 20 participants took part in six sessions. Due to recruitment uptake these sessions included one-to-one interviews and small groups as well as focus groups, with numbers ranging from 1 to 10 (Table 1). Of the 20 participants, 16 were women and 4 were men, with ages ranging from 60 to 91 (mean age 74). Three participants within the sample reported having mobility issues, though all participants reported having at least a fair level of mobility, and over half the participants reported having a good level of mobility.

*Table 1: Focus group details*

	<b>Traffic level</b>	<b>Area</b>	<b>Type of session</b>	<b>Number of participants</b>	<b>Length of session</b>
1	High traffic	Slateford, Edinburgh	Focus group	10	1 hour 35 minutes
2		Musselburgh, East Lothian	One-to-one interview	1	1 hour
3		Camelon, Falkirk	One-to-one interview	1	38 minutes
4		East Kilbride, South Lanarkshire	Small group	2	1 hour 25 minutes
5	Low traffic	Dennistoun, Glasgow	Small group	2	1 hour 18 minutes
6		Dennistoun, Glasgow	Focus group	4	1 hour

*Walking Interviews:* During focus group sessions, participants were asked whether they would be willing to take part in a follow-up walking interview. For those who volunteered, a suitable date was arranged. Again, participants were given an information sheet and consent form to confirm to confirm their agreement. The walking interviews, or “go-alongs”<sup>10</sup> were conducted in Dennistoun, Glasgow, and Slateford, Edinburgh. Focusing on these two areas allowed for a deeper insight into specific issues, as well as a comparison of low and high traffic areas. The walks were led by participants, to allow them to build on focus group discussions and highlight aspects of the environment that may help or prevent them from being active. During the walking interviews, photographs were taken of highlighted features and the route was tracked. Each walk lasted 30 to 40 minutes, and was audio recorded using wireless lapel microphones.

A total of 6 participants took part in five walking interviews. All were women, with ages ranging from 62 to 80 (mean age 71). Of the 6 participants, 2 reported having a fair level of mobility, and 4 reported a good level of mobility.

Focus group and walking interview recordings were transcribed and analysed using a process of reflexive thematic analysis, with codes generated from the data grouped together to identify key themes.

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<sup>10</sup> Carpiano, R. M. (2009). Come take a walk with me: The “Go-Along” interview as a novel method for studying the implications of place for health and well-being. *Health & Place*, 15(1), pp. 263-272.

## Findings

Through data analysis, six key themes emerged: 1) Staying active; 2) Enablers to 'getting out'; 3) Barriers to staying active; 4) Traffic issues; 5) Concerns about low traffic measures; and 6) Possible solutions. These themes could be grouped under two main headings: 1) Experiences of being and remaining active with age; and 2) Potential of low traffic measures. The themes are explored in more detail below, under the two main headings.

### Experiences of being and remaining active with age

THEME	SUB-THEMES	DESCRIPTION
Staying active	Walking for leisure	Some participants incorporated walking for leisure into their daily routine, as a way of maintaining their mobility.
	Walking for purpose	The majority expressed that they often walk for purpose, either for travel or out of necessity, like walking their dog.
	Importance of staying active	Staying active was essential for many, who highlighted physical, mental and social benefits. For others, staying active was less of a priority.
Enablers to staying active	Accessibility	Access to green space as well as good public transport were identified as key enablers.
	Access to car	While the car was seen as a luxury for some, others argued that they could not live without out, particularly in poorly connected areas. Those who lacked independence were seen to be at a disadvantage.
Barriers to staying active	Physical environment	Poor maintenance of the environment, e.g., potholes, pavements, drains, made walking particularly stressful.
	Lack of pedestrian infrastructure	Poor street design makes navigating traffic difficult and unsafe. Sharing streetspaces with cyclists represents another issue.
	Age	Age-related mobility issues limited participants' level of activity.
	Impact of Covid	Covid-19 lockdown had a significant impact on available services, as well as levels of confidence.
	Poor accessibility	In some areas, lack of public transport and facilities made getting out difficult, particularly for those without a car.
	Feelings of unsafety	Lack of street lighting made going out at night particularly frightening. In one area, participants did not go out at night, through fear of harm from others.

### Staying active

The majority of participants considered themselves to be active. For many, staying active was about *“just getting out and about, you know, walking and using public transport and things.”* For others, staying active referred specifically to engaging in physical activity. Walking was the most common form of activity, incorporated into daily routines both for leisure and for

purpose, highlighting the significance that staying active held for many participants. For others, it was less of a priority.

*I mean normally if I'm going somewhere, I'll walk. And my husband will say, 'I'll take you in the car,' and I say, 'I'll walk,' to save parking and things.*

(CM001, Focus group)

*If I didn't have a dog, would I still go out for walks? Probably not actually, probably not! Having a dog, walking them comes with the territory. No, it's... You need to have a purpose for moving about.*

(EK002, Focus group)

Participants highlighted a range of benefits associated with staying active. Some suggested that staying active improved their general wellbeing, which was seen as particularly important as we get older. Others highlighted that staying active not only allowed them to 'clear their heads' but provided them with opportunities to meet and interact with others, a particular benefit for those living alone.

*I think when you're older it is important to try and keep moving, y'know, if you're able, not everybody is... But even just a short walk. But if you're going up to [the supermarket], you could walk there and get the bus back, because you're carrying, y'know, there's still a... You're still moving!*

(SF009, Walking interview)

*I think if you're living on your own, which I think a lot of older people are on their own, I think you need to get out for your mental health, or you can get depressed, if you're in all day and you've nobody to talk to, y'know.*

(SF010, Focus group)

**In summary, staying active was significant for the majority of participants, with a focus on walking both for leisure and for pleasure. This importance was primarily driven by a range of physical and mental benefits identified by participants.**

### ***Enablers to staying active***

'Getting out' for various activities, such as shopping, exercising, and attending various clubs and communities, was an important aspect of staying active. Many participants identified some factors that helped to facilitate these activities, focusing primarily on physically getting around the area, as well as having facilities to get out to. Having access to facilities and services within the area was particularly important for the majority of participants. Access to green space was often seen as an essential part of the environment, as it provided a space to stay active as well as an opportunity to escape traffic on main roads. Two of the five areas were identified as benefiting from spaces such as parks and canal paths.

*The canal is great! It's totally traffic free and it's straight, it's marvellous. You can do 150 miles!*

(CM001, Focus group)

*Well, [the tenements] all have back gardens right enough, but they're communal and some of the neighbours don't get on, so this [park] is their big garden.*

(DN002, Walking interview)

Half of participants did not drive, meaning that having access to good public transport links was vital, particularly for those with mobility issues. In two areas, public transport services were praised for their availability and accessibility, as well as the connections that these links

provided. In areas where accessibility was poor, having access to a car was seen as essential for allowing participants to maintain their independence.

*I can still go on the bus with my stroller, I was taught what to do and it's great! [...] I can still go out for lunch, eh, even [by the seaside] because we have a good service from door to door. Of course, [the various clubs], the coffee mornings as you've said, we have a lot going on in this church and I would be very sad if I couldn't go anymore.*

(SF005, Focus group)

*At the moment I couldn't do without my car. I mean I know I'm getting older, and I'm not as confident driving, but it gets me out!*

(SF004, Focus group)

*You feel sorry for people who maybe don't have cars and they've to phone a taxi or something.*

(DN003, Focus group)

**In summary, accessibility was a key enabler to staying active because it supported participants in getting out and staying connected, particularly those who were less mobile.**

### ***Barriers to staying active***

While participants identified enablers, most also reported they were prevented from being as active as they would like to be, as a result of a wide range of barriers. Primarily these barriers concerned the design and maintenance of the local environment. Poorly maintained pavements and potholes were a key issue for almost all participants, referred to as a 'patchwork quilt'. Many highlighted that feeling unsafe as a result of the landscape had a direct impact on their confidence, particularly for those with mobility issues. Clogged drains and flooding were also seen to make walking particularly dangerous.

*I'm 91 years old and I'm lucky enough to have a, what I call a stroller – if I didn't have that and just depended on my stick, I wouldn't be able to come out because I wouldn't be able to chance it. And that's silly, I feel. At our age, when we have the church, and we are prevented just because the pavements aren't being looked after.*

(SF005, Focus group)



*Poorly maintained pavements were identified as a key barrier to staying active.*

*When the leaves are down, then the road- flooded. Then that flooding freezes and it's very, very dangerous. They should be getting the drains cleaned more regularly that's why they're getting choked.*

(SF001, Focus group)



Participants also highlighted that insufficient provision for pedestrians made walking difficult and unsafe. A lack of safe pedestrian crossings, as well as an insufficient time to cross, made navigating traffic particularly difficult, especially for those with mobility issues. One participant in particular raised concerns about traffic island crossings with no traffic signals:

*You've got to watch this way, cross over, stand in the middle, watch these ones, and then you cross the second part. But meanwhile, you're standing, you've got cars whizzing up behind you and you've got cars whizzing in front of you, so you feel a bit vulnerable. [...] We're all just kind of huddled round this wee island.*

(SF010, Walking interview)



*One participant identified this island crossing as being particularly dangerous. The crossing was poorly marked, and the island area was considered to be too exposed to the lanes of traffic on either side.*

*The crossing was opposite a bus stop, and so was frequently in use.*

Sharing paths and streets with cyclists was also considered a barrier for many, with participants suggesting that areas, such as canal paths, were not designed to accommodate both pedestrians and cyclists, despite being accessible to both. This, coupled with a perceived lack of consideration from many cyclists, discouraged some participants from using these spaces.

*They've ruined that walk. And they go along like the Tour de France. [...] I mean sometimes if you're at the library, I walk back via the canal, but I've stopped doing it! Cause it's just too stressful!*

(SF009, Focus group)

*You canny relax, you've got to keep looking about.*

(SF003, Focus group)

Many participants expressed concerns about going out at night. For many, a lack of street lighting combined with potholes and poorly maintained pavements meant that going out at night was just too dangerous. For others, these concerns were driven by the area itself, and fear of harm from others.

*I don't know about you, but for us walking, even from the bus stop, it is, it's frightening. I think the lights could be better.*

(SF009, Focus group)

*I definitely wouldn't go out without the car at night, I'd just wait till the morning if I needed anything, and I couldn't go out and get it. Em... I mean this place is deserted at night when you come back, likes of from the town, and there's not a soul.*

(DN002, Focus group)

**In summary, a number of barriers were identified by participants that prevented them from being as active as they would like to be. Poorly designed and maintained streets**



made walking stressful and often dangerous, particularly at night, and especially for those with mobility issues.

#### Potential of low traffic measures

THEME	SUB-THEMES	DESCRIPTION
Traffic issues	Traffic levels	High levels of traffic were identified in all areas. Lack of consideration from drivers made navigating this traffic particularly stressful.
	Parking	Overcrowding was seen as result of increased reliance on cars. Inconsiderate parking created significant issues for access, particularly for those with mobility issues.
Concerns about low traffic measures	Impact of low traffic measures	Many argued that traffic would not be reduced but simply shifted to another area. Drivers suggested that these measures would negatively impact them.
	Reaction from drivers	There was a sense that drivers do not adhere to current restrictions, so low traffic measures would not be effective. Changing behaviour would require a complete change of mindset.
	Lack of consideration for older people	Some argued that active travel does not benefit older people, particularly those with poor mobility.
Possible solutions	Low impact measures	Any support for low traffic measures focused on lower impact measures such as one-way streets and bus gates. It was argued that these measures need to be put in place with monitoring devices such as cameras in order to make them effective.
	Improved active travel infrastructure	Improved pedestrian infrastructure and investment in public transport was seen as essential to promoting staying active.
	Importance of planning and consultation	Existing measures were said to be poorly planned, so engagement with the public was considered key.

#### **Traffic issues**

High levels of traffic were identified in all areas. This was a particular issue in areas close to town/city centres, referred to as “*main artier[ies] into town*,” that experienced high volumes of through-traffic. Navigating these high levels of traffic was found to be particularly stressful, especially where drivers didn’t adhere to speed limits or other restrictions, which was a commonly identified issue.

*The traffic is chronic, it really is.*

(CM001, Focus group)

*The main roads today; you’ve got to be on your metal, you’ve got to be careful.*

(EK001, Focus group)

These high levels of traffic also brought high demand for parking, which many areas could not accommodate. There was a sense that an increasing number of people have cars, but towns and cities were not built with this in mind, leading to issues of overcrowding. This was often seen to lead to inconsiderate and dangerous parking, with drivers blocking pavements and access points. This made walking more difficult for pedestrians, particularly those with mobility issues or other disabilities.

*And do you know what another thing that annoys people is? Say, if you're parking on the side and somebody's parked on the pavement, and you've got a pushchair or somebody walking with a white stick, yknow, or a wheelchair.*

(DN003, Walking interview)

*You cannot get turned for parked vehicles all along streets like that. And you go, 'that's actually scary when it comes to that.' What if someone's house goes on fire?*

(EK002, Focus group)



*Inconsiderate parking on pavements was considered a barrier, particularly for those who use mobility aids such as wheelchairs or strollers.*

*Inconsiderate parking was seen to contribute to the poor state of pavements in many areas.*

**In summary, pedestrians found it difficult to navigate high levels of, and often speeding, traffic, in all areas, as well inconsiderate and dangerous parking exacerbated by overcrowding.**

### **Concerns about low traffic measures**

Despite some support, the majority of participants were pessimistic about the concept of low traffic neighbourhoods, particularly higher impact measures that would require significant changes to the landscape. Many struggled to identify potential benefits that these measures may have, or how those might be implemented within their local area. Many expressed concerns about the impact that low traffic measures would have, not only on the traffic, but on the area itself. Some suggested that rather than reducing traffic, these measures would simply move it to another area, which in may have a negative impact on local businesses.

*What you'll find is some people use these streets as a rat run. If you block those streets off, are you going to force the traffic onto [the main road]?*

(SF001, Focus group)

Low traffic measures were primarily seen to be beneficial for pedestrians; by reducing traffic, they would make walking less stressful and less dangerous. For drivers, however, these measures were viewed negatively, with many expressing concerns about the impact that they would have on them personally. Many argued that discouraging driving represented a disadvantage, though participants did recognise that this was an aim of low traffic measures.

*It might actually be better, cause if you know you're going this way and there's a one-way, you can just look the one way. I think it'll maybe even feel safer for them crossing the roads.*

(DN001, Focus group)

*At the end of the day, what it's designed to do and what it would do is discourage people from bringing vehicles into the cities, that's what it's about.*

(EK001, Focus group)

There was a sense that, due to a lack of compliance, many of these measures would be rendered meaningless, regardless of their intentions. It was argued that many drivers do not adhere to restrictions that are already in place, and some even suggested that some drivers were so attached to their cars that no level of restriction would stop them. This was attributed to the increased significance of cars; the car has become an everyday part of life, and so low traffic measures alone would not be enough to change behaviour. Instead, participants suggested that a change of mindset was needed.

*The idea is there, it's just people not following it.*

(DN002, Focus group)

*I think, considering current mindset, they would be approached with disdain, people will approach it with disdain. Some of them with every bone in their body.*

(EK001, Focus group)

With a focus on active travel, it was suggested that the concept of low traffic neighbourhoods almost completely overlooked older people, particularly those with poor mobility who relied on cars for their independence. This was particularly felt in areas with high proportions of older residents, who were not seen to benefit from active travel infrastructure.

*They've got to think more about the present population. They're thinking too far ahead I think and not about the population we've got just now. [...] People are living longer, and they have to be accommodated whether they're driving or not. [...] They're not looking at certain age groups I think, and as people are living longer, whether their mobility keeps them in the house, they still need to have access.*

(DN002, Focus group)

**In summary, a number of concerns were raised about low traffic measures, including some negative impacts on drivers and how they may react, as well as the design of these measures and the impact they may have on older people.**

### ***Possible solutions***

Where there was support for low traffic measures, this tended to be towards those that had the lowest impact on both drivers and the physical landscape, such as one-way streets and bus gates. Many argued, however, that these measures were not effective on their own. Some suggested that these should be implemented alongside other measures in order to make them successful. Some suggested that speed cameras were necessary to encourage compliance, while others proposed that better active travel infrastructure was required. Making walking safer for pedestrians was a main priority, by increasing the availability of pedestrian crossings at relevant points, as well as the time provided to cross.

*Definitely more lights, and a longer gap in between. I mean some of the cars are just sitting – amber gamblers – they're just sitting waiting for amber and then they go! But then someone could just come round and weech! It doesn't even need to be an older person, and they're caught.*

(DN002, Focus group)

*It's different from a pedestrian's point of view, isn't it? We want ore crossings, but if you're a driver and stopping at every set of lights. But then I always think, if you're in that much of a hurry, you should just leave earlier!*

(DN001, Focus group)

Without improving public transport, there was a perception that people would continue to drive. As well as improving transport links, it was considered necessary to make public transport more appealing and more comfortable, to encourage people to choose this over their own car.

*Unless you have a good bus service that gets people to [the train station] so they can get on the train and get into work in [the city centre], then all you will have is folk parking in car parks.*  
(EK001, Focus group)

*The experience just now is, you walk, or you park your car at the train station, you get onto a train that's from the 70s, it's slow, it's smelly, etc. Who would want that when they can just jump in the car?*

(EK001, Focus group)

**In summary, possible solutions centred on encouraging active travel by making it more accessible and appealing, by increasing and improving pedestrian infrastructure, as well as making improvements to public transport services.**

### **Interpretation**

This study considered the potential of low traffic neighbourhoods to support healthy and active ageing, by exploring older people's experiences of being and remaining active with age, alongside perceptions of low traffic measures. Findings from the current study suggest that while participants identified that they wanted to be more active, implementation of low traffic measures were perceived as less positive, particularly for those with mobility issues, versus a focus on existing pedestrian infrastructure and public transport links.

Overall, participants had generally positive experiences of staying active, though many suggested that they were being prevented from being as active as they would like to be by a number of barriers. While some highlighted enablers to staying active, many suggested that the design and maintenance of the physical landscape does not benefit pedestrians, particularly those with mobility issues. Many also raised concerns about sharing streetspaces with cyclists, suggesting that a lack of consideration for pedestrians ultimately discouraged them from walking. Existing low traffic measures were not perceived to have had a significant impact, with all areas identified as having high levels of, often speeding, traffic. Navigating this traffic was a particular issue, due to a lack of accessible pedestrian infrastructure. This was coupled with a perceived lack of consideration for pedestrians, making participants feel especially vulnerable while walking.

Perceptions of low traffic measures as a solution to some of these issues were mixed. While many understood and approved of the intentions, there was scepticism around the practical benefits that these measures may have. Some raised concerns about the ability of these measures to achieve their aims, whilst others suggested that too much focus was being placed on active travel, with older people being forgotten about. Participants argued that reducing the access to cars would significantly impact older people with poor mobility, who often relied on cars to maintain their independence. Consultation was highlighted as a priority within the development of LTNs.

### **Conclusions**

The findings of this exploratory study suggest that there are concerns about the impact of Low Traffic Neighbourhoods on older people. Issues navigating the physical environment, as well as high levels of traffic, led many participants to experience unmet physical activity needs. While the implementation of low traffic measures was seen to tackle these issues in principle, positive substantial impacts were often overshadowed by negative perceptions, with many suggesting that drivers would not comply with new or existing low traffic measures.

Discussions instead tended to focus on support for better public maintenance, as well as improved public transport systems.

The use of walking interviews allowed for more contextual data to be collected, in support of issues discussed in focus group sessions. While this method often limits the research sample to those with a relatively good level of mobility, conducting these alongside focus groups ensured that those who were interested in taking part still could, regardless of their mobility level. It is necessary to acknowledge, however, that the sample was relatively limited by the community-based recruitment strategy. Those with limited mobility were largely excluded, though further studies may conduct more extensive recruitment in order to reach participants with all levels of mobility.

There was a sense that LTNs were not designed with older people in mind, making them inaccessible for many older people, particularly those with poor mobility or who lack independence. It was highlighted that there should be a clear focus on increased and targeted consultation with older people and other groups of interest, to address some of the negative impacts that LTNs may have on them, while working towards solutions to mitigate these. Making improvements to pedestrian areas and existing services should also be a key priority.

In summary, Low Traffic Neighbourhoods may be beneficial for some in principle, though thorough consultation is required to make these inclusive and accessible for all.

#### **Fuller report**

A full academic report of the study and findings is available at <https://psyarxiv.com/4savi>.

#### **Research team and funding**

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