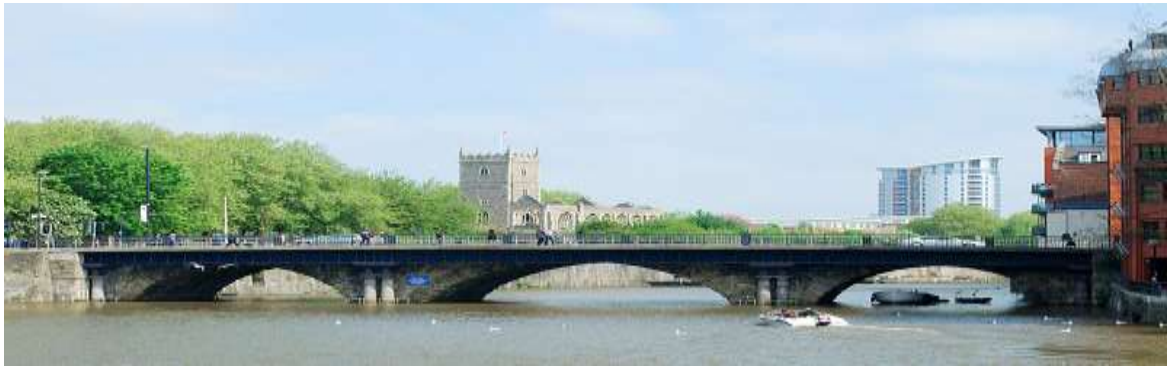
Public health needs, new communities, and the transport offer



Dr Adrian Davis FFPH

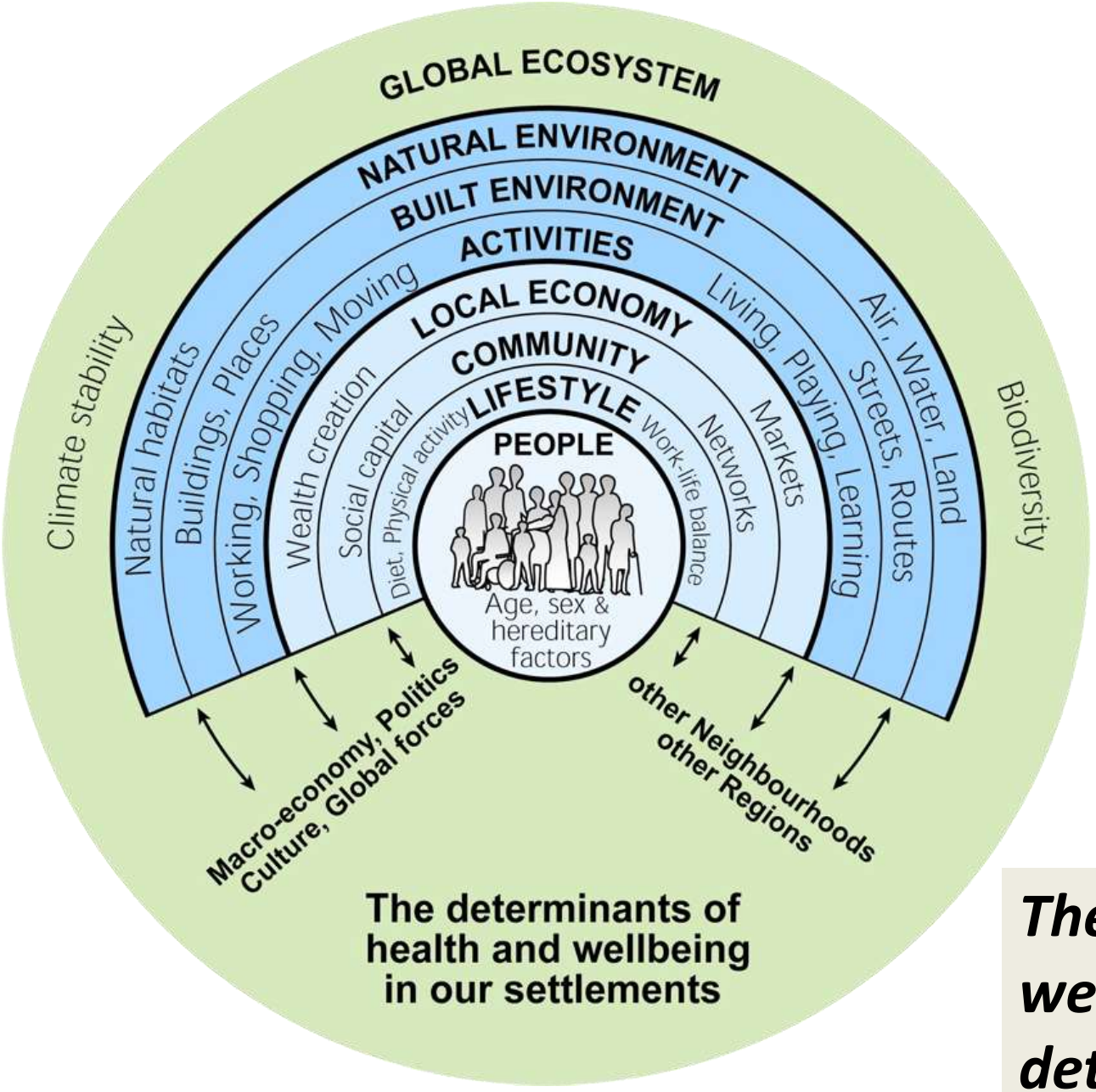
Transport Research Institute

Part of Edinburgh Napier University

Public Health is:

The science and art of preventing ill health and prolonging life and promoting physical and mental health through the organised efforts of society

Lindsey Davies after Donald Acheson



The places we create determine our health


THIS IS PUBLIC
HEALTH.
thisispublichealth.org

Ways in which transport influences health

Health Promoting

Enables access to physical activity, employment, shops, goods, education, other services, countryside, social support networks, active travel, well being

Health Damaging

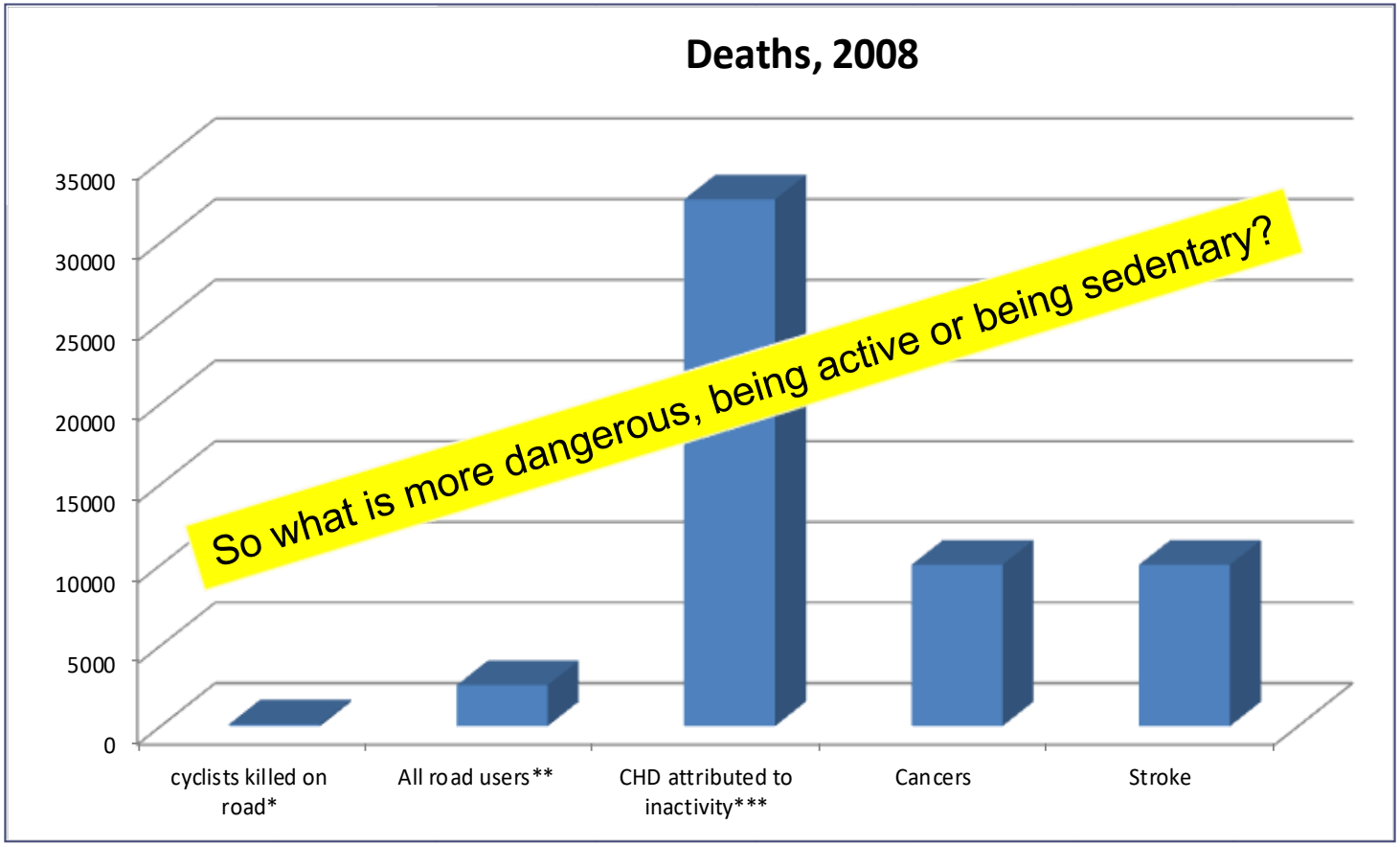
Injuries
Sedentary lifestyle.
Pollution: particulates, carbon monoxide, nitrogen oxides, hydrocarbon, ozone, carbon dioxide, lead, benzene,
Climate change
Noise and vibration
Stress and anxiety
Traffic danger
Loss of land and planning blight
Severance of communities by motor traffic

‘Grand Father’ of Public Health Epidemiology: Jerry Morris

1910-2009. Uses of Epidemiology 1957

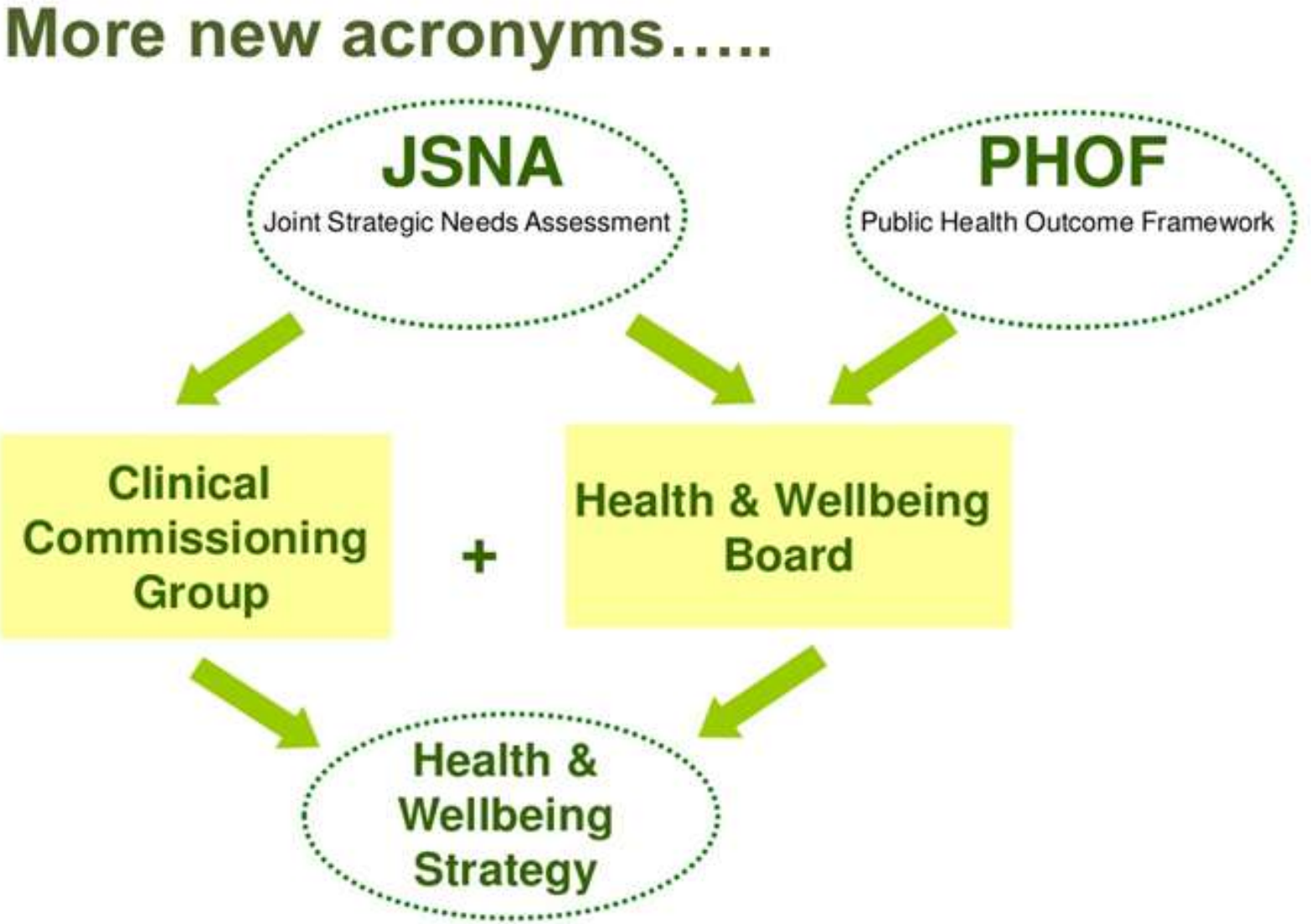
Epidemiology is the study of how often diseases occur in different groups of people and why.
Morris studied 31,000 bus drivers and conductors
- conductors climbed 500-700 steps per shift
- drivers sat for 90% of their shift
- Found less coronary artery disease (CAD) in conductors
Studied 110,000 postal workers
- Demonstrated that postmen who cycled or walked to deliver mail had fewer CAD events than colleagues with less active jobs

The risk of premature death through physical inactivity compared to road casualties



Source: * **DfT Road Traffic Casualties 2009 * BHF statistics 2010 edition; McPherson et al 2002.**

JSNA, PHOF, HWB/S, CCGs…



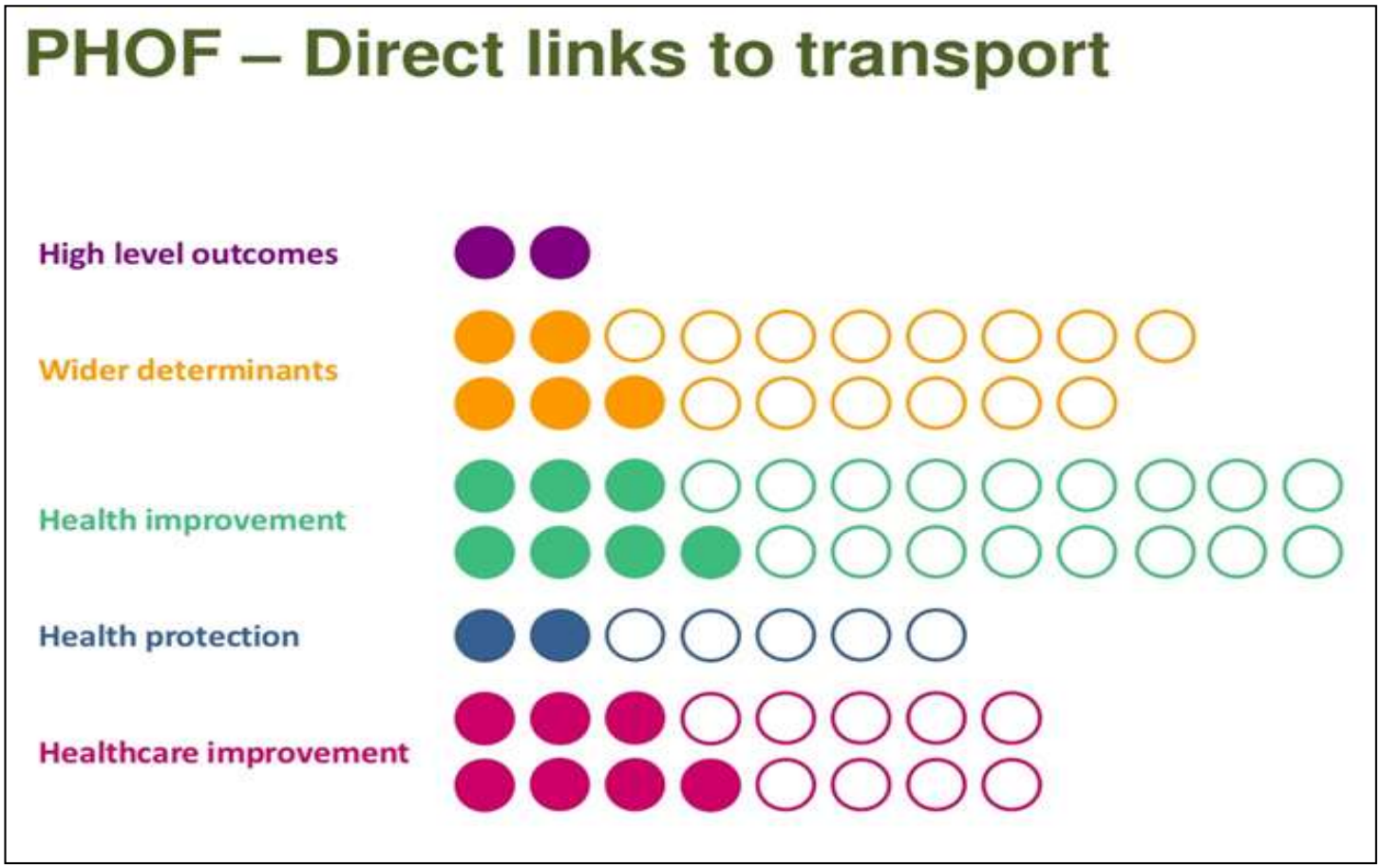
Board priority setting in context

- HWB produces a **Joint Strategic Needs Assessment (JSNA)**: an assessment of current and future health and care needs in the local population and the wider determinants of health

- The JSNA informs the **Joint Health and Wellbeing Strategy (JHWS)**: which identifies local health and wellbeing priorities

- The **plans of local organisations** should address the needs and priorities identified in the JSNA and JHWS

Public Health Outcome Framework: Direct links to transport



https://www.gov.uk/government/publications/healthy-lives-healthy-people-improving-outcomes-and-supporting-transparency

High level outcome /Domain	Indicator	Explanation
Reduced differences in life expectancy	Same	Reducing social class gradient related to transport eg casualties and pollution
Reduced differences in life expectancy between communities	Same	Reducing social class gradient related to transport eg casualties and pollution
Domain 1: improving the wider	Pupil absence	Increased physical activity reduces absenteeism
determinants of health Indicators	Sickness absence rate	Increased physical activity reduces absenteeism
	Killed or seriously injured casualties on England's roads	Major negative impact and inequitably distributed with large costs
	The percentage of the population affected by noise	X% of population exposed to damaging levels of traffic noise
	Utilisation of green space for exercise/health reasons	Severance effect of motor traffic can impede access
Domain 2: Health improvement	Excess weight in 4-5 and 10-11 year olds	School journey and other local active travel trips
	Hospital admissions caused by unintentional and deliberate injuries in under 18s	Road traffic casualties
	Excess weight in adults	Increased energy expenditure through active travel
	Proportion of physically active and inactive adults	Opportunities for increased total physical activity
	Recorded diabetes	Role of increased physical activity in combating diabetes
	Self-reported wellbeing	Role of roads as places which contribute to wellbeing
	Falls and injuries in the over 65s	Increase active travel contributes to increased muscle strength
Domain 3: Health protection	Air pollution	Where active travel can replace private car/van use
	Public sector organisations with board-approved sustainable development management plan	Role of increased active travel as part of overall sustainable development
Domain 4: Healthcare public health	Mortality from causes considered preventable	Role of increased physical activity in combating premature deaths
and preventing premature mortality	Mortality from all cardiovascular diseases inc CHD/stroke	Low physical activity directly causes over 50,000
	Mortality from cancer	Low physical activity directly causes over 20,000 premature deaths
	Mortality from respiratory diseases	Primary contribution of road transport to air pollution
	Health-related quality of life for older people	Motor traffic domination reduces quality of life
	Hip fractures in over 65s	Increased walking increased bone density/less fractures
	Dementia and its impacts	Physical activity mediates against mild dementia

NICE recommends…

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Home > Essential Evidence

- Essential Evidence
- Demand Management & Behaviour Change
- Children
- Adults and Walking
- Adults and Cycling
- Public Transport Use
- Air and Noise
- Safety

Key evidence from peer-reviewed literature is being used to strengthen the case for current transport policies and practice.

All of the summaries found below are published on a single page in order to better disseminate academic research

TRANSPORT RESEARCH INSTITUTE

HOME | ABOUT | CONTACT | PEOPLE | PUBLICATIONS | RESEARCH

Essential Evidence 4 Scotland

At a Transport Planning and Public Health Seminar on Thursday 22nd November 2018 the Transport Research Institute commenced a fortnightly one-page plain-English set of summaries on aspects of transport planning from robust peer reviewed studies.

In the busy world of transport planning, access to peer reviewed evidence is both time consuming but also often impossible without a university library card. But even overcoming such hurdles, then finding the material is often problematic and time-consuming not least because of the searches required and

SEARCH...

ARCHIVES

May 2019

April 2019

www.konsult.leeds.ac.uk

KonSULT

HOME | LINKS | GLOSSARY

Measure Option Generator
Policy Instruments
Transport Strategies
MOG Introduction
PG Introduction
DMG Introduction
Contact Us

What is KonSULT?

Despite the large number of policy measures available to urban transport planners, and the several years over which many of them have been implemented, it is difficult to find consistent and comprehensive empirical evidence of their performance. As a result, cities are often unaware of the full range of measures available to them, and may as a result develop less effective strategies.

This process of option generation has been highlighted in several studies as one of the weaknesses of urban transport policy formulation, resulting in:

- an over-reliance on preconceived ideas;
- a tendency to focus on supply-side measures such as infrastructure and management rather than demand-side measures such as regulation and pricing;
- lack of awareness of the wider range of policy measures available;
- lack of evidence of the performance of these measures in other contexts;
- lack of a formalised approach for option generation;
- lack of expertise in designing a given policy measure to meet local needs;
- failure to appraise the resulting options appropriately in terms of effectiveness, acceptability and value for money.

KonSULT is designed to help overcome these weaknesses. It aims to assist policy makers, professionals and interest groups to understand the challenges of achieving sustainability in urban transport, and to identify appropriate policy measures and packages. It also provides detailed information on individual policy measures which will be of relevance to professionals, researchers and students. It has been developed since 2001 with support from the European Commission, the UK Department for Transport, the UK Engineering and Physical Sciences Research Council and the Rees Jeffreys Road Fund, and is regularly updated to reflect the results of recent research.

The current version has been developed under the European Commission's CHALLENGE project to help cities identify the most effective policy measures and packages as input to their Sustainable Urban Mobility Plans. That project has also produced a Manual on Measure Selection - Selecting the most effective packages of measures for Sustainable Urban Mobility Plans - which provides more detail on the potential uses of KonSULT.

It contains three levels of information:

Journal of Transport & Health

Health impacts of urban transport policy measures: A guidance note for practice

Haneen Khreis, Anthony H. May, Mark J. Nieuwenhuijsen

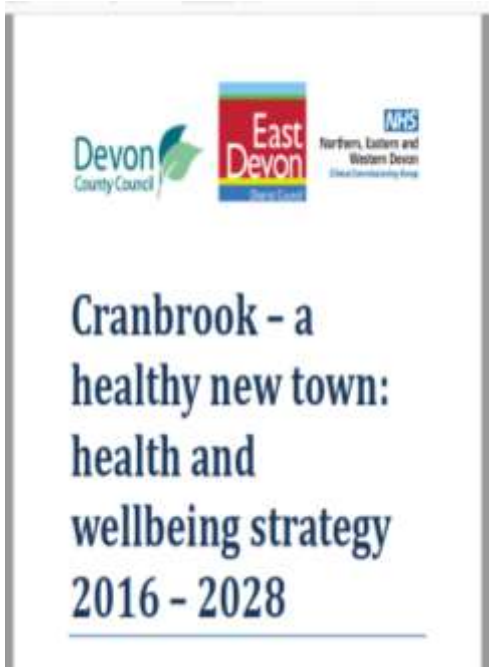
ABSTRACT

Not Business As Usual, please

- Car dependence is perpetuated in newly established outer urban areas because residential growth often precedes the arrival of the infrastructure, jobs and services required to live a less car dependent life.
- Substantial increases in commute times for relocating residents are revealed and these commutes are car-dependent.

Kent, J., Mulley, C., Stevens, N. 2019. Transport and wellbieng in a newly constructed greenfield estate: A quantitative exploration of the commuting experience, *Journal of Transport & Health*, 13: 210-223.

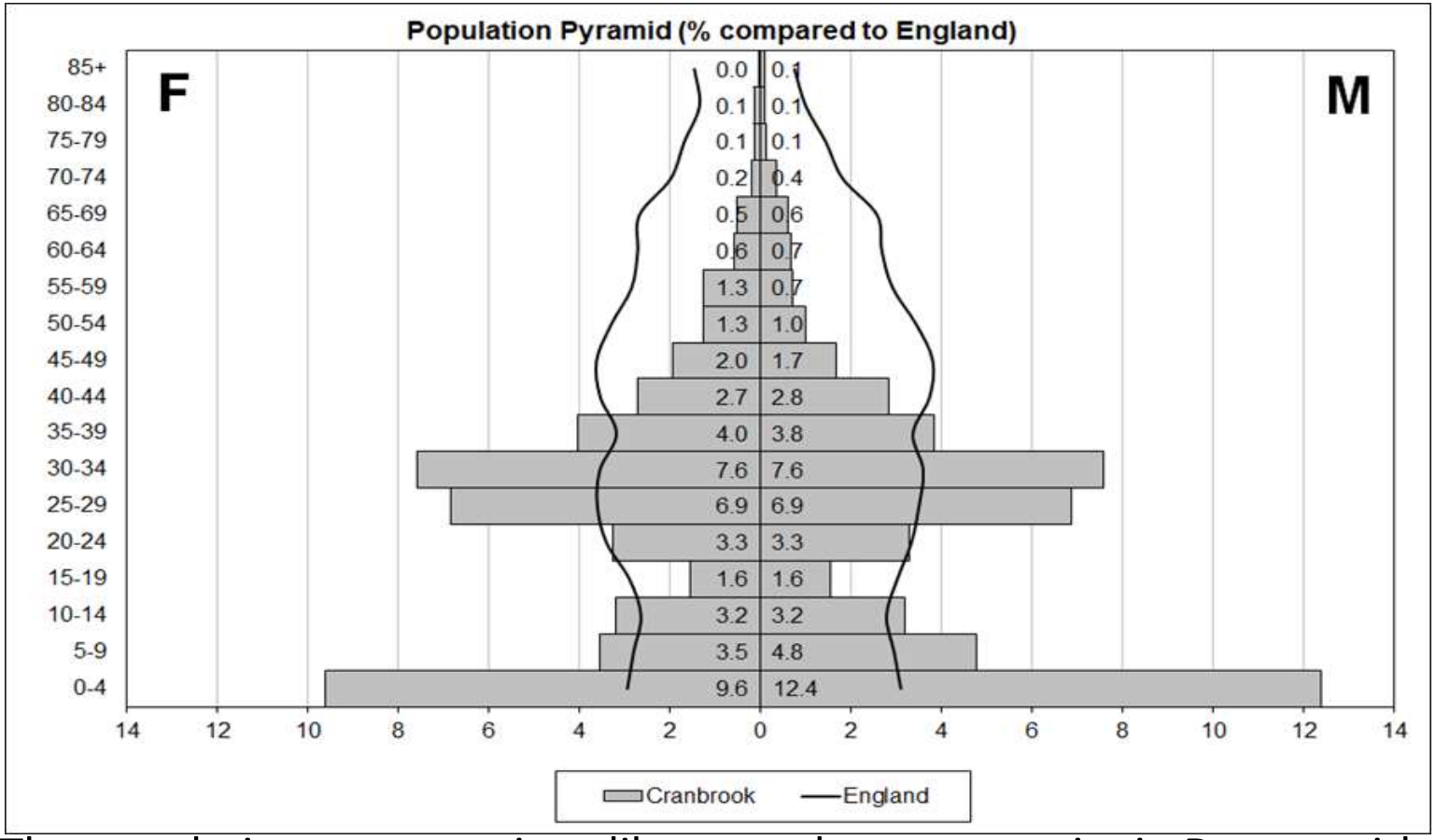
Population health aspiration



In building a new town, there is a unique opportunity to make sure that the built environment *enables* rather than *hinders* wellbeing and that the infrastructure provides the foundation for future health and prosperity. Modern, vibrant designs and services should be adopted, creating an appealing built environment in which residents feel ownership and pride.

- Street layout, connectivity and active travel
- Facilitating balanced communities
- Neighbourhood and community spaces
- Co-location of facilities
- Active buildings and infrastructure
- Food production and access
- Open and green space
- Affordable, flexible and energy efficient housing across the social gradient
- Access to education, training and employment
- Air quality and noise.

Cranbrook's population pyramid



- The population structure is unlike any other community in Devon, with an unusually high proportionof adults aged 25 to 34 and a very high proportion of children aged 0 to 4.

Cranbrook Healthy New Town

THEME: Urban Design: Transport & Movement

- The policy should provide a clear vision for sustainable transport across the new town… risks …of being very largely car dominant with the damage to physical and mental health, as well as contributing to poor air quality, greater congestion and traffic injuries across the local highway network.
- **With a green field site designing for sustainable transport can happen first and the road system is adapted to the needs of the most vulnerable users first. That way it will work for all road users – and be socially inclusive.**

Green space

play

Compact urban form

Legibility

Walking Standard

Walkability

800 metres

Pedestrian infrastructure

Car parking

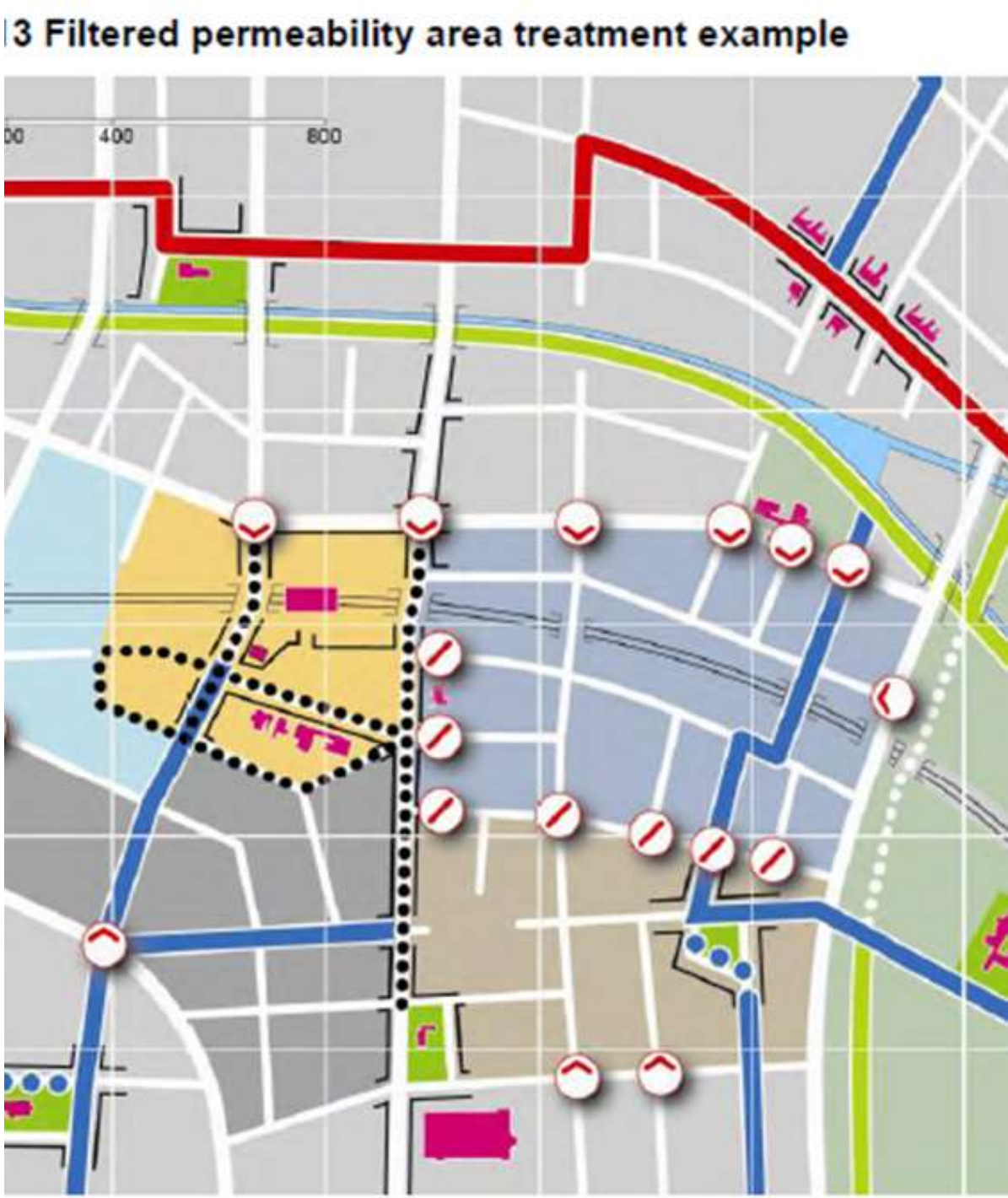
Pavements

20mph speed limit by design

Beyond a movement network

Filtered permeability

Cycling infrastructure



Good practice guidance

Walking guidance good practice

Inclusive walking infrastructure standards

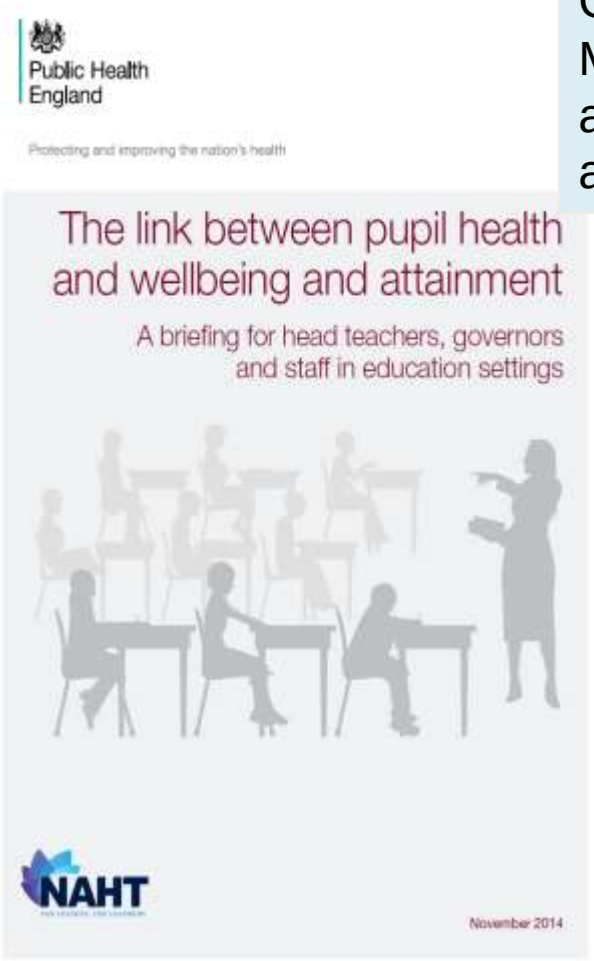
No.	Service level type	Key specification	Value points
1	**Minimum pavement widths (Unobstructed)**	**Basic standard:** 2 lane > 250 cm* (25+100+100+25) **High standard:** 3 lane > 330 cm (25+100+100+100+25)	→ Supports older adults, people with disabilities, parents/ caregivers and children. → Allows for sociable walking. → Allows tolerance for common hazards such as bins, street assets & vegetation.
2	**Raised secondary crossings**	Continuous level surface Continuous walking paving type Supportive road markings	→ Prioritises people walking at secondary junctions. → 2 step yield for vehicular traffic, and slows traffic. → Supports older adults, disabled users, parents/caregivers and children.
3	**Narrowed vehicular roads**	e.g. 3.7m (e.g. single lane entrances to 2 lane streets) retains emergency service access widths	→ Prioritises people walking particularly at junctions → Adds widths (see item 1). → supports 20 mph for motorised traffic
4	**Smaller turning radii**	Reduce road turning radii, can be supported by single lane entrances 1.6m footway radius (turning circle of a	→ Slows traffic turning → Restores travel desire lines for people walking → Based on turning radius for mobility scooter

Utilising co-benefits

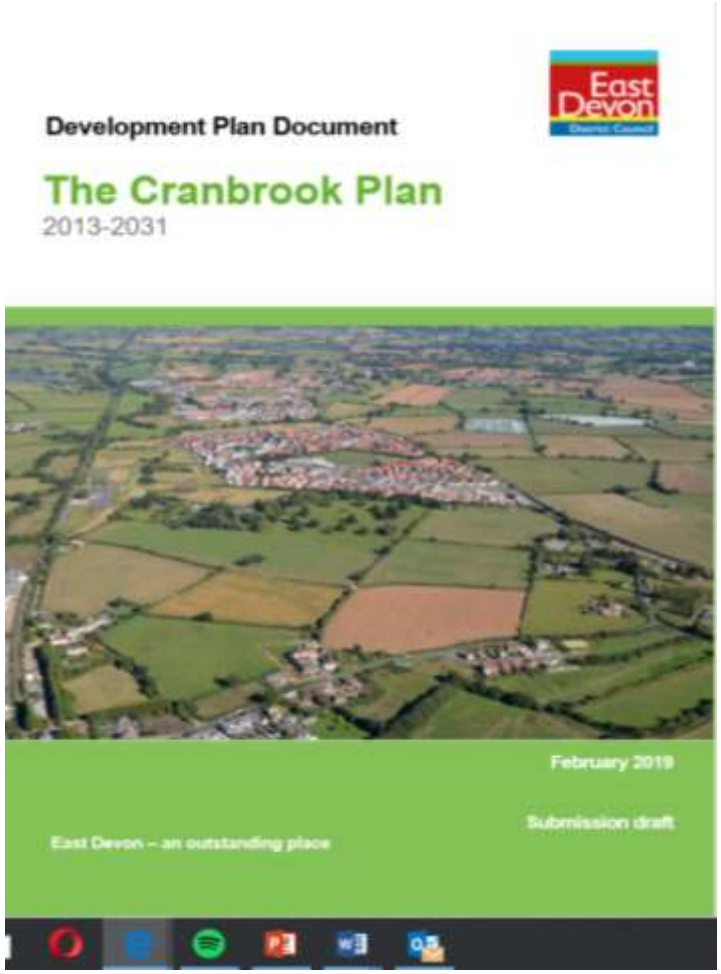
- Co- benefits: “ Substantial evidence indicated that designing and creating parks, communities, transportation systems, schools and buildings that make physical activity attractive and convenient is also likely to produce a wide range of additional benefits”.

- Salliis, 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.

Children, MVPA and academic attainment



The outcome: Wait and see…



Strategic Policies

CB1. Health and Wellbeing at Cranbrook

CB1 Health and Wellbeing at Cranbrook

To maintain and improve the good health and wellbeing of individuals and the community as a whole at Cranbrook, development proposals must:

1. Develop an attractive and legible built and natural environment that links into its surroundings, including the wider West End of East Devon and Exeter Airport;
2. Ensure that the community has, and is able to have, the infrastructure to support their needs and aspirations both now and into the future;
3. Ensure that all designs, proposals and decisions are coordinated to address the wider determinants of ill-health;
4. Ensure that locations of services and land-uses in Cranbrook integrate well with the community and are within easy reach on foot and bicycle wherever possible;
5. Create well designed streets and spaces using the Healthy Streets Approach to encourage walking, cycling and social activity;
6. Ensure that civic and community buildings are accessible to all and provide facilities to meet the needs of individuals and the community;
7. Ensure that housing is designed around spaces that encourage social activity; and
8. Ensure that housing typologies and resulting densities are appropriate to their locations to support vibrant economic activity and public services.

The Council will require all developers and applicants to demonstrate how proposals meet the objectives of this policy in order to embed positive health and wellbeing outcomes in the planning process.

3.1 The creation of a town which has positive health and wellbeing outcomes for all its residents is the overarching and fundamental principle underpinning policy making and decision taking in respect of the expansion of Cranbrook. Good health and wellbeing outcomes will be achieved through a holistic approach to development and delivery and will involve a coordinated multi-agency methodology. With mental ill health now recognised as a significant issue affecting many people in a variety of ways, and in particular suicide rates

- **Thank you**

a.davis@napier.ac.uk

- www.travelwest.info/evidence
- https://blogs.napier.ac.uk/tri/essential-evidence-scotland/
- www.elsevier.com/locate/jth