Physical activity and the environment update

Evidence Reviews – Appendix 7

Expert Testimony

DRAFT

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National Institute for Health and Care Excellence

Expert Testimony

1. Introduction

Expert testimony is an important source of evidence for guidelines. Experts may be called upon when evidence from published literature is insufficient, or where there are gaps in published evidence meaning that review questions may not be fully answered.

2. Methodology

Gaps in the Literature

Once all relevant published literature meeting the inclusion criteria for this guideline was identified, a gap analysis was carried out. This involved listing populations, interventions, and other aspects of review questions such as *adverse events*. A tally demonstrated frequency with which these issues were covered in the content of included papers. The value or thoroughness of each instance was considered. Populations, interventions, or other themes with the lowest amount of evidence, as judged by the tally and the consideration of value, were considered to be gaps.

The main gaps identified for this guideline included the following:
- Variation in the effectiveness and cost effectiveness of interventions for different population groups, in particular:
  - People with limited mobility
  - Older adults
  - Black and minority ethnic groups
- Effectiveness and cost effectiveness of interventions in:
  - Green spaces other than parks e.g. woodland interventions
  - Blue spaces
- Adverse outcomes and unintended effects of interventions
- Involvement of communities or key groups to ensure interventions are acceptable to all.

The committee also identified areas which they felt were inadequately covered by literature and were important in the current context:
- Factors which may influence active travel levels and public transport use, drawing on practical examples that include London but taking a greater geographical breadth than London alone.

47 • Changes in scientific knowledge about the relationship between transport, active
48   travel and physical activity, since PH8 was published in 2008.
49 • Changes in transport policy and practice since PH8 was published in 2008.
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51 <u>Identification of Experts</u>
52 The committee agreed that these gaps should be the target of expert testimony. The
53 committee were presented with an initial list of possible sources of expert testimony,
54 identified from website searches and the experience of the NICE developers.
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56 The committee discussed these options and suggested additional possible sources of
57 testimony, based on their own knowledge of the area. They agreed on a list of organisations
58 and individuals that they asked the NICE team to approach as potential providers of
59 testimony. . This was an iterative process with some speakers reached through a
60 'snowballing' approach and was dependent upon speakers' availability.
61

62 <u>Use of Expert Testimony Evidence</u>
63 Evidence from expert testimony may be more susceptible to bias than evidence from high
64 quality published literature. Therefore, measures were taken to reduce this:
65 • To increase validity, experts were encouraged where possible, to observe the
66   testimonies of other experts and to join a general discussion with the committee. This
67   was facilitated by endeavouring to arrange as many expert testimonies as possible to
68   be heard in one committee meeting. Where experts were attending a committee
69   meeting at a later date, they were sent written summaries of previous testimonies
70   and were asked to reflect on the testimony previously heard and if it concurred with
71   their own experience of the area. Two of the 9 expert testimonies were provided in
72   writing only, due to speakers' availability and agenda time available.
73 • The committee were given opportunity to ask questions about methods or other
74   issues to establish a better understanding of possible biases and applicability to the
75   subject of the guideline.
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77   ## 3. Expert Testimony Papers

78   ## *1: Active travel in London*

Section A: CPHE to complete	
Name:	Lucy Saunders
Job title:	Consultant in Public Health
Address:	Greater London Authority Transport for London
Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Active travel in London
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]
- Factors influencing active travel in London	
Section B: Expert to complete	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Looking at active travel in London helps us to understand what factors influence active travel at a structural level in urban areas. Most active travel in London is walking. Over 90% of Londoners do some walking each week. Around half of the walking done by Londoners is as part of public transport trips (Travel in London report 7, TfL). In an urban environment such as London land use density and mix, access to public transport and the permeability of the street network affect population activity levels at a macro-level. This generates patterns in active travel in the population that do not reflect those seen in other environments. It is commonly understood that physical activity levels are lower amongst women than men, lower amongst lower income groups than higher income groups and lower amongst BAME groups than white british population. In London these are not the primary factors in differences in active travel. Active travel levels are similar for gender, employment status, income, ethnicity and disability. Even when assessing inner and outer london separately because we can see that inner london is more urban than outer london this is true for residents of both outer and inner London. The strongest odds ratio for 30 minutes of active travel on the previous day is car ownership. Age is also an important factor. Car owners are 2-3 times less likely to do half an hour of active travel in a day than those who don't own cars in London (Fairnie et al, 2016).

Analysis commissioned by the GLA from Dr Ashley Dhanani at UCL mapped London in terms of its 'technical walkability' or urban form and used this analysis to identify what interventions would be required at a structural level to increase active travel in different areas.

Some areas of London, particularly the very centre of the city, are highly walkable but have little potential for more trips to be walked (because the majority of trips that could reasonably be walked are already being walked). In these areas the quality of the walking experience can be improved by widening pavements, greening the streets, reducing traffic noise. To identify what measures would be needed the 10 indicators of a Healthy Street (Lucy Saunders) serve as a useful guide.

Some areas of London are highly walkable but also have potential for more trips to be walked, in these areas measures may be needed to disincentivise car use, promote active travel or improve the quality of the environment for walking and cycling in.

Some areas of London have poor walkability and there are few trips that could be switched to walking. This presents a structural challenge, promotional activity and improving the quality of the street environment will only have limited impact without measures to generate more reasons for walking local trips – increasing land use mix and density, improving public transport provision, increasing the permeability of the street network for walking.

Some areas have poor walkability and high number of potentially switchable trips. Again the structural challenges will need to be addressed to increase the walkability of the environment.

It is important to correctly identify what the potential is for increasing active travel in a given area and what structural, qualitative or social measures would be needed to increase active travel to avoid ineffective interventions e.g. promoting active travel in areas where there are no trips that are short enough that they could reasonably be walked or cycled.

The 10 indicators of a Healthy Streets were developed from the evidence base of what is needed to improve health, reduce inequalities and increase active travel. These indicators are helpful for drawing together the full range of impacts of the public realm / surface transport network on health into 1 coherent framework. Public Health guidance to transport planners needs to advise on the actions that will deliver the biggest public health benefit in the round, rather than silo'ing interventions for addressing road danger, air quality, noise, active travel. A useful check for unintended consequences of guidance and advice is to assess whether it will deliver against the 10 healthy streets indicators (which are all connected), the best value (and easiest to implement) interventions are those that increase active travel across the whole spectrum of the community at the same time as reducing noise, road danger, air pollution and severance. Many of these interventions tackle the root cause of the health impacts of the surface transport system which is the dominance of motorised road transport. If an intervention will improve some of the Healthy Streets indicators but worsen others then there needs to be guidance that those measures which increase active travel should be prioritised because this is the biggest impact of the transport system on population health. The Faculty of Public Health has published practical guidance for local authorities on measures that can be taken locally to mitigate the health impacts of cars (Faculty of Public Health).

References (if applicable):

Travel in London report 7 (2014) Transport for London http://content.tfl.gov.uk/travel-in-london-report-7.pdf

Fairnie, Wilby & Saunders (2016) 'Active travel in London: The role of travel survey data in describing population physical activity' Journal of Transport and Health http://www.sciencedirect.com/science/article/pii/S221414051600013X

Healthy Streets Lucy Saunders www.healthystreets.com

Faculty of Public Health (2016) Local Action to mitigate the health impacts of cars http://www.fph.org.uk/uploads/Briefing%20statement%20-%20Impact%20of%20cars.pdf

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81   *2: Disability and the built environment*

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Section A: CPHE to complete	
Name:	Michael Wilson
Job title:	Campaigns Manager (Regional Team)
Address:	RNIB, 105 Judd Street London WC1H 9NE
Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Disability and the built environment
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]

-	The impact of sight loss on the ability of blind and partially sighted people to go out and about and navigate the built environment
-	What are the biggest obstacles for people with sight loss trying to navigate the built environment
-	What are some of the issues we face when trying to address some of the barriers that blind people face at a local and national level

Section B: Expert to complete	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

RNIB (Royal National Institute of Blind People) is a membership community with over 24,000 supporters throughout the UK and 80 per cent of our Trustees are blind or partially sighted. We encourage members to get involved in our work, and regularly consult them on matters relating to Government policy and ideas for change. We are the largest organisation of blind and partially sighted people and provide information, advice and support to almost two million people with sight loss. The accessibility of the built environment and transport has been at the heart of campaigning work and that will continue as we see new technologies, differing local government arrangements and changing national and local regulations. In a report called 'Who Put That There' that RNIB published in February 2015 we discovered that:

- 95 per cent of blind and partially sighted people have collided with an obstacle in their local neighbourhood over a three month period.
- Nearly a third of those were injured, yet less than one percent claimed compensation for injuries.
- The most common obstacles collided with are: – cars parked on pavements (70 per cent) – bins of all kinds (64 per cent) – permanent and temporary street furniture (59 per cent and 55 per cent) – advertising boards (49 per cent).
- No local authority monitored how many blind and partially sighted people were being injured.

Although there is some national guidance and regulation, feedback from our supporters indicated that they wanted some way of targeting their local area – the streets in a Devon village are very different to a London Borough - and so we needed a report and solutions that were relevant to a variety of different landscapes on streets across the UK. To help shape the findings of the report and any possible solutions, we did a survey of our members and a freedom of information request to all English upper tier local authorities.

- 55 per cent of blind and partially sighted people said their local roads were either not very safe or unsafe.
- 40 per cent of people without sight loss also said their local roads were either not very safe or unsafe.
- 74 per cent of blind and partially sighted people said that there was a need for more pedestrian crossings in their area.
- 67 per cent face the inconvenience of having to take longer journeys in order to cross roads at safe pedestrian crossings.
- Only 17 per cent of pelican crossings were completely accessible with tactile paving, rotating cones and audible beeps in place.
- Around half of local authorities couldn't even provide information about the accessibility of the crossings they manage.

In summary blind and partially sighted people told us that, on a day to day basis, they face the following problems when out and about:

- Street obstacles, both permanent and temporary, injuring blind and partially sighted people, sometimes seriously – such as bollards, advertising boards (a-boards), bins, cars parked on pavements and street furniture.

- Dangerous roads which do not have adequate, safe or accessible pedestrian crossings.

- Developments that remove kerbs and crossing points making an area more difficult for blind and partially sighted people to walk around – including developments sometimes called shared space or shared surfaces.

- Blind people also face issues because of the way local authorities make decisions that impact upon them especially on issues relating to the street environment. Many staff who work in highways, planning or environment don't understand the impact of sight loss on navigating streets or access to transport.

- Communications around built environment issues are often inaccessible and even if someone does find out about an issue, consultations are often inaccessible and not enough effort is made to engage with hard to reach groups in their preferred communication format.

- Finally, when there is regulation or guidance a lot of local 'interpretation' goes on which causes a postcode lottery approach to policy implementation – so for example despite there being specific guidance about how to use tactile paving – there is no guarantee that one local authority uses it in the same way as another.

There are still major issues relating to the accessibility of public transport, especially buses. In 2012 RNIB produced a report called 'Stop for me, Speak to me' which called on bus operators to improve bus travel for blind and partially sighted people. RNIB found:
- 9 in 10 people with sight loss cannot see an approaching bus in time to hail it.
- 8 in 10 people with sight loss say they missed the bus they want.
- 7 in 10 missed the bus because it boarded away from the official bus stop.
- Over half of respondents found it difficult to get verbal information from the driver.

In October 2014, Guide Dogs released its Destination Unknown report, which was based on a survey of 2009 people, including 818 people living with sight loss.

The report showed that:

- Nearly two thirds (65%) of blind and partially sighted passengers, who responded to the survey, have missed their stop at least once in the past six months.
- 73% of bus users who responded to Guide Dogs' survey said none of their local services had on board AV announcements.
- Only 14% of people with a disability who responded to the survey said a bus driver always responds appropriately to their needs as a disabled passenger.
- Only 19% of UK buses have audio visual (AV) announcements on board, and the vast majority of those vehicles are in London

Guide Dogs and RNIB have also been campaigning to ensure that the Bus Services Bill (which is going through parliamentary process in 2016/17) mandates audio visual announcements. The Bill does now include an amendment on making available information about a local service to persons

travelling on the service. We do not know yet what the regulation will stipulate but we hope this will be a step toward mandating audio visual announcements on buses across the UK.

References (if applicable): RNIB: Who Put That There (February 2015)
Guide Dogs for the Blind: Destination Unknown (October 2014)
RNIB: Stop for me, Speak to me (October 2012)

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86   *3: Changes in scientific knowledge and transport practice since 2008*

Section A: CPHE to complete	
Name:	Adrian Davis
Job title:	Independent Consultant in Transport and Public Health
Address:	
Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Changes in scientific knowledge and transport practice since 2008
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]
- Update on the relationship between transport, active travel and physical activity since PH8 was published in 2008	
- Update on new developments in policy and practice in this area since PH8 was published in 2008	
Section B: Changes in scientific knowledge and transport practice since 2008	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Overview

- Over the past two decades there has been a rapid increase in focus on road transport, active travel and its relationship to public health including a better articulation of co-benefits.
- This includes the economic case for active travel
- In addition, in the past decade road safety policy and practice internationally has been in transformation in moving towards Safe Systems approaches which help support active travel.

Co-benefits

Health co-benefits, often addressing climate change include adaptation strategies to improve urban design and planning strategies such as increased or improved shade and green spaces, smarter road design, the development of walkable neighbourhoods, the creation and maintenance of bike paths, and improvement to public transport. Typically, researchers are reporting the wider public policy outcomes:

"Substantial evidence indicated that designing and creating … transportation systems, schools and buildings that make physical activity attractive and convenient is also likely to produce a wide range of additional benefits".

Sallis, J. et al, 2015 Co-benefits of designing communities for active living: an exploration of the literature, *Int. J. of Behavioural Nutrition & Physical Activity*, 12:30.
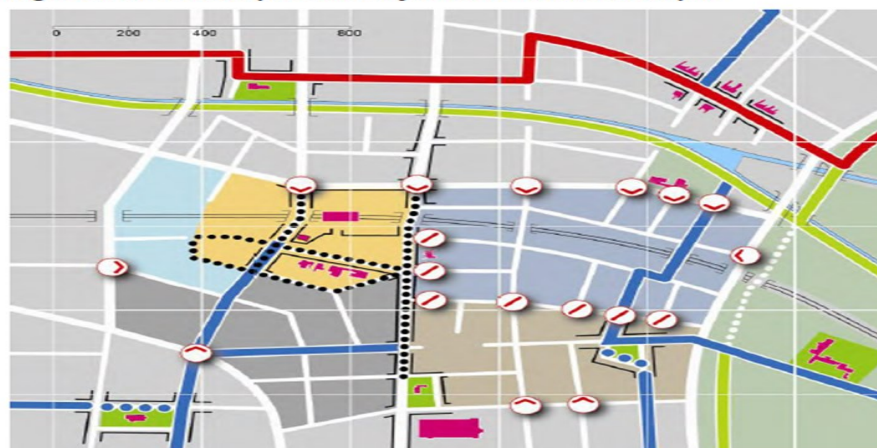
Walking and Public Transport

- Walking can often be combined with public transport, and this can provide a significant boost to physical activity levels. Researchers reported that Americans who use public transport spend a median of 19 minutes daily walking to and from public transport and that 29% achieve 30 minutes of physical activity a day solely by walking to and from public transport.[1]
- More recent studies have also report that between 20-30% of public transport active travel users achieve all of their 150 minutes minimum physical activity solely by this means. [2]
- Besser, L., Dannenberg, A. 2006 Walking to public transit. Steps to help meet physical activity recommendations, *American Journal of Preventive Medicine*, 29(4): 273-280.
- Langlois, M. et al 2016 Can transit-oriented developments help achieve the recommended weekly level of physical activity, *Journal of Transport and Health*, 3: 181-190.

Safe System Approaches in Road Safety

- Although road traffic injuries have been a leading cause of death for many years, most traffic crashes are both predictable and preventable.
- There is considerable evidence on interventions that are effective at making roads safer: countries that have successfully implemented these interventions have seen corresponding reductions in road traffic deaths.
- Interventions often include speed management to address a significant contributory casualty factor but also the deterrent effect imposed on potential active travel users.
- Separation of modes is one approach including filtered permeability

Figure 2.13 Filtered permeability area treatment example

Source: London Cycle Design Standards

https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit

The term safe system represents the current consensus of what constitutes best practice strategic thinking in road safety.[1] It builds upon Sweden's Vision Zero and the Dutch principles of sustainable safety.[2][3] Many discussions of the safe system model commence with a discussion of an assumed underlying ethical platform in which human life is sacrosanct.

1. OECD, 2008. Towards Zero: Ambitious Safety Targets and the Safe System Approach. OECD, Paris.
2. Johansson, R. 2009 Vision zero – Implementing a policy for traffic safety. *Safety Science.* 47 (6).
3. Wegman, F., Aarts, L., & Bax, C. 2008 Advancing sustainable safety national road safety outlook for The Netherlands for 2005-2020. *Safety Science*. Vol. 46 (2).

The four principles of a Safe System are:

- People make mistakes that can lead to road crashes;
- The human body has a limited physical ability to tolerate crash forces before harm occurs;
- A shared responsibility exists amongst those who design, build, manage and use roads and vehicles and provide post-crash care to prevent crashes resulting in serious injury or death; and
- All parts of the system must be strengthened to multiply their effects; and if one part fails, road users are still protected.

2nd Guiding Principle

- **The human body by nature has a limited physical ability to tolerate crash forces before harm occurs.**
- vehicle vs vulnerable user- 30km/h
- Side-on, 90 degree V2V- 50km/h
- Head on collision V2V - 70km/h
- No possible side/frontal collision- 100kmh+

Source: http://itf-oecd.org/sites/default/files/docs/safe-system-report-findings-messages.pdf accessed 12th December 2016

Speed Management

- 20mph speed limits are effective in reducing speed driven in residential streets. [1] This is a critical determinant of safety, and as a result, of mode choice. Beyond reducing casualties speed influences whether people choose to walk or cycle – including whether parents/carers allow children to walk local journeys typified by the school journey.

- Older adults constitute a major but very inactive population group, and yet there is a desire to be able to 'age in place' and maintain independence. To facilitate this while maintaining quality of life it is important to understand the role of the built environment on mobility limitations and disability. [2]

1. Cairns, J., Warren, J., Garthwaite, K., Greig, G., Bambra, C. 2014 Go slow: an umbrella review of the effects of 20mph zones and limits on health and health inequalities, *Journal of Public Health*, doi:10.1093/pubmed/fdu067

2. Rosso, A., Auchincloss, A., Michael, Y. 2011 The Urban Built Environment and Mobility in Older Adults: A Comprehensive Review, *Journal of Aging Research*, Article ID 816106.

Perceived Impact of 20mph Limit on **Walking and Cycling**

ATKINS

Statement: The 20mph limit is beneficial for cyclists and pedestrians

69% — Residents
77% — Drivers
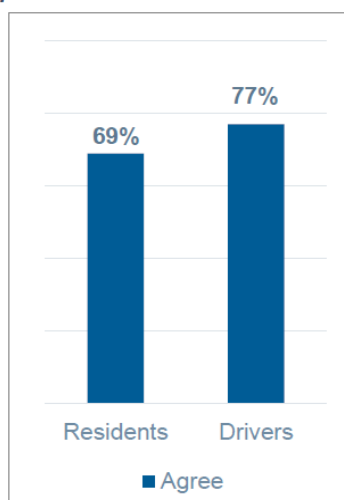
■ Agree

% agreeing / disagreeing with statement

- Are 20mph limits beneficial for cyclists and pedestrians – 77% of drivers and 69% residents felt the limit was beneficial for cyclists and pedestrians.

- **Impact on the quality of the walking and cycling environment** – Half of residents felt the 20mph limit had created a more pleasant environment.

- **Perceptions of safety when cycling and walking** – 60% of residents felt that the limit provided a safer environment.

- **Perceived impact on pedestrian and cycle numbers** – Around a tenth of residents thought more people were walking on their street since the 20mph limit.

- **Likelihood of walking or cycling more** – reducing the speed limit to 20mph had encouraged some residents to walk (16%) or cycle (9%) to local places rather than use a car.

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20mph Research – Purpose, methodology and early findings, Robinson, J., Newman, N. Presentation to 20sPlenty Conference, City of London, January 2016.

Next Steps

- In the New Urban Agenda we are all required to work to adopt, implement, and enforce policies and measures to actively protect and promote pedestrian safety and cycling mobility. Given the weight of evidence, national governments and local decision-makers should promote active travel and establish a mix of accessible walking and cycling infrastructures appropriate to national geographic and cultural contexts:
- This should include actions to remove barriers for disadvantaged groups.
- They should also consider approaches to improving the availability and attractiveness (affordability, reliability and public safety) of public transport.
- Collaboration with the transport sector should be sought, and linkages to road safety strategies identified.
- Where appropriate and necessary, Member States may consider passing legislation to make pavements and cycling infrastructure mandatory, with priority given to pedestrians and cyclists.

WHO, 2016 *Physical activity strategy for the WHO European Region 2016-2025*. Denmark: Copenhagen.

References (if applicable):

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89 ***4: Environmental support for physical activity in older people, urban***
90 ***deprived populations and black and minority ethnic groups***

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Section A: CPHE to complete	
Name:	*Catharine Ward Thompson and Katherine Brookfield*
Job title:	CWT: Professor of Landscape Architecture and Director, OPENspace research centre, invited expert KB: Research Fellow, OPENspace research centre, contributor to this written summary of evidence
Address:	OPENspace research centre, University of Edinburgh, Lauriston Place, Edinburgh EK3 9DF
Guidance title:	Physical Activity and the Environment (Update
Committee:	PHAC C
Subject of expert testimony:	Physical activity and the environment: evidence on environmental support for physical activity in older people, urban deprived populations and BME groups.
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]
Effectiveness of interventions for people with limited mobility	
Effectiveness of interventions for older people	
Black and minority ethnic groups and socio-economically deprived groups	
Section B: Physical activity and the environment: evidence on environmental support for physical activity in older people, urban deprived populations and BME groups.	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Note: Some data were presented on an academic in confidence basis and have been redacted

1. Outline of evidence presented

This evidence derives mostly from OPENspace-led research in the UK, in particular from some large, mixed methods studies on access to outdoor environments for older people (aged 65+) and inclusive use of green space and woodlands in deprived urban communities. In most cases the primary outcome under study was use of outdoor environments and quality of life, rather than physical activity (PA) *per se*, although PA was often a secondary outcome.

Much of the best evidence available to date on links between environment and PA (including our own) is cross-sectional or qualitative, but still offers valuable insights into the relationship. OPENspace has recently attempted to treat environmental interventions as natural experiments, with pre-post measures and control or comparison sites, although PA measures in these studies vary and the challenges of such research designs are considerable.

2. Qualitative evidence of what matters for older people's mobility in neighbourhood streets

Semi-structured interviews with 200 older people[1] and questionnaires with over 250[2] in different UK contexts identified the following as important for a useable pedestrian environment:

Footways
- Well-maintained, firm, flat and wide footways preferred; tarmac or asphalt the preferred material so long as clean and well-maintained, because non-glare and offering colour and textural contrast to walls and kerbs
- Separation for pedestrians from busy traffic, including cyclists, is desired – verges and trees offer permeable buffer zones that help (so long as tree roots don't distort paving surface)

Level changes
- Steps *and* ramps to offer alternatives (some people find steps easier to manage than ramps), clearly marked, well lit with handrails and non-slip, non-glare surfaces

Road crossings
- Dropped kerb preferred at pavement edge but many find tactile paving difficult or uncomfortable
- Controllable crossings with lights and audible signal (pelican rather than puffin) preferred; short crossing distance is important.

Obstacles
- Temporary or unpredictable obstacles a particular problem on footways: A-boards, cars parked on pavement, scaffolding, bins.

Wayfinding
- Signs welcome but need to be clear, simple, easily visible and understandable. Signs that are too busy with information and/or too small text are not favoured.

Seating
- Frequent, warm (wood, not metal or stone), supportive, well maintained seats, ideally with backs and armrests to help seating/standing transition, and different height options, are very important.

Bus stops and shelters
- Valued for weather protection and temporary seating as well as waiting for bus, but high external visibility important for feeling safe, and wheelchair accessibility needed.

Toilets
- Accessible, safe, ground-level, well-maintained toilets at regular intervals are vital to enable some to go out at all.

Such findings are reinforced by a number of other UK studies with older people which almost invariably point to the same factors as important for outdoor mobility. Research on older people's preferred local walking routes identified the importance of attractive routes (especially offering some kind of contact with nature), even if sometimes less well-maintained, as well as ones that feel safe[3]. With regard to safety, the presence of CCTV cameras is seen by some older people as a sign of crime and antisocial behaviour, making participants reluctant to enter environments featuring such equipment[4]. Work with stroke survivors highlighted the profound impact that the built environment can have on what activities are possible and thus on community reintegration post-stroke[5].

3. Predictors of older people's time spent in outdoor activities such as walking

A cross-sectional study (n=271) of the supportiveness of the outdoor environment for older people's outdoor activities found that those who perceive their neighbourhood environments as fairly or very supportive were more than twice as likely to report being

high-level walkers (≥ 2.5 hrs walking/week)[6]. Further analysis found only one environmental attribute significantly associated with total walking time: participants were twice as likely to walk ≥ 2.5 hrs/week if the quality of paths to reach their local open space was good (OR = 1.96, 95% CI = 1.03–3.74) as opposed to poor[7].

The study also considered how older participants' perceptions of their local open space predicted recreational or utilitarian walking (n=268). Factor analysis reduced the environmental variables to six dimensions, of which four predicted walking levels. Using logistic regression to predict time spent walking for recreation (>1hr/week), pleasantness of open space (OR = 1.41, 95% CI = 1.01–1.98), and nuisance (OR = 0.71, 95% CI= 0.55–0.91) were significant. Regressions to predict time spent in walking for transport (>1hr/week), found good paths to reach local open space (OR=1.38, 95% CI =1.07-1.77) and good facilities at destinations (OR=1.34, 95% CI =1.02-1.78) significant[8].

4. What environmental attributes matter most for different older adults?

In a further UK study, choice-based conjoint analysis (CBC) (a discrete choice methodology) was used to indicate what environmental attributes are most important to older people for their local open space. Results (n=237) indicated the six most important attributes for a park: one without nuisance, that has a cafe and toilets, with many trees and plants, light traffic en route to the park, wildlife to watch, and is well maintained[9]. Analyses also showed that whether or not people lived alone (p=0.001), and their functional capabilities in getting around (p=0.002), made a difference to the importance of different attributes[10]. Such CBC produces a model that can be used to explore different scenarios and their impact on preference by the sample as a whole or sub-groups within it. It allows trade-offs between different attributes to be explored, e.g. the influence of changing traffic en route from heavy to light vs. the influence of adding toilet facilities to the park, in terms of preference.

5. Older people's outdoor activity based on pre-post surveys of changes to local street environments in deprived urban residential areas.

A study of the effects of a programme of residential street improvements in the UK (Sustrans 'DIY Streets') – a natural experiment - allowed a rare opportunity for a prospective, longitudinal study of the effect of such changes on older adults' activities and quality of life[11]. Cross-sectional pre– (n=96) and post-intervention (n=61) surveys were carried out in locations across the UK; participants were aged 65+ living in intervention or comparison streets. Analysis of cross-sectional data reinforced many earlier findings on the importance of outdoor attributes (often in the wider neighbourhood rather than just the local street) to predict levels of outdoor activity, including good footpaths and nuisance such as dog-fouling. Being able to park outside the home was significantly related to more time spent outdoors as well as less loneliness, suggested convenient car access is important for activity in older age. This supports other UK studies showing that access to a car is a predictor of activity levels and the number of outdoor trips taken may be highest among car owners or users[12, 13]

A subset of the participants (n=36) in the study was recruited as a longitudinal cohort, surveyed pre-post-intervention. Analysis of this cohort showed that participants in the intervention group perceived that they were more active post-intervention, cf those in the comparison group (p=0.04). Significant differences were also found in the intervention group's perceptions that 'it is easy for me to walk on my street' compared with the non-intervention group (p=0.03). However, across the sample as a whole, pre-post self-reported levels of outdoor activity in winter significantly decreased (p=0.05) and did not change significantly for summer months; there were no significant differences between intervention and comparison groups. Results may partly reflect a significant pre-post decline in quality of life (CASP-19, p=0.04) and an increase in reported unhealthy days (p=0.006) across the sample as a whole, as well as limited change in the intervention street environments[14].

Participants in this study were also asked to wear an accelerometer and keep an outdoor activity diary; unfortunately, there were insufficient numbers retained pre-post to allow for meaningful statistical analysis of intervention effects. Data from the baseline survey (n=50) showed that most participants did not achieve current UK-recommended levels for moderate-or-vigorous physical activity. Our participants were most active between 10:00 and 13:00 but rarely achieved more than 4 mins of moderate-to-vigorous activity in any hour, with a mean weekly total of 105 mins. Walking was by far the most frequent outdoor activity for participants but getting out of the house at all, for whatever reason, even if people used a car or public transport, was associated with moments of greater activity[15]. This supports other UK findings that 'trips away from the home are associated with objectively measured physical activity, both as volume of MVPA, and steps per day'[16].

6. Environmental deterrents to walking in older adults – addressing fear of falling

A study on environmental attributes associated with falls and subsequent fear of falling in older adults (a major deterrent to outdoor activity) found this was an underdeveloped area in terms of rehabilitation and walking post-fall. Based on a review of previous work on walkability audit tools and qualitative data collected via accompanied walks in their local neighbourhood with older people who had experienced a fall, an environmental audit checklist was developed to assist occupational therapists as well as environmental designers and managers in ways to assist older people's outdoor mobility and reduce falls and fear of falling[17]. The items included in the checklist reflect findings listed earlier on the attributes of the outdoor environment that matter most for older people's confidence in going outdoors: weather conditions; type of path or pavement; gradients; path condition and smoothness; path material; useable width of pavement; permanent path obstructions; steps; road crossings; temporary obstructions; street lighting; crowdedness.

7. Deprived urban populations, BME groups and use of green space

A study for the Commission for Architecture and the Built Environment (CABE) of deprived urban areas including high percentages of black and minority ethnic (BME) groups explored the associations between the quality of local green space, its use, and different groups' physical and mental health. A prior 2010 study had revealed the disparity between quantity and quality of urban green space between affluent and deprived communities: the majority of the UK's BME communities live in the most deprived wards in English cities, where there is significantly less public green space and what exists is likely to be of poorer quality[18].

Primary research (the first of its kind, so far as we are aware) was undertaken (n=523) via a cross-sectional household survey of white British, Pakistani, Bangladeshi, Indian, black African and African-Caribbean and other BME groups in London, Greater Manchester and West Midlands and from deprived urban wards (in the lowest 20% IMD) with similar amounts but varying quality of green space. Statistically significant (p=0.001) differences in levels of physical activity were found among groups: PA was far lower in the Caribbean/African group than any other BME group (82.5% reported exercising fewer than 7 days per month) and was highest in Indians (12% reporting activity greater than 22 days per month). Across the BME groups, the Bangladeshi group was least satisfied with the quality of green space and with its safety. White British and Indian groups, by contrast, had high satisfaction levels. Satisfaction with green space was significantly associated with PA levels (p<0.005). Indian groups were most likely to consider green space as a good place to exercise, with Bangladeshi groups least likely to (p<0.001). White British and Indian groups were more likely to visit green space for relaxation and to enjoy the peace and quiet; Bangladeshis were least likely to value these qualities (p<0.001). Overall, if their local green space were made more pleasant, and they began to use it more, 60% of participants thought it would improve their overall physical health but this varied significantly between groups: 100% of Indian and 98.2% of Pakistani groups but only 76% of black African or African Caribbean and 68% of other BME groups[19, 20].

8. Deprived urban populations and woodland interventions to increase outdoor activity

An exploratory study, using woodland improvements under the Forestry Commission Scotland's (FCS's) Woods In and Around Town (WIAT) programme as a natural experiment, surveyed a disadvantaged urban community pre-post intervention, and a comparator community, both in Glasgow. A repeat cross-sectional survey was undertaken of the community resident within 500 m of the local woodlands or green space (n = 215). The results showed significant differences in woodland use (p < 0.001), in the frequency of summer woodland visits (p < 0.05), and in perceptions of safety (p < 0.05) in the intervention site over time, compared with no significant change in the comparison site. Intervention site participants had increased levels of PA over three years, cf decreased PA over time in the comparison site (p<0.01). The difference in outdoor PA over time was less significant for those who had *not* visited woodlands in the last year (p<0.05), suggesting a contributory effect from the intervention. The significant positive difference over time in perceptions of woodlands as places to pursue healthy activities (p<0.01) in the intervention (ns in comparison site), adds support to this interpretation[21].

This study has been followed by a larger study[22], funded by the National Institute for Health Research Public Health Research (NIHR PHR) Programme (project number 10/3005/18), due to finish on 31st August 2017; the findings have yet to be reported. The results reported here, in confidence, are those of the authors and do not necessarily reflect those of the NIHR PHR Programme or the Department of Health. The project was designed to take advantage of a natural experiment again, the £8 m/year WIAT programme run by the Forestry Commission Scotland (FCS). WIAT works with deprived urban communities to regenerate, improve and promote local woods as safe and accessible places to enjoy the outdoors, aiming to increase local residents' contact with woodlands, thus enhancing wellbeing and quality of life. The intervention programme involves two stages: first, making changes to the physical woodland environment designed to facilitate greater use; second, undertaking community social engagement activities to advertise and promote woodland use. The physical interventions promoted by FCS as part of their WIAT programme are based on a toolkit developed by OPENspace centre to enhance woodland use by different community groups[23].

The study design was a controlled, prospective study of impacts on health and wellbeing. The primary outcome was perceived stress but secondary outcomes included self-reported physical activity using the IPAQ short-form scale to give the duration (in minutes) and frequency (in days) for three generic activities: walking; moderate-intensity; and vigorous-intensity. The analysis reported here used the continuous form of the measures. To obtain the weekly minutes of moderate, walking and vigorous activities in terms of Metabolic Equivalent (MET), participants' estimates of the average number of minutes of each activity was multiplied by the weekly frequency and the respective MET scores. In accordance with IPAQ guidance, a total physical activity score was computed by summing the three generic activities. The outcome variables therefore took a continuous form and were expressed in terms of MET-minutes/week.

The six sites chosen for the study were in the worst 30% of socioeconomic deprivation in Scotland as assessed using the Scottish Index of Multiple Deprivation. Each of three intervention sites was paired with a comparison site matching on woodland and demographic characteristics. The woodland sites all had a minimum size of 4 ha and had not received investment or direct promotion within the last 5 years. The project design involved a repeat survey of a random sample of residents living within 1.5km of intervention and comparison sites. Three waves of data were collected: pre-physical environment intervention (2013); post-physical environment intervention (2014) and post-social intervention to promote and encourage woodland use (2015).

The initial design treated each wave of data collection as a cross-sectional survey but, in practice, it proved possible to obtain a longitudinal cohort within this dataset. The results reported here (as yet unpublished) relate to this longitudinal dataset of participants who responded in the Wave 1 survey and in either or both of Waves 2 and 3 (a minimum of n=350 per wave); we did not include participants who responded solely to waves 2 and 3. Analysis was conducted using multiple imputation (analysis just using complete cases was also carried out with no major differences in results) and all models were adjusted for age, gender, life events, social class, education, working status, income coping, access to car, smoking status, disability, health status, dog ownership, children, distance bands (to local woods - 150m, 300m, 500m, 750m, and 1500m, i.e. five distance bands), and site pair (intervention and control site).

The impact of the WIAT programme on measures of physical activity and sedentary behaviour was determined by the magnitude of the interaction between living in an intervention area, or not, and the wave of the survey. We reported coefficients, p-values and confidence intervals for the interaction terms for Wave and Type of site.

The total cost of the intervention in the three sites, including Forestry Commission Scotland staff time, and externally contracted time and the costs of physical and social interventions, was £XXXX. This excludes voluntary time contributed by the local community or other contributions not managed under the WIAT programme

Concluding comments

Mundane and commonplace details can make a real difference in delivering supportive environments for outdoor mobility and PA, especially for older people and those with restricted mobility. The pedestrian environment is vitally important and used in some way by everyone who goes outside the home. Older people, especially in urban contexts, are most often on foot when out and about so heavy traffic and poor design, provision, installation or upkeep of neighbourhood features, especially footpaths, limit their confidence and ability to remain active outdoors. By contrast, good quality local open space that is attractive, feels safe and is easy to access encourages a range of different groups and ages to be physically active. Our research has identified some conflicts between the needs of different user groups, e.g. in relation to the benefits or difficulties associated with tactile paving or kerbs, but these can be resolved by good design.

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95 ***5: Encouraging physical activity in the natural environment***

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Section A: CPHE to complete	
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Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Encouraging physical activity in the natural environment
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]
- Effectiveness and cost effectiveness of interventions in green spaces and blue spaces	
Section B: Expert to complete	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Evidence submission to NICE from the Ramblers
For over 80 years, the Ramblers have been at the forefront of providing opportunities for millions of people to be more physically active. In recent years, we have introduced a range of activities specifically focused on increasing the health benefits of walking, especially for otherwise inactive people. In this paper, we outline the evidence for the link between good health and the natural environment, the importance of access and maintenance for maximising the benefits, as well as highlighting some issues that need to be resolved.

1. **The physical and mental health benefits of walking**

   Over the last few years, the physical and mental health benefits of walking have received increasing attention from academic researchers, policy makers and health professionals alike. A recent study published by the University of Cambridge found that a brisk daily 20-minute walk reduces an individual's risk of early death by 25%.

   The British Medical Association believes that active forms of travel, such as walking and cycling, are associated with a number of recognised health benefits, such as improved mental health, a reduced risk of premature death,

and prevention of chronic diseases such as coronary heart disease, stroke, type 2 diabetes, osteoporosis, depression, dementia, and cancer.

Walking and cycling are effective ways of integrating, and increasing, levels of physical activity into everyday life for the majority of the population, at little personal or societal cost. For example, in 2013, Urban Transport Group found that public spending on walking in England was only around £0.40 per head of population; in comparison, highways maintenance (excluding the cost of new infrastructure), received average spending of £56 per head of population.

A recent review of the benefits of group walks confirmed the wide range of health benefits, from reductions in blood pressure, resting heart rate, to a significant increase in physical functioning. There are particular health benefits to walking in natural environments, whether in town or country, particularly in terms of mental health. There is something very special about walking outdoors that can't be equalled by walking on a treadmill: contact with the natural environment can improve one's mental health[1], all at substantially lower cost than other interventions.

2. How and why people access the natural environment

When asked people identify the health benefits of walking as one of their primary reasons for walking in cities, in the countryside and at the coast. MENE data (see chart below) shows that people see walking as a healthy activity, especially in natural environments.

Figure 4.4 – Reasons for visits by destination type
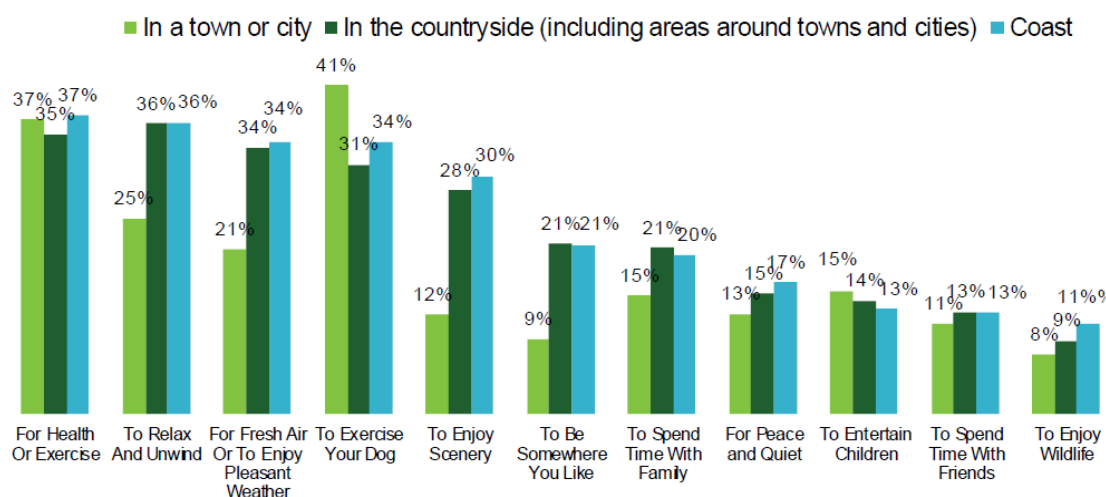MENE Years 1-6: March 2009 to February 2015

Walking as an activity has low entry costs: unlike other forms of physical activity, there are very few costs associated with it, and no special skills or equipment are needed. Yet there are barriers and there are many reasons why, despite the attractions, people do not walk, from lack of time to cultural norms. However, lack

of access is the critical barrier to physical activity in the natural environment and improving access is key to realising the health benefits for more people.

2.1 *Parks and urban green space*

The vast majority (68%) of visits on foot to parks and other green spaces are taken within 2 miles of home.[2] Separate research from UCL has shown that those who live within 500m of accessible green space are 24% more likely to meet recommended levels of physical activity.[3]

A wide range of people benefit from walking in parks and green spaces. They are visited regularly by an estimated 37 million people each year[4] and are the means by which most people in England experience the natural environment.[5] Many Ramblers' walks - in particular health walks - take place in parks as they provide a safe, traffic-free, interesting and accessible environment. Households with children, people living in urban areas, and those from black and minority ethnic communities use their parks the most.[6] If we are concerned with encouraging people to be physically active, especially among those least likely to be so, maintaining and enhancing the accessibility and attractiveness of parks and urban green spaces will be critical.

Yet, while a huge number of people benefit from parks, they remain almost entirely funded from a single, dwindling resource – local authorities' amenity budgets. Research from the Heritage Lottery Fund (HLF) shows that over 90% of park managers reported that their maintenance budgets have fallen in the past three years and 95% expect this trend to continue.[7]

2.2 *The countryside and the rights of way network*

The Countryside and Rights of Way Act 2000 opened up an additional 865,000 hectares of land for people to enjoy. While very welcome, there is currently very little data available about how this has encouraged walking. However, rather more is known about the effect of improved access and maintenance on the existing network of public rights of way (PROW).

During 2015/16 the Ramblers surveyed around half of the rights of way in England and Wales. The Big Pathwatch reported on the condition of paths and also the experience of walkers, it identified 59,000 problems on the network including barbed wire across path, inadequate way marking, and obstructions such as undergrowth; of these, 12,500 problems were deemed severe enough to stop walkers in their tracks. If people cannot be confident that a path is clear and accessible, they will be put off walking.

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[2] Monitor of Engagement with the Natural Environment, Natural England et al, January 2015
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[6] Heritage Lottery Fund 2016, *State of public parks,* https://www.hlf.org.uk/state-uk-public-parks-2016
[7] Heritage Lottery Fund 2016, *State of public parks,* https://www.hlf.org.uk/state-uk-public-parks-2016

The Paths for Communities (P4C) scheme funded 43 projects to extend the rights of way network and to make it easier to use. These projects have delivered 21km of new footpath, 22km of footpath improvement, 55km of new bridleway, and 84km of bridleway improvement. An analysis of the impact of these measures found:

- Over a third (37%) of trips along the PROWs are either directly or indirectly undertaken for health reasons and are undertaken at or over the recommended duration of a trip (30+ minutes) for health benefits.
- On average, using the PROW contributes to 8% (648 minutes per annum) of the recommended physical activity that users seeking health benefits need to undertake annually to stay fit and healthy. The contribution of the P4C initiative (by encouraging new trips and more frequent trips) is 2.5% (195 minutes per annum).
- The physical activity associated with the PROW (assuming all trips for health purposes lead to physical exertion) saves an estimated £358,500 per annum in terms of health benefits, savings to the NHS, and benefits to productivity. Of this, £112,000 per annum is directly attributable to the new usage and more frequent visits to the case study PROW generated by the P4C intervention. This means that for every £1 of Defra grant returns £8.09 in terms of a willingness to pay for the use of the PROW[8]

2.3 Woodland

While there are many well-being benefits that can be experienced from having contact with nature and green space in general, trees and woodlands specifically have a number of advantages. Woodlands are restorative environments: the sounds, sights and smells experienced in a wood play a role in reducing stress; they offer a range of options for various types of activities from gentle to vigorous; and carrying out physical activity in an attractive environment such as woodland may encourage people to maintain their activities in the long term.

Yet much of our woodland is inaccessible to walkers. The Woodland Trust[9] record that:
- Only 30% of woodland was publically accessible (recorded in 2015), compared to 43% in Wales, 61% in Scotland and 64% in Northern Ireland[10].
- Less than 17% of the population in England have access to a wood covering at least 2 hectares within 500m of their home and less than 66% have access to woodland within 4km.

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[8] Assessment of the Socio- Economic Benefits of the Paths for Communities Programme, Full Study Evaluation Report Final Draft, 2015

[9] Woodland Trust , Space for people Targeting action for woodland access, January 2015.

[10] The definition of 'accessible' in this report was "any site that is permissively accessible to the general public for recreational purposes" and included sites with unrestricted open access and restricted, but permissive, access (e.g. fee-payable, fixed-hours access) but not woods served only by public rights of way.

2.4 The coast

The coast attracts visitors for a wide variety of reasons. The most common motivations relate to health and exercise, relaxing and unwinding[11]. In 2009, the Ramblers secured the right to coastal access and a coast path around England, previously much of our coastline was inaccessible. Natural England are now constructing this path which will be complete by 2020 providing us with nearly 4,000km of new walking opportunity.

We know from surveys that a third of the population are more likely to visit the coast if access is improved[12] and can also see this realised in practice as sections of the coastal path are opened: according to counters on the previously opened South Bents to North Gare route, 10,000 people a year have enjoyed access to the coast and cliffs in a location which was previously inaccessible[13].

3. Challenges

Reductions to the amount of funding given to local authorities – in particular the phasing out of the Revenue Support Grant by 2020[14] - threaten to undermine the accessibility of urban green space, as well as the maintenance of countryside access. A recent report from the Association of Public Service Excellence found that 78% of local authorities agree or agree strongly that 'the squeeze on public sector resources is affecting parks and green spaces disproportionately to other service areas'.[15] Similar pressures exist for the path maintenance functions of local authorities and other custodians of the natural environment, such as the National Parks Authorities.

To make up for funding shortfalls, authorities are increasingly looking to external funding sources. On average around a quarter of park funding is from external sources, with planning gain (Section 106 and Community Infrastructure Levy) being the most important contributor, followed by charging for services and grants from National Lottery.[16] Community groups and partnerships with voluntary organisations are playing an increasingly important role in fundraising for and managing green spaces. HLF research suggests that there is now an average of 14 friends groups, contributing support valued at £280,000, per local authority.[17]

4. Our expertise

The Ramblers helps everyone, everywhere, enjoy walking, and protects the places we all love to walk. We are the only charity dedicated to looking after paths and

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[11] Monitor of Engagement with the Natural Environment: Visits to Coastal England, Natural England, October 2016

[12] Monitor of Engagement with the Natural Environment: Visits to Coastal England, Natural England, October 2016

[13] https://www.gov.uk/government/news/longest-section-of-england-coast-path-opens-in-middlesbrough

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[16] Heritage Lottery Fund 2016, *State of public parks,* https://www.hlf.org.uk/state-uk-public-parks-2016

[17] ibid

green spaces, leading walks, opening up new places to explore and encouraging everyone to get outside and discover how walking boosts health and happiness:

- We have 107,000 members and 25,000 volunteers. We're a campaigning charity ensuring that the 140,000 miles of footpaths in England and Wales are maintained, protected saved and expanded.
- We championed the creation of national parks and national trails and the right to roam securing 865,000 hectares of land for people to walk in with the Countryside and Rights of Way Act 2000. Coastal access will give people 4,000km of path around the English coastline to enjoy.
- In partnership with Macmillan Cancer Support, we have hosted the national Walking for Health programme since 2012. Every week, local Walking for Health schemes run over 1,800 free, friendly, short group walks that reach approximately 20,200 individuals.
- Over 10,000 Ramblers walk leaders across nearly 500 groups led a total of over 48,000 group walk last year, totalling 372,939 miles.

References (if applicable):

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101 **6: Improving the environment to encourage people to walk**

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Section A: CPHE to complete	
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Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Living Streets experience in interventions to improve the environment to encourage people to walk
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]
- Interventions to improve the environment to encourage people to walk	
- Effectiveness and cost effectiveness of interventions among different groups groups, such as older people and those with limited mobility.	
Section B: Expert to complete	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Summary

Motorised traffic use impacts on the health of everyone through: traffic injuries and deaths, noise, severance, air pollution and climate change. However, the most significant role transport plays in our health is enabling physical activity, particularly from active travel.

Walking has a number of health benefits including improved mental health, a reduced risk of coronary heart disease, stroke, type 2 diabetes, depression, dementia, and cancer. Walking is particularly important to increasing physical activity because:

- It is the most likely activity for people to do consistently throughout their lives
- It is the easiest way for most people to stay active every day.
- It is a universal activity - there is very little difference by gender, household income, ethnicity or employment status

Living Streets has considerable experience in interventions to improve the environment to encourage people to walk. As part of the expert testimony, Living Streets outlined finding from three of its flagship projects: Walk to School Outreach, Fitter For Walking and Streets Apart. These projects demonstrate the role behaviour change programmes can play, alongside

physical interventions, to enable and encourage more people to walk. The programmes also highlighted some of the challenges delivery organisations have in undertaking robust analysis of short term interventions.

The testimony went on to highlight findings from a recent piece of research undertaken by Living Streets on behalf of PHE called, '*Overcoming Barriers to walking for disabled people*'. The research asked participants to describe a local journey and used prompts to promote discussion of the different types of the barriers they faced. The main physical barriers identified were:
  - **crossing the road-** lack of dropped kerbs, not enough time to cross the road safety, no safe crossing places, crossing design, not working
  - **footways** - uneven surfaces, lack of colour contrast, obstructions, tactile paving, conflict (e.g. cyclists)
  - **comfort facilities** - toilets, public seating

3 steps towards a more walking
1.planning places so that people aren't reliant on a car to make everyday journeys
2.designing places that feel safe and inviting to walk in
3.encouraging people to walk

Walk to school outreach
Project outline (Sept 2012 – Mar 2015)
15 local authorities,182 secondary schools and 854 primary reaching a potential 400,000 children
•Coordinators worked with selected school communities in 98 areas to increase levels of walking to primary and secondary school and tackle local barriers to walking. Using our School Route Audit method, we engaged 364 schools, mapping accessibility, safety or route condition concerns and allocating over £430k to capital projects, including footpath and crossing improvements.
•Secondary students are supported, using our successful student-led Campaign in a Box approach, to develop their own walk to school campaign, consider local environmental issues, and take action to raise walking levels.

Evaluation
Across three years of the project, walking rates increased by an average of 23% after 5 weeks, an increase that was all but sustained one year on (22%) and two years on (19%)
•There was corresponding drop in car use from 39% to 27% - after 5 weeks and one year
•In secondary schools, walking rates increased by 12%
•We invested £430,000 and influenced and further £154,000 in school route improvements

Walk to School Outreach economic appraisal (Capita)
•What: Economic webTAG appraisal and BCR based on modal shift data collected over the life of a project
•Main findings: BCR of 4.17:1

Longitudinal Evaluation (CLES)
•What: three phase evaluation into impact of the WTSO, comprising pupil survey, focus groups, stakeholder interviews and desk research
•Main findings: Increase of walking rates of on average 23% after five weeks
Social Return on Investment Study (CLES)
•What: studied the wider social benefits to children who take part in WoW
•Main finding: every £1 invested generates £4.30 of social value to children, across four outcomes: health, self confidence, independence and social connections

Fitter for walking
Project outline (2008-2012)
Worked with 150 communities across 12 local authorities
•Our Coordinator worked with 20 communities in eight neighbourhoods to help older people overcome barriers to walking by improving walking journeys to vital services and amenities such as: doctors' surgeries and pharmacies. The project aims to give 400 older people the opportunity to walk more with 240 of those becoming more active as a result.
•Using our Community Street Audit (CSA) method older people were able to have their say on how their local streets are designed, managed and maintained. Barriers to walking are identified (e.g. poor and uneven footway surfaces, inadequate crossing points and lack of resting places), highlighted in the audit report and negotiations then take place with the local authorities to make improvements based on these recommendations.
•In addition, a series of events, short walks and social activities took place in each area to boost confidence, promote healthier lifestyles and help older people re-connect with their communities.
• Led to over £400,000 worth of street improvements from Local Authorities

Surveys showed that these were the issues that prevented older people from walking the most:
•Lack of public toilets
•Lack of resting places/benches
•Slippery/icy pavements
•Damaged/uneven pavements
•Pavement parking

Evaluation:
External evaluation performed by BHF National Centre for Physical Activity and Health, Loughborough University has indicated a positive impact on healthy lifestyle behaviours.
•This formal evaluation used questionnaires, focus groups and one-on-one interviews as qualitative measures of impact.
•All respondents remembered making a pledge and over 63% had met their pledge regularly, with 27% meeting it occasionally.
•54% of people reported having increased the amount of walking they did since making the pledge
•80% of respondents stated they felt less stressed or anxious as a result of their walking, with 70% feeling less lonely and isolated and 68% of people feeling more connected and involved with their communities.

•54% of respondents also met new people as a result of walking around their neighbourhood.
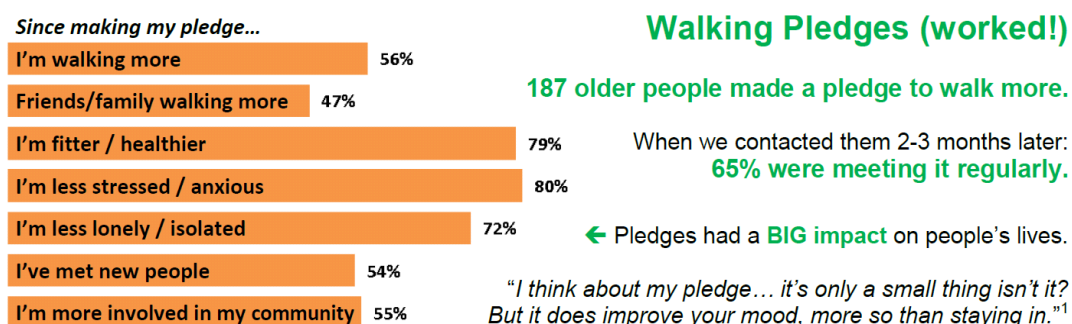
The benefit to cost ratios (BCRs) were positive between 0.9 and 46:1 for all Fitter For Walking interventions and generally likely to result in significant financial savings from decreased mortality.

Streets apart
June 2013 to March 2015
•Aim to increase walking and reduce isolation
•Promoted physical activity for people over 50 years of age, targeted at areas with high concentrations of this population. The programme worked in partnership with existing services to increase social cohesion.
•Used Community Street Audits and walking pledges.

Evaluation

Since making my pledge...

I'm walking more	56%
Friends/family walking more	47%
I'm fitter / healthier	79%
I'm less stressed / anxious	80%
I'm less lonely / isolated	72%
I've met new people	54%
I'm more involved in my community	55%

Walking Pledges (worked!)

187 older people made a pledge to walk more.

When we contacted them 2-3 months later:
65% were meeting it regularly.

← Pledges had a **BIG impact** on people's lives.

"I think about my pledge… it's only a small thing isn't it? But it does improve your mood, more so than staying in."[1]

Retrospective beneficiary focus group and stakeholder interviews
•External evaluation (Qa) has indicated a positive impact on healthy lifestyle behaviours. This formal evaluation used questionnaires as a qualitative measure of impact. Self-report results indicated 78% of participants felt fitter, 80% felt less anxious and 70% felt less isolated.

Overcoming barriers to walking for people with disabilities

Nationally people with disabilities represent almost a fifth (9.4 million people or 18%) of the English population
•72.1% of disabled people take part in no sport or physical activity, compared to 47.8% of non-disabled people (Active People Survey, 2014)
Methodology

•A literature review (but not a systematic) policy mapping and evidence based guidance
•Interviews with a public health manager and transport officer from Coventry County Council
•Focus groups: 39 participants aged 30-78 with a range of disabilities (stroke survivors, learning difficulties, mobility impairments). We asked participants to describe a local journey and used prompts to promote discussion of the different types of the barriers they faced
Limitations - not a systematic review of the academic literature, it was not possible to include every type of limiting condition; the focus groups provided

a sample of people already speaking out on disability; we were unable to recruit younger participants (under 30).

Findings from literature review
Physical activity is particularly important for disabled people
•Studies have looked at the physical and emotional barriers to being more active
•But there is a lack of published evidence on the disabling impact of the built environment for people with a range of impairments
•However, the impact of the built environment on an ageing population is better researched, with the main attention being paid to concerns about physical impact of the built environment on the functional mobility - and disability - of older people.
Three themes emerged:
1.the role of the built environment in preventing the functional mobility of older people (especially the risk of falls);
2.the importance of the built environment as a means of maintaining functional mobility
3.The need for interventions which address the psychological and emotional barriers to walking (eg fear of falling)

The main physical barriers identified:
•crossing the road- lack of dropped kerbs, not enough time to cross the road safety, no safe crossing places, crossing design, not working
•footways - uneven surfaces, lack of colour contrast, obstructions, tactile paving, conflict (e.g. cyclists)
•comfort facilities - toilets, public seating

References (if applicable):

Living Streets project evaluations
A summary of recent externally-commissioned evaluations

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1. **Walk To 15/16 qualitative evaluation** (SIRC)

What: Interview-based qualitative evaluation looking at added value, legacy in schools, and effectiveness of delivery.
Main finding: Consistent findings revealed a number of important success factors and recommendations for the future.
Links: Final report, infographic and case studies

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2. **Walk to School Outreach economic appraisal** (Capita)

What: Economic webTAG appraisal and BCR based on modal shift data collected over the life of the project.
Main finding: BCR of 4.17:1
Links: Final report

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3. **Walk to School Outreach longitudinal evaluation** (CLES)

What: Three-phase evaluation into the impact of the Walk to School Outreach, comprising pupil surveys, focus groups, stakeholder interviews and desk research.
Main findings: An effective programme that is delivered well and contributes to local and national strategies. Various recommendations have been put forward to continue improving delivery.
Links: Final report

4. Walk to School Social Return on Investment (SROI) study (CLES)

What: Studied the wider social benefits to children who take part in WoW.
Main findings: Every £1 invested generates £4.30 of social value to children, across four outcomes: health, self-confidence, independence and social connections
Links: Final report

5. Walk To economic appraisal (Capita)

What: Economic webTAG appraisal and BCR based on forecasts for our Walk To LSTF bid.
Main findings: BCR of 8.32:1 for the whole project, and 7.64:1 for the school elements.
Links: Final report

6. Tyne and Wear Transitions and SEN evaluations (CLES)

What: Small-scale evaluation of the SEN/Inclusive and Transitions elements of the Go Smarter walk to school programme in Tyne and Wear.
Main findings: The SEN project increased awareness of and enthusiasm for walking, and helped pupils understand the benefits and barriers. The Transitions project had limited success at increasing walking, but had other secondary impact on participating pupils; the evaluation highlighted existing barriers and provided useful insight into improving delivery.
Links: Final SEN report, Final Transitions report

7. Fitter for Walking evaluation (BHFNC / UWE)

What: Major evaluation of the impact and delivery of FFW, including an economic analysis.
Main findings: Successful, well-delivered and well-received programme achieving a number of outcomes, although mixed evidence of increased walking. Economic benefits are difficult to measure and analysis was mixed but generally positive.
Links: Main evaluation, Economic evaluation

8. Step Out in London evaluation (SRA)

What: Before and after surveys with the public, businesses and stakeholders, looking at the impact of walking activities and public realm improvements on health, community and the built environment.
Main findings: Variable but positive survey findings showed that people welcomed the improvements and activities, and walked more in the area as a result. Some evidence of increased retail spend.
Links: Final report

9. Streets Apart (Qa)

What: Retrospective beneficiary focus group and stakeholder interviews
Main findings: The project delivered a range of practical help and outcomes, including improved confidence, for older people; and contributed to the strategic aims of stakeholders.
Links: Final report

10. Walking Works pledge follow-up evaluation (Sustrans)

What: Before and after comparison of walking and physical activity rates of people making a walking pledge through the BIG-funded Walking Works project.
Main findings: Walking and physical activity levels were up across every question asked. HEAT health BCR of 4.4:1 (50% sustained change) or 8.9:1 (100% sustained change).
Links: Final report

103

104

105   ***7: Learning from Paths for All***

Section A: CPHE to complete	
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Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Learning from Paths for All
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]
Learning from the Paths for All project about environmental interventions which may support those with limited mobility or disabilities to be physically active in both urban and rural environments.	
Section B: Expert to complete	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Walking is the most accessible and practical way to achieve recommended levels of physical activity and offers a huge opportunity for preventative spending. There is however a clear need for increased and sustained funding to support physically active lives.

Our vision is for walking and cycling to be the natural choice for short journeys, creating a healthier, socially inclusive, economically vibrant, environmentally friendly Scotland. Active Travel is about improving quality of life and quality of place. With over 50% of all driven journeys in Scotland being less than 5km, and 26% less than 2km, there is plenty of scope for achieving a significant shift to walking and cycling as the most sustainable forms of transport.

Creating an environment where people actively choose to walk and cycle as part of everyday life can have a significant impact on health and may reduce health inequalities. The quality of environment in a locality influences a person's decision to walk or not. It also has an influence on community life and perceptions of an area by residents and outsiders.

Accessibility to a range of neighbourhood resources and facilities is strongly associated with physical activity. Similarly, areas that are more 'walkable' are more likely to see higher numbers of people using local streets.

In our experience the top 5 "must haves" for walking infrastructure are:

- Well maintained streets, paths and public spaces – including level, smooth surfaces that are fully accessible, fit for purpose and with reduced street clutter;
- Information on walking routes to key destinations and places to walk, including more paths with signage;
- Seating, public toilets and good lighting, as a minimum provision in a high-quality, person-centred public realm;
- Safe places to cross roads with pedestrians given priority at signalized crossings;
- Vehicle speeds limited to 20mph.

Background: Paths for All is a Scottish charity founded in 1996. We champion everyday walking as the way to a happier, healthier Scotland. We want to get Scotland walking: everyone, everyday, everywhere.

The Scottish Government's Active Scotland Outcomes Framework describes Scotland's ambitions for sport and physical activity and the key outcomes over the next ten years. The headline measure of progress is the proportion of the population who meet the recommended level of physical activity. This is a National Indicator. The proportion of adults meeting this in 2015 was 63% - the same figure as in 2014 and similar to previous years.
http://www.gov.scot/About/Performance/scotPerforms/indicator/physicalactivity

Walking is the most accessible and practical way to achieve the recommended levels of physical activity. If incorporated into daily routines it brings a host of wider health benefits including preventing obesity. To encourage behaviour change towards everyday walking, we must create places and spaces that encourage physical activity and promote active travel.

Walking – value for money: Walking delivers social benefits including making people fitter, healthier and improving their mental health. This in turn makes cost savings to the NHS and local authorities such as reduced spend on care and prescriptions due to clients being more fit, healthy and able. Getting people active through walking is a key way to support better health and longer healthy lives – taking pressure off health and social care services. Walking offers a huge opportunity for preventative spending as recommended by the Christie Commission. This is particularly important as our population ages and resources come under more pressure.

There is a clear need for increased and sustained funding to support physically active lives – and, in this context, promotion of walking offers the best value

investment. There should be better coordination between funders and the delivery of key policy outcomes.

A Social Return on Investment (SROI) study to analyse the impact of the Glasgow Health Walk programme revealed that for every £1 invested in Health Walks in Glasgow, there were £8 of benefits generated for society. Two further SROI studies, in Stirling and the Scottish Borders, showed that for every £1 invested in Health Walks £9 and £8 worth of benefits were delivered respectively.
http://www.pathsforall.org.uk/pfa/health-walks/our-research.html

National Walking Strategy: The desire and intent to encourage more walking and to embed it in our daily lives is reflected in the Scottish Government's National Walking Strategy and Action Plan
http://www.gov.scot/Resource/0045/00452622.pdf
http://www.stepchangescot.scot/

> Walking is highly cost-effective and demonstrates that prevention really is better than cure. The health risks of inactivity are stark – 7 Scots die every day due to inactivity, often long before they have to.
> Shona Robison, Cabinet Secretary for Health and Sport – National Walking Strategy 2014

The Scottish Household Survey: for the fifth year in a row, more people are walking recreationally. 69% of people walk regularly for recreation, an increase of 5 percentage points from last year. The greatest increase between 2014 and 2015 was in those aged 75 and over, who are amongst those most likely to be inactive

Walking for Health: Our Walking for Health programme consists of 149 local projects delivering volunteer led health walks in communities across Scotland. We are working with health professionals and Community Planning Partnerships to signpost these opportunities more widely. Thousands of people across Scotland have discovered the benefits of walking through their involvement with a Paths for All supported project. Each walker can tell you an individual story of how walking has really helped them to improve their mental, social or physical health.
http://www.pathsforall.org.uk/pfa/walkers-stories/walkers-stories.html

Workplace walking: We have developed resources, training and support to help develop walking in workplaces. http://www.pathsforall.org.uk/work The Step Count Challenge is a workplace walking challenge run by Paths for All. Research by the University of Edinburgh shows an increase in the amount of time people were walking each week. http://stepcount-staging.linux-live.stormid.com/2015/02/step-count-challenge-research-results/

Active Environments: Creating an environment where people actively choose to walk and cycle as part of everyday life can have a significant impact on health and may reduce health inequalities. We offer support, funding and technical expertise to local communities across Scotland working to develop infrastructure and maintain welcoming and safe routes. These routes allow people to be physical

active where they live, every day. There is far more demand for the grant funding than we are able to award. Our partners, Living Streets Scotland, also support community organisations to develop greater capacity to ask for improved places for walking.

The quality of environment in a locality influences a person's decision to walk or not. It also has an influence on community life and perceptions of an area by residents and outsiders. Accessibility to a range of neighbourhood resources and facilities is strongly associated with physical activity. Similarly, areas that are more 'walkable' are more likely to see higher numbers of people using local streets. http://www.pathsforall.org.uk/pfa/support/walkipedia.html https://www.livingstreets.org.uk/media/1392/making-the-case-summary-final.pdf

Walking Infrastructure - Top 5 "must haves"
- Well maintained streets, paths and public spaces – including level, smooth surfaces that are fully accessible, fit for purpose and with reduced street clutter;
- Information on walking routes to key destinations and places to walk, including more paths with signage;
- Seating, public toilets and good lighting, as a minimum provision in a high-quality, person-centred public realm;
- Safe places to cross roads with pedestrians given priority at signalized crossings;
- Vehicle speeds limited to 20mph.

Relative priorities will depend on location. The Place Standard Tool and Community Street Audits are ways of exploring this.

Designing Streets - Policy Statement: Designing Streets is the policy statement in Scotland for street design and marks a change in the emphasis of guidance on street design towards place-making and away from a system focused upon the dominance of motor vehicles.

Active Travel: Our vision is for walking and cycling to be the natural choice for short journeys, creating a healthier, socially inclusive, economically vibrant, environmentally friendly Scotland. Active Travel is about improving quality of life and quality of place. And with over 50% of all driven journeys in Scotland being less than 5km, and 26% less than 2km, there is plenty of scope for achieving a significant shift to walking and cycling as the most sustainable forms of transport.

Twenty two percent of journeys in 2015 had walking as the main mode of transport and a lot needs to be done if we are to meet our ambitions on active travel – with a significant change in priorities and spending on transport. The review of the National Transport Strategy offers an opportunity to address this and the recently announced Active Travel Task Force should give this focus. http://www.transport.gov.scot/statistics/transport-and-travel-scotland-all-editions

With Scottish Natural Heritage and the Central Scotland Green Network, we have produced a series of case studies that demonstrate how active travel can be

promoted by different kinds of organisations in different settings.
http://www.pathsforall.org.uk/pfa/get-involved/active-travel-case-studies.html

Smarter Choices, Smarter Places: The Smarter Choices, Smarter Places
(SCSP) Programme is Paths for All's grant scheme to support behaviour change
initiatives to increase active and sustainable travel. The programme is funded
through Transport Scotland and aims to make walking and cycling the modes of
choice for short local trips. This scheme links to infrastructure funding through the
Community Links programme delivered by Sustrans Scotland. The funds (£5m /
year) have been allocated on a population basis to local authorities and the
initiatives aim to support people to make walking and cycling part of their daily
lives. Paths for All and Transport Scotland have produced a series of illustrated
case studies that demonstrate the range of approaches to travel behaviour
change. http://www.pathsforall.org.uk/pfa/get-involved/scsp-case-studies.html

Walking and Public Transport: The quality of public transport and walking
access to it is an important factor in encouraging people to travel more
sustainably. This is particularly the case for those without access to a car or who
have a disability. There should be a door to door approach to travel options –
many journeys are a combination of several modes. The quality and safety of
routes, public information and the walking environment in and around public
transport stops and stations is being addressed in several ways.

Active Travel Hubs: Active Travel Hubs are designed to encourage and support
more people to walk, cycle and use public transport for their daily journeys instead
of using the car. In Scotland, the aim is to develop a network of Active Travel Hubs
in towns and cities across the country. These will give local people help and
encouragement to travel actively more often. The benefits include improved health
and wellbeing, cost savings for individuals as well as a reduced carbon footprint.
Paths for All can support organisations to integrate walking and multi-use path
developments into Active Travel Hubs.

Walkability in Edinburgh: PFA funded a Walkability post with Edinburgh City
Council - mainly concerned with producing Street Design Guidance for Edinburgh.
The post also supported the Edinburgh Active Travel Action plan which includes:
- Changing prioritisation of footway maintenance to busiest footways
- Removal of guardrails in the city
- Upgrading of pedestrian crossings
- Implementation of the George Street trial pedestrian priority project – 74%
  of street users felt the project improved the street
- Installation of new signalled crossings, zebra crossings and refuge islands
- Introduction of 270 dropped crossings in the East Neighbourhood Area in a
  project aimed at improving access to shops and services for pedestrians,
  especially for those with mobility impairments

The 20mph speed limit being rolled out across Edinburgh will improve travelling
conditions across the city for both walking and cycling.
http://www.edinburgh.gov.uk/info/20243/20mph_for_edinburgh/1249/better_and_s
afer_at_20mph

Disability: Difficulties with mobility may affect a large cross section of the population including those with sight or hearing impairments, wheelchair users, the elderly and parents with young children. In some cases, the mobility constraints may be hidden such as a heart condition which prevents the person from walking any distance. The needs of all these groups must be considered when planning walking facilities. Mobility impairment can also be temporary, e.g. dealing with bags or a pushchair or a temporary physical condition such as pregnancy or injury. http://www.pathsforall.org.uk/pfa/support/walkipedia.html

Dementia: Our Dementia Friendly Walking project is providing training, funding and support to make the Walking for Health network dementia friendly. We are also working to raise awareness about the benefits of walking for people living with dementia. The projects that we support through this project will receive a Dementia Friendly Walking accreditation.

We have consulted people living with dementia on why they walk, what they enjoy about it, challenges, etc. For example, walks need to take place on terrain that is safe and appropriate to the physical and cognitive abilities of participants e.g. as flat, even, and as hazard-free as possible. A vital dimension to the physical environment that was highlighted again and again was the availability of toilets. http://www.pathsforall.org.uk/pfa/health-walks/dementia-friendly-walking.html

Countryside for All: The Countryside for All standards, developed through the BT Countryside for All Project by the Fieldfare Trust, define minimum physical access standards. There is a simple scoring system, and the standards recognise that people expect a different level of provision in city parks to open countryside. All our technical guidance for infrastructure has these standards as a minimum.

Outdoor recreation: Opportunities to take part in formal or informal outdoor recreation are a vital resource for communities. One of the most effective ways to improve the health of our population is to increase physical activity levels. There is also a growing body of evidence of the wider benefits of outdoor recreation – particularly in greenspace – including better physical health as well as mental health and wellbeing. http://www.sciencedirect.com/science/article/pii/S0277953612003565

Green infrastructure should be accessible, inclusive and attractive, with high quality paths and street environments to encourage walking and other physical activity. Paths for All can support organisations to integrate walking and multi-use path developments into Green Infrastructure projects.

Paths: Paths for All aims to increase the number, quality, accessibility and multi-use of paths across Scotland - working with a wide range of partners to support the development, maintenance and promotion of paths for all purposes through:

- Advocating the benefits of using paths and providing focused advice and support to key stakeholders
- Increasing the quality and quantity of paths through technical advice and support
- Increasing the capacity within communities to develop Community Paths
- The Path Grading System for Scotland to help users to pick a route

- Delivering more local path networks

We offer grants and support to help community groups improve, maintain and promote their local community paths. They can use our funding to: buy tools, insurance and materials; hire a contractor, plant and machinery; install signage and way-markers and produce a leaflet or promotional materials. Recent case studies: http://www.pathsforall.org.uk/pfa/support/making-tracks-community-path-grants-case-studies.html

Core Paths: Core paths are paths, waterways or any other means of crossing land to facilitate, promote and manage the exercise of access rights under the Land Reform (Scotland) Act 2003. Every local authority and National Park authority (access authorities) in Scotland is required to draw up a plan for a system of core paths. Clearly defined paths are important - a network of signposted paths makes people feel more confident. http://www.snh.gov.uk/enjoying-the-outdoors/where-to-go/routes-to-explore/local-path-networks/

Paths for All is a partnership organisation; for a full list of our current partners please visit our website.
Paths for All Partnership is a recognised Scottish Charity No: SC025535 and a Company Limited by Guarantee No: 168554 incorporated 19 September 1996 at Companies House, Edinburgh. Registered Office: Office 8, Forrester Lodge, Tullibody Road, Alloa FK10 2HU

References (if applicable):
See hyperlinks

106
107

108 ### *8: Strathclyde Partnership for Transport*

109

Section A: CPHE to complete	
Name:	Bruce Kiloh
Job title:	Head of Policy and Planning Strathclyde Partnership for Transport
Address:	
Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Experience from Strathclyde Partnership for Transport
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]

-     If learning from London can be applied to other areas
-     Public transport provision in rural areas
-     Impetus for and impact of announcements on buses
-     Impact of co-commissioning
-     Resolving conflict between cyclists, pedestrians and motorists

Section B: Expert to complete	
Summary testimony:	[Please use the space below to summarise your testimony in 250 – 1000 words – continue over page if necessary]

Strathclyde Partnership for Transport is the regional transport partnership for the West of Scotland, covering 12 council areas, 2.41 million people and 250 million public transport trips per year. It has responsibilities for regional transport strategy for the west of Scotland.

Learning from London

SPT owns and operates the Glasgow subway, which has 15 stations and is the only other underground system in the UK apart from that in London. Currently SPT are undertaking subway modernisation work. There is a well-established link with London underground and SPT have learnt a lot from London as it has a bigger market and more funding, but London also learns from SPT, so there is an exchange of learning.

A rapid bus transit scheme linking the QE hospital and city centre has recently been introduced and an integrated ticketing system is being promoted, which allows smartcards (similar to London's oyster cards) to be used on the subway, buses and ferries on the west coast.

Bus systems and rural transport provision

Bus services are a big issue and there is an on-going debate about re-regulation which has been spurred on as bus patronage decreased significantly in the last decade. This is due to a range of factors including reduction in size of the network, the increasing popularity of out of town shopping and internet shopping, and car ownership. Time and effort is being spent on turning this around. The bus system is seen as the most flexible and important mode of transport for deprived and rural areas and SPT want to 'grow' that again. London bus patronage has doubled with a regulated system. However when subsidies are compared, it is £5 per head in Strathclyde, and £100 per head per person per year in London, so there is considerable pressure on budgets.

SPT support 'socially necessary bus services' (e.g. services continuing to run after 6pm when they wouldn't be commercially viable). They are also responsible for organising school transport and a demand responsive service called 'MyBus' for those unable to use mainstream bus services. See http://www.spt.co.uk/bus/mybus/

Rural areas are particularly challenging. New initiatives, such as 'My Bus Rural' is made available in areas without a regular bus service. It is similar to an 'on demand' bus service and is for communities who register to use it It focuses on journeys from home to local amenities and there are rules governing its use, for example it doesn't include journeys to hospital appointments. These are currently covered by NHS hospital transport system, (though a new report is calling for more 'Total Transport Schemes' in which such services are co-ordinated by local authorities Urban Transport Group). The Scottish government is currently looking at an Isolation Strategy and transport in rural areas would be very important. The 'My Bus Rural' scheme has been popular and the West of Scotland Community Transport Network has been working with local organisations to fund and encourage this to grow as a social enterprise.

Announcements on buses

With reference to announcements on public transport, SPT have introduced a 'Talking Bus' scheme and announcements on 'My Bus' services. These announce the bus number and destination and the next stop and have been endorsed by RNIB and Guide Dogs Scotland and have proved hugely popular http://www.spt.co.uk/corporate/2014/04/its-all-talk-on-the-m1-bus/.

Co-commissioning

When the West of Scotland Integrated Transport Hub was created, it brought together a range of providers and so it is possible to seek opportunities to integrate. It is not a straight- forward task but is moving in the right direction.

Resolving conflict between the needs of cyclists, pedestrians and motorists

Meeting the conflicting needs of these groups is a common issue. The focus of cycling projects over last few years has been on the 'low hanging fruit' such as completing sections of the National Cycle Network and interventions which are easy to implement and SPT are now moving onto the slightly harder interventions, e.g. which involve allocation of road space. This involves working with local councils and transport operators to get the balance right. They are supported in this with a secondee from Sustrans. Some initiatives are seeking to educate road users and achieve an atmosphere of peace on roads.

Glasgow is a compact city and is built on a grid system. The challenge in Glasgow is congestion, parking and bus speed and SPT are working with the City Council on these issues. There is also a new City Centre Strategy which is promoting 'avenues'https://www.glasgowcitycentrestrategy.com/project/city-centre-avenues - specific streets through Glasgow which devote greater space to pedestrians and cyclists. They are tree-lined and provide seating and aim to improve the walking environment in Glasgow. They also form an integrated network of pedestrian and cycle routes through the city, connecting key areas, transport hubs and links to surrounding neighbourhoods. https://www.glasgowcitycentrestrategy.com/project/city-centre-avenues. The river front has been renovated over the last 5 to 6 years and now includes 4 or 5 miles of cycle path and has created a more pleasant environment which people walk or cycle along for commuting or leisure purposes. People expect and want these types of facilities and Glasgow is working towards this.

References (if applicable):

110
111

112   *9: Transport planning*

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Guidance title:	Physical Activity and the Environment (Update)
Committee:	PHAC C
Subject of expert testimony:	Transport planning
Evidence gaps or uncertainties:	[Please list the research questions or evidence uncertainties that the testimony should address]

Factors influencing active travel - Geographical breadth Adverse effects Effectiveness of interventions for people with limited mobility

Resolving conflict between cyclists and pedestrians (particularly those with poor sight or other disabilities) and other road users.

I begin with the comment/disclaimer that, as far as I am aware, there is very little objective evidence – in London, the UK, or elsewhere – that helps to prove conclusively that one course of action is better than another in resolving conflict between cyclists and pedestrians in any given context. This is for two principal reasons.

Firstly, the environments in question (e.g. urban streets) are often highly complex and are usually quite different from one another, Even those that seem, on face value, to be ordinary enough, may be quite different in terms of the patterns of activity associated with the buildings that line them or the role of the street within the wider movement networks.

Secondly, the matter of what constitutes a 'conflict' is often highly subjective.

In short, simple metrics are of little value in resolving these conflicts.

Some evidence relating to both of these considerations is contained in reports I helped prepare from Transport for London and Bristol City Council in 2014 and 2015 respectively. The first was the report of an International Cycling Infrastructure Best Practice Study, and some relevant information is found in the section on 'Interaction with Other Users' (from page 77). The second was a Review of Shared Pedestrian/ Cycle Space in Bristol city centre.

At the heart of the matter is what constitutes a 'conflict'; and part of the problem here is that the matter is usually viewed differently by different participants in the same incident. I have found it helpful to consider a continuum from 'separation' to 'collision' along which can be located a range of interactions with progressively greater potential for harm. However, at which point on this continuum any given person would place any given

incident depends on a number of factors, which may be both highly subjective and prone to a high degree of variance.

One subjective consideration is a possible predisposition to be mistrustful of the general user group to which the other person involved in the interaction belongs. (For example, 'cyclists' are still considered by some to be an 'out group' to be feared or disliked.) Another relates to the extent to which any given person considers themselves vulnerable. (For example, one person walking may be especially apprehensive at the prospect of being knocked down or otherwise hurt by someone on a bike, while another may not usually give the possibility the slightest regard.) Another aspect of subjectivity concerns the simple matter of how aware of any given incident the participants were at the time. Someone looking the other way, chatting with friends, or looking at a smartphone might be much less conscious of the potential severity of a 'near miss' than they would be if not so preoccupied.

I also offer the following reflection on the matter of subjectivity. Much of the success of contemporary cycling campaigning in the UK has been in large part due to the case having been made that what puts most people off cycling is that they consider it to be unsafe. While people may come to this conclusion partly because of having seen a few headlines about death or serious injury suffered by people while cycling, the view that 'cycling is unsafe' is almost never based on a detailed analysis of collision data. It's much more subjective. People don't *know* that cycling is less safe than the alternatives; rather, they simply don't like the idea of being put in very close proximity with high volumes of fast moving vehicles of considerable mass.

I'm sure others will have provided evidence to this effect, but my purpose here is simply to note that the importance of considering 'subjective safety' in the choices people make has been established (or is rapidly becoming so).

With this in mind, it is noteworthy that some cycling campaigners are often quite dismissive of the objections of some people (speaking as pedestrians) to the risks that they perceive might arise from, for example, footway cycling, mixing with cyclists in so-called 'shared space', or 'floating bus stop' arrangements. This dismissal is usually accompanied by statements that the real danger to people walking comes from motor traffic. This is generally true, in terms of the severity of any injury a pedestrian is likely to experience in a collision with a car or lorry as opposed to a pedal bike. And yet it overlooks that what people feel can affect their behaviour as much as, and often more than, the simple facts of the matter.

It simply isn't sufficient to point out to people on foot that the cycling activities and layouts they may be fearful of are 'fine' because there's something else they should be more fearful of, or because these activities and layouts have been commonplace for years in other countries, where the experience has been very largely benign. 'Subjective safety' is a factor in the choices and opinions of all people, whatever their mode of travel.

Returning to the matter of complexity, the unwelcome fact is that, while standardisation in design is generally a positive thing – as it helps breed familiarity and reduce confusion, the inherent idiosyncrasies of street environments, and the practical differences between them, can make it hard

to apply standard design templates or common treatments. 'Context is key' is a phrase that risks being overused in street design, but that doesn't stop it being largely true. My study of shared pedestrian/cycle space for Bristol was commissioned, in essence, to help the Council answer the question, 'What is the best layout and access regime for any given street or space?' It would not be unfair to summarise my conclusion on this question as being, 'It depends'.

Which is to say, the best design response depends on a detailed understanding of the interplay of numerous factors like: the number of different people moving on foot and by bike; their speeds; the different directions of travel involved; the physical space available; the presence/absence of fixed objects; the nature of the activities associated with adjacent buildings; the heritage character of the built environment; the requirements for access by other users/vehicles; etc.

The inherent subjectivity and complexity mean that, when concerns about potential conflicts arising from new designs are made, referencing similar layouts that seem to work successfully in other locations may not be sufficient, in itself, to meet those concerns. We do, and should, have to do more to make the case.

All of the above points to the clear conclusion that resolving real or potential conflicts between cyclists and pedestrians will, and should, almost always require meaningful engagement with people having and representing different perspectives. This is not to say that the best design will be the product of consensus amongst these different parties. In my experience, a simple, clear consensus is highly unlikely – for the very fact of the complexity and subjectivity involved. The design should be based on a solid foundation in policy, reference (but not unthinking adherence) to appropriate guidance, a thorough grasp of good practice and, as necessary, on relevant data collected locally. It should also be based on a clear assessment of the relative pros and cons of different options, with the importance of different criteria reflected in the weight given to the pros and cons relating to each.

Assessing the pros and cons for different user groups cannot properly be done without effective engagement, and, in the context of potential cyclist/pedestrian conflicts, it is important that the views of more vulnerable users (e.g. people with limited mobility, including impaired visibility) are actively sought. Every effort should be made to engage with ordinary users, with a good grasp of the local context, not just representatives of national or related local organisations. While the breadth of knowledge of such representatives is often valuable, it is also very helpful to have perspectives unencumbered by the need to adhere to formal campaigning positions.

As for conflicts between either pedestrians or cyclists and people in motor vehicles, I need only be brief. Priorities in design should relate to an established modal hierarchy, which should be of the form Walking → Cycling → Public Transport → Freight → Car Traffic. Furthermore, the focus should always be on *enabling* walking and cycling, not merely *encouraging* it. People have always shown, and will always continue to show, a marked reluctance to be 'encouraged' to walk or cycle when they consider it less convenient, less safe or otherwise less attractive than the alternatives. Without changing the conditions, efforts to 'encourage' will always fail. Indeed, I would add that it

could be considered irresponsible, even negligent, to encourage people to walk and cycle until genuine efforts have been made, successfully, to address the underlying causes of the low levels of such activity.

Applicability of learning from London to other areas in England (particularly more rural areas).

The point about complexity applies to differences between different towns and cities – and between urban and rural areas – just as it does to differences between neighbouring streets in the same city. On other words, 'context is key'. Similarly, just because relatively novel layouts are becoming increasingly familiar and well-understood in one city does not oblige people in another city or place, who are unfamiliar with the layout, to accept them without quibble.

That said, the same 'golden thread' should be followed in every place – from policy, through strategy, data collection, engagement, concept design and further engagement to detailed design and delivery.

I would be considerably better off if I had £10 for every time I'd been told that 'The drivers/cyclists around here are the very worst, so this new idea of yours will never work', and better off still if I had the same amount for when such fears proved ungrounded. In this regard, I would note that it is by no means just members of the public who can be risk-averse at the prospect of innovation. People in my profession can be just as resistant to 'the new', despite data and other evidence from elsewhere.

At heart, though, beyond the basic truth that every street is different in some way – the root of the complexity we need to embrace – everywhere in England is subject to the same laws and design regulations (the very few exceptions proving the rule). So, there is no reason, in principle, why learning from London is not applicable to all other parts of the country. Resolving concerns may require a more involved engagement process than one might wish but, again, that is part of the package.

To be a little more specific, there is no good reason why the London Cycling Design Standards, for example, should not be used as a basis for design in other towns and cities. Indeed, large parts of it – including the approach to assessing the Cycling Level of Service – are essentially suitable for universal application.

To be yet more specific, in early 2014, in Clapham Old Town, London, five side street junctions were treated with 'continuous footways' – a design approach intended to accord crossing pedestrians clear priority over vehicles turning in/out of the side street. This was as part of a larger urban realm improvement scheme for which Urban Movement was the lead designer. Concerns were raised at the time that pedestrians crossing would not know where to stop, that drivers would not cede priority, and that confusion and collisions would result. We engaged with these concerns, using data to show that the volumes of pedestrian flows relative to vehicle flows both justified the priority and made the design likely to be successful. Drivers are given the clear signal that they are crossing over the footway, and not that pedestrians are crossing 'their' carriageway.

We were inspired by the success of similar layouts in other countries (indeed, the features were dubbed 'Copenhagen Crossings' by Lambeth Council, our client). While we could not, of course, be certain that the layouts would be successful at these five locations in Clapham, we considered that the potential benefits – enabling more people to see walking as a more attractive option for local trips – outweighed the possible disbenefits (principally collisions).

We recently obtained collision data for the near three-year period since the scheme was opened, and compared this with data for a comparable 'before' period. There have been no recorded collisions or injuries at the five locations, and collision rates in Clapham Old Town as a whole have reduced by 25%. Neither has Lambeth Council received any complaints about 'near misses' or similar concerns. (Further details available on request.)

Adverse effects (or minimising adverse effects) of interventions to increase active travel.

The Clapham Old Town scheme, mentioned above, is a good example of the kind of situation in which there may be concerns that the adverse effects of some interventions may be sufficient to outweigh the potential benefits. At the risk of sounding like a cracked record, the best way of addressing such concerns – and indeed of minimising both perceived and actual adverse effects – is to engage with people who have these concerns and with the full range of end users of the scheme. In doing this, there must be a transparent assessment of relative pros and cons for all users, a focus on outcomes based on the best available data and other evidence, and the recognition (a) that not everyone will be happy at the end of the process, and (b) that the loudest voices should not sway rational judgement unduly.

Summary testimony:	[Please use the space below to summarise your testimony in approximately 250 – 1000 words. Please reference where possible]

Increasing the extent to which the physical environment has a positive effect on physical activity must be a matter principally of enabling, not merely encouraging.

The physical environment – the streets and spaces in which people move – is inherently complex, often hugely so. Added to that, the basis upon which people make travel choices is often highly subjective, as is their response to changes in the physical environment, especially those that are unfamiliar.

For these reasons, while consistency in design is generally a good thing, it should not usually be expected that arriving at the best design solution, and/or resolving conflicts between pedestrians and cyclists, can be achieved simply by reference to design guidance. Neither will the best design to achieve the desired outcomes be achieved simply by reference to data; while design-by-the-loudest-voices, or by the simplistic application of concepts like 'segregation' or 'sharing', should be avoided at all costs. There is needed an in-depth understanding of context and of different perspectives; the wise use of guidance, data and precedent; and, generally, a willingness to embrace complexity, realising that there is very rarely a one-size-fits-all 'right' answer that will please everyone.

If more active modes of travel are truly to be made more attractive, it is vital that debates about potential conflicts between people walking and cycling do not distract from the main prize, which is to reassert the importance of both over private motor transport for short trips, and as feeder modes to public transport services for longer trips. Getting more people walking and cycling will absolutely necessitate a shift in design and investment priorities away from motor traffic, and all efforts to this end should be guided by a clearly-stated hierarchy of modes of the form Walking → Cycling → Public Transport → Freight → Car Traffic.

References:

The report of the International Cycling Infrastructure Best Practice Study for Transport for London (2014) is available to download via the following link. If necessary, the London Cycling Design Standards (2014) can also be found via the same link.

http://www.urbanmovement.co.uk/thoughts/tfl-international-cycling-infrastructure-best-practice-study

113

4. Expert Testimony and Evidence

Expert Testimony	Gaps addressed	Recommendations supported
1: Active travel in London	Factors which may influence active travel levels and public transport use	1.1.2; 1.2.1
2: Disability and the built environment	People with limited mobility Community involvement	1.1.2; 1.1.3; 1.1.4; 1.2.2; 1.2.7; 1.3.1
3: Changes in scientific knowledge and transport practice since 2008	Update on the relationship between transport active travel and physical activity since 2008 Update on changes in transport policy and practice since 2008	1.2.1; 1.2.2
4: Environmental support for physical activity in older people, urban deprived populations and black and minority ethnic groups	Effectiveness of interventions for people with limited mobility Effectiveness of interventions for older people Black and minority ethnic groups and socio-economically deprived groups	1.1.3; 1.1.4; 1.2.5; 1.2.7; 1.3.1; 1.3.3
5: Encouraging physical activity in the natural environment	Effectiveness of interventions in green and blue spaces Community involvement	1.2.2; 1.2.3; 1.2.5; 1.3.1
6: Improving the environment to encourage people to walk	Effectiveness of interventions for older people Effectiveness of interventions for people with limited mobility Community involvement;	1.1.3; 1.1.4; 1.2.3; 1.2.5; 1.2.7; 1.2.8; 1.3.1

7: Learning from *Paths for All*	Geographical breadth Effectiveness of interventions for people with limited mobility	1.1.3; 1.1.4; 1.2.3; 1.2.5; 1.2.7; 1.3.1
8: *Strathclyde Partnership for Transport*	Geographical breadth Adverse effects	1.2.2
9: Transport planning	Factors influencing active travel - Geographical breadth Adverse effects Effectiveness of interventions for people with limited mobility	1.1.2; 1.2.6