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Promoting Walking through Placemaking

The role of behaviour change in designing for everyday walking

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Our vision is to improve the world around us and in turn improve people's lives. Designing environments which promote physical activity and active living are valuable for public health.¹ Encouraging more people to integrate walking in their everyday routine provides an opportunity to increase individuals' quality of life and health.

Understanding behaviours

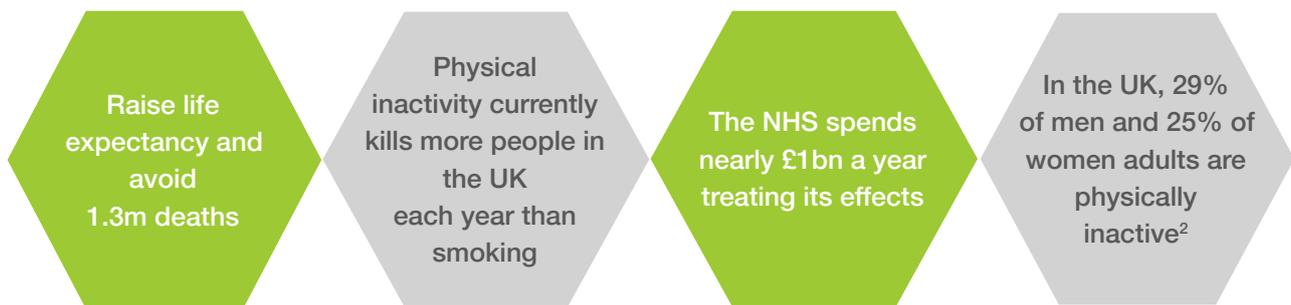
Ryder is committed to designing and creating more active and healthier future communities. Delivering this vision requires a cultural shift, changes in people's behaviour and changes in the physical infrastructure which would support this. Therefore, an understanding of behaviour change theory should feed into the work we do as designers. This is a cross discipline issue and something we must work collaboratively on to achieve with partners, including transport, landscape, planning and health colleagues.

In collaboration with Nafsika Michail, a PhD candidate at Northumbria University, we are exploring the links between the urban environment, walkability and behaviour change.



The importance of active design

Increasing physical activity through the creation of walkable environments can assist in healthier communities of the future:



Many of the places we live and work do not facilitate the physical activity we need to stay healthy. Historic failures in planning and design have created places where pedestrians are marginalised so that driving often seems a more attractive option than walking, even for a short distance. This can be due to:

- Disconnected and circuitous street patterns
- Routes which feel unsafe
- Over engineered roads rather than streets for people
- Mono use developments
- A lack of sustainable transport infrastructure

With nearly 70 percent of the world's population set to live in urban areas by 2030, public health and quality of life will be dictated by the extent to which the environments we create incorporate elements of active design.

In England, the National Planning Policy Framework³ sets, as a priority, the promotion of healthy communities and urban environments that facilitate an active way of living.

Everyday walking

Public Health England⁴ has set a goal to reduce the number of people that are active less than 30 minutes per week, and to motivate adults to have at least 150 minutes of moderate intensity physical activity, including walking, per week.

Walking is the simplest, easiest and most sustainable way to exercise, because there is no need for special skills or equipment, so people are therefore more likely to start and maintain it.

Everyday walking to work can play a very important part in this, as it is practical and may not be traditionally viewed as exercise.⁴ The benefits of everyday walking are significant and include:

- Improved mental wellbeing
- Greater social connectedness
- Environmental benefits including reduced air pollution

It is therefore important that walking is integrated into the environment where people live, in order to make physical activity easy and accessible.^{3,5}

By designing more walkable places that improve access to green infrastructure, we enable different groups of people, including people of all physical abilities, to use neighbourhood facilities and increase their activity levels.



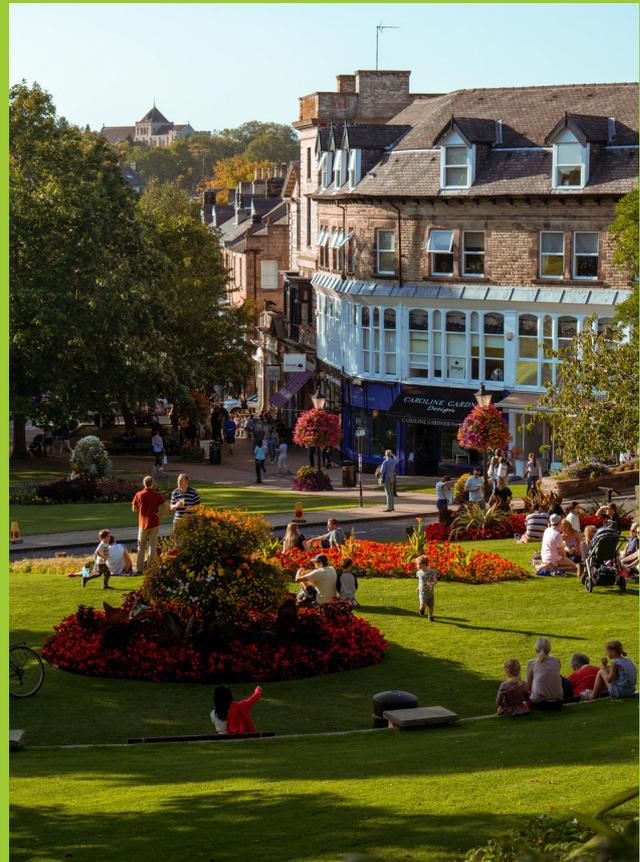
The impact of placemaking on walking

We can use urban design to affect everyday choices, create habits and influence behaviours. It can be used to integrate physical activity and promote walkability. According to existing research, there are numerous factors which influence how likely people are to walk, including the land use mix, connectivity, population density, and overall neighbourhood design and aesthetic qualities.⁶ For example, urban density and shorter distances to everyday destinations affects the preference of walking as a commuting mode.^{7,8}

Lessons from the urban design of cities across Europe shows us that safety and security influence how much we choose to walk everyday. Issues such as safety and maintenance of green infrastructure and pathways, structures that block views of pathways and physical barriers between neighbourhoods make orientation difficult and discourage walking.⁹

Studies show that streets with trees and lower levels of car traffic, pavements and shops were found to motivate everyday walking,¹⁰ whilst hilly topography is associated positively with recreational walking and negatively with active travel.⁸

Green spaces are also likely to support walking if they connect residential areas with workplaces and commercial areas,⁹ making walking a viable and enriching choice of commuting.

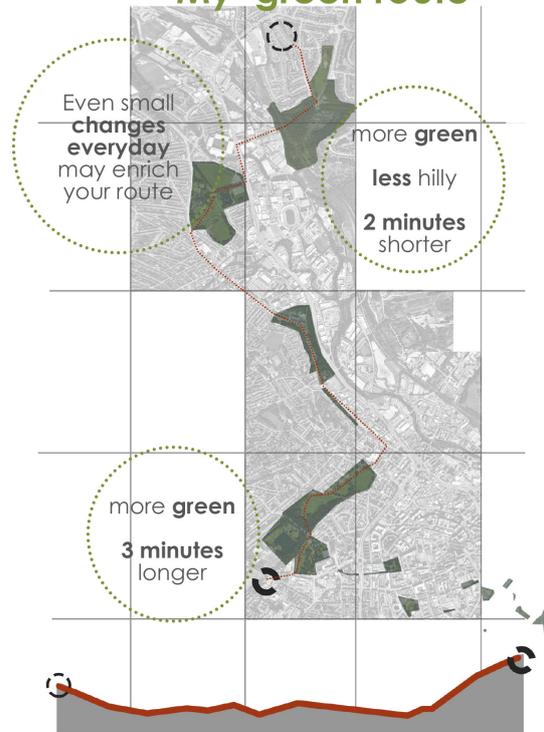


Alongside these urban design principles, individual and cultural perceptions may have a strong impact on the choice of walking.^{9,11}

Traffic, street safety and green open spaces may be indicators for a pleasant route. However without the inner motivation for everyday walking, various factors such as weather, time and fatigue, could distract individuals from everyday walking.¹²

As part of Nafsika's research, following a one week walking challenge, participants were invited to guide the researcher on their everyday route and indicate all the aspects that they enjoy or dislike about the journey. Based on this process and individual experiences the researcher was able to propose new or alternative routes, increasing the chances for the previous non walkers to retain everyday walking as a routine and enjoy the new habit.

Step 3 My green route



The research suggests that individual preference may create a different perspective of the built environment which in turn influences their choice of travel mode. Individuals select their commuting mode according to their experiences, feelings and convenience, and different sub groups of the population perceive different barriers.¹³

According to studies, large distances and lack of time due to personal or professional commitments, weather conditions, injuries, fatigue and psychosocial issues are practical barriers for everyday walking.^{13,14}

On the other hand, a strong motivation for adopting walking as a commuting mode may overcome bad weather conditions, large distances and uphill routes.¹²

So how can we incorporate design walkability into new places and upgrade existing ones? The key to this is understanding people's behaviour in the urban environment and how this influences their choice to walk.

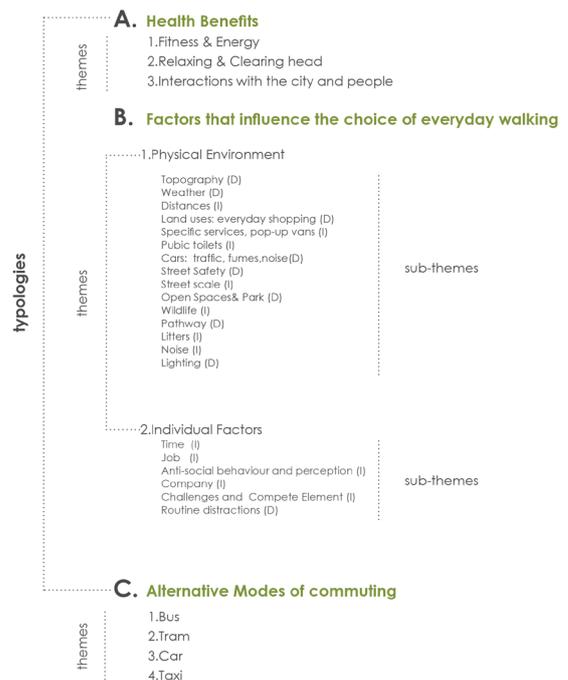
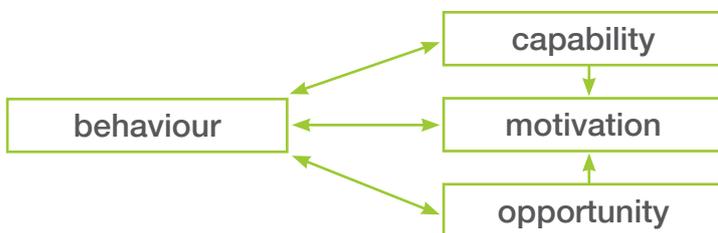


figure 16: Findings

Behaviour change

According to the COM-B model of behaviour change,¹⁵ adopting a new habit requires:

- Capability to change
- Opportunity to experience or start the new habit
- Motivation to maintain the new habit¹⁶



Therefore, the chance to experience walking is crucial for behavioural change.

Some people may not be aware of or cannot predict the health benefits before having the opportunity to experience them.

The most vital part of the behaviour change process is the maintenance stage, which requires a strong motivation. According to the Self Determination Theory, for long term results on behaviour changes, autonomous motivations are more effective than controlled motivations, which could be helpful to start an activity but not to maintain it.

Based on this, and aiming to integrate walking into people's everyday lives, researchers recommend educating people on the benefits of walking through first hand experience, through pilots and trials.

Walking must be viewed as a pleasant and satisfactory activity which people want to engage with, rather than an activity that they are obliged to do.¹⁷

The environment must enable individuals to determine the way they want to walk and create a positive experience in order to sustain the habit. Urban landscapes and how individuals experience walking in the urban context creates memories and feelings that shape everyday habits and, by extent, people's health.



This process will take time¹⁸ but could contribute to a cultural shift towards more active communities. For example, in the Netherlands and Denmark, the number of active travellers is largely due to the walking and cycling infrastructure and culture. However, making active travel the most popular way of commuting is a long term aim of transportation policies, placemaking and cultural adaptation.



Motivational guides

There is a need for fresh, innovative and creative public health promotion techniques in the area of behavioural sustainability.¹⁸ During a one week walking challenge,¹² motivational guides were designed for individuals, taking into consideration personal preferences and including other behaviour techniques, like exploring inner motivations for everyday walking.

Placemaking practitioners should share knowledge and experience which can feed into motivational guides to encourage active travel decisions. Based on these, routes can be designed in the urban context which serve individual needs.¹⁹

A pleasant and interesting route contributes to a better experience, increasing the possibility of people adopting walking as their everyday commute.

Recommendations for placemakers

1 Walking as an everyday activity built into people's routines should be encouraged. It enables people to meet their recommended weekly minutes of physical activity and benefit from improved physical and mental health.

2 People typically choose the shortest route, unless another is more attractive, but efficiency, particularly for commuting, remains a priority. Our street networks should therefore be designed to be well connected and permeable, to enable more direct connections.

3 Reducing car use helps to make walking more attractive by reducing the speed and volume of traffic, exposure to air pollution and noise, all elements that discourage people from walking.

Examples of this in practice include 'road diets' where the number of lanes are reduced to give space to pedestrians and cyclists, and car free new neighbourhoods where cars are restricted to the perimeter.

4 Public buildings, shops, pop up vans and artwork can enrich the experience of walking, providing interest while reducing the perception of distance, a sense of safety through natural surveillance, and an opportunity to incorporate public toilets and places to rest or shelter. Developments should contain mixed uses, active frontage and high quality public realm with facilities for everyone. Reusing redundant buildings and spaces, even with temporary uses, can improve the attractiveness and safety of a walking route.



5 Incorporating pathways through natural green spaces can encourage walking and have further health benefits. Routes through green infrastructure such as pocket parks, parklets and green walls also help to increase walkability.

6 Creating safer and more attractive routes for pedestrians often involves low cost solutions that can be easily piloted. Trialling improved crossings, creating small pockets of public space, reclaiming space from vehicles and repurposing these spaces as green infrastructure or active travel routes. Decluttering streets of unnecessary signage and guardrails, and incorporating more street furniture for resting and socialising can make these routes more attractive.

7 Public transportation may be a more comfortable choice of commuting in certain situations and when combined with walking can discourage car use. Creating opportunities for multi modal transport connections should encourage people to make walking part of their journey. These connections are helpful at maintaining walkability at times of inclement weather and encourage positive behaviour change in the uptake of walking in the population.

8 Temporary road closures, such as the growing trend for Open Streets or the UK's 'Playing Out' initiative, can help to change both motorists and pedestrians' perceptions of who and what streets are for.



Tailored solutions and collaboration

There is a need to explore new methods to motivate more people to walk that will have significant impact on public health. The built environment interacts with individual preferences and circumstances, culture, and policy to influence everyday walking. The study of Health Benefits and Motivations Of Everyday Walking To Work demonstrated that people's motivations for walking and their preferences for walking routes are not necessarily the same but are interlinked. Through this study and the process of engagement and ongoing feedback we have highlighted simple interventions that can encourage walking and have the greatest impact and benefit to public health. The findings of the study indicate the pivotal role of urban design in encouraging the adoption of active travel and walking in urban areas.

The study shows that through incorporating simple solutions into the design of our urban environments we can begin to facilitate behavioural change. However further research is needed to understand the impact of wider planning decisions around schools, workplaces and commercial districts as well as the impact of identity, cultural expectations and habitual patterns. Creating environments that normalise and promote everyday walking from a young age is vital. This requires more collaborative thinking between national and regional policy, strategic planning and placemaking initiatives. Co creation is key, community support in changes to the public realm and a sense of ownership is vital to long term adoption and success.

The creation of an Active Travel Fund as part of public health funding nationally would enable the co creation of bespoke place based active travel plans. Technology also has a huge role to play in the adoption of active travel, gamification and performance tracking are popular methods of increasing engagement in health related activities and their potential to encourage walking in our cities should not be overlooked.

Through this study, the process of engagement and ongoing feedback we have highlighted simple interventions that can encourage walking, and have the greatest impact and benefit to public health.

Collaboration and co creation between placemakers, policy makers, researchers, local authorities and the public is key to implementing lasting behavioural change and encouraging active travel and walkability in our communities. This will help us to shape our future urban landscapes and create a healthier future for everyone.

We would love to hear from you if you are interested in collaborating.



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14 Nies, M.A. and Motyka, C.L. (2006) Factors Contributing to Women's Ability to Maintain a Walking Program. *Journal of Holistic Nursing*, 24(1), 7–14.

15 Mitchie, S., Marieke van Stralen, M., West, R. (2011) COM-B model [digital image]. Retrieved 18 July 2018 from https://www.researchgate.net/figure/The-COM-B-system-a-framework-for-understanding-behaviour_fig1_51070630

16 Sport England. (2017) Applying behaviour change theories. Retrieved 5 July 2018 from <https://www.sportengland.org/media/11546/applying-behaviour-change-theories-real-world-examples-from-ghga.pdf>

17 Thøgersen-Ntoumani, C., Wright, A., Quested, E., Burton, E., Hill, K. D., Cerin, E., Biddle, S. J. H., and Ntoumanis, N. (2017) Protocol for the Residents in Action Pilot Cluster Randomised Controlled Trial (RiAT): Evaluating a Behaviour Change Intervention to Promote Walking, Reduce Sitting and Improve Mental Health in Physically Inactive Older Adults in Retirement Villages. *BMJ Open*, 7(6).

18 Segar, M. L. and Richardson, C.R. (2014) Prescribing Pleasure and Meaning: Cultivating Walking Motivation and Maintenance. *American Journal of Preventive Medicine*, 47(6), 838–841.

19 Ogilvie, D., Foster, C. E., Rothnie, H., Cavill, N., Hamilton, V., Fitzsimons, C. F., and Mutrie, N. (2007) Interventions to Promote Walking: Systematic Review. *BMJ: British Medical Journal*, 334(7605), 1204–1207.

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