

Healthy and Active Street: Evidence Statement  
Draft 04/01/2018

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## 1. Healthy and active streets: an evidence statement

Streets are a community asset that can improve the health and happiness of people in the West Midlands. They can be designed to by protecting people from harms associated with travel, or to promote health and wellbeing by increasing social contact between neighbours or the amount of activity that people get.

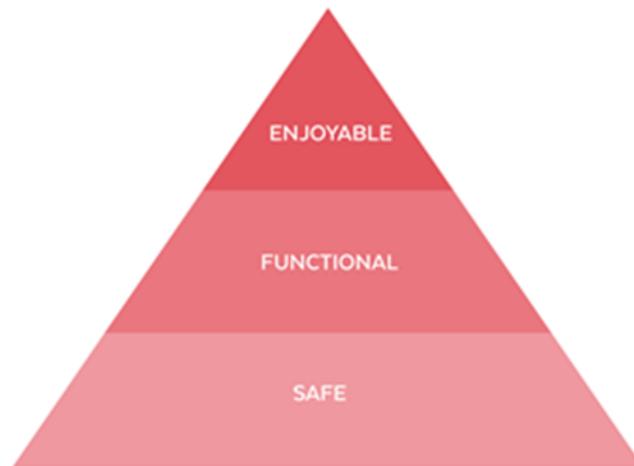
Good quality street environments in the right place can help to solve the problems of congestion and delays on the road network. Around 2 out of every 5 journeys under 2 miles in the West Midlands are made by car. Walking and cycling can be encouraged over these distances, yet proportion of trips that are walked is declining. In more walkable cities, journeys happen by foot in the morning and afternoon rush hours, and during the day at weekends.<sup>1</sup>

This is where streets can play a role. Even when only considering a small number of easily measured characteristics of streets and the urban environment, places that encourage walking increased everyone's amount of physical activity by 20 minutes each week. For many, this will be enough to prevent inactivity and the harms from it.<sup>2</sup>

There are no cost barriers to walking around a friendly urban space, and for this reason more walkable streets can reduce the inequalities seen in physical activity. Increasing the number of steps in the most inactive can be four times more effective at reducing obesity rates than if those steps were split between everyone. Cities with a more walkable environment have lower inequalities in the amount of activity.<sup>1</sup>

A more walkable environment has an influence on people's behaviour, and the amount of walking that they do. One study tracked the behaviour of people who moved between areas with a high and low walkability. People who moved to areas with a higher walkability increased the amount of walking they did for travel. Similarly, the longer that someone lived in a more walkable environment, the more walking they did. This influence was true amongst people who were previously inactive.<sup>3</sup>

There is strong evidence that walking and cycling improves health. There is now a large and continually growing evidence base that sets out how the built environments and streets encourage more walking and cycling for travel.<sup>4</sup> However the evidence has not been brought together and the links between different areas of health have not been made. This evidence statement addresses that gap.



Walking and cycling is a pleasure	The street carries people efficiently and wayfinding is clear	The air is safe to breath and the noise does not interrupt daily life
The design of the street promotes wellbeing	People of all abilities are able to use and cross the street	Traffic speeds are set to not cause fatal injuries in a collision
People living there know each other and there is opportunity to socialise	The street is well connected to places people want to go	The street is designed to protect the most vulnerable from harm

## The characteristics of a healthy and active street

### Walking and cycling is a pleasure

Streets that make people feel happy are more likely to be used. This is not easy to measure, but is important to acknowledge to make sure that streets are designed to improve people's wellbeing.

The science is developing to capture this emerging agenda. Questions about aesthetics, or the number of interesting things to look at, are often used to measure this relationship. The amount of walking for leisure rather than travelling also reveals streets that a preference to use some environments.

The attractiveness of buildings and connection with natural sights have been identified as aesthetic reasons why people might choose to walk for leisure. This is related to the total amount of physical activity that people do.<sup>5,6,7</sup> The strength of the relationship is not always the same in each country, but it is also be one of the largest influences of whether people walk for leisure or not.<sup>8</sup>

Places that visually stimulate people are most likely to be aesthetically pleasing. It has been argued that the most visually attractive places offer new details every 4 or 5 seconds.<sup>9</sup>

Changing arrangements of the traffic and lay out of the street also offers a way to increase the prominence of existing features.<sup>10</sup>

The importance of engaging people and learning about the place can identify important features to draw out.<sup>11</sup>

Although the aesthetics of the environment increase both walking and cycling, people often rate the aesthetics of cities poorly, showing there is often potential to improve this characteristic of streets.<sup>12</sup> This is important to address as the look and feel of the street can often explain why people don't walk in what might otherwise seem to be a well-connected urban environment.<sup>13</sup>

### The design of the street promotes wellbeing

Streets can promote mental wellbeing. The importance of parks and other greenery in promoting wellbeing and healthy living have wide impacts, going as far as helping to explain why people who walk in green spaces have longer life expectancies than people from similar backgrounds who walk the same amount in less green spaces.<sup>14</sup>

Green space improves wellbeing and has a positive impact on people's self-reported mood and feeling, and can help to reduce fatigue.<sup>15</sup> Greater visual connections can be made between the streets around the park and the green space itself and this promotes easy access. Well-designed green spaces encourage greater use.<sup>9</sup>

Elsewhere, there are opportunities to introduce natural elements such as plants and running water into streetscapes. Green walls are one way to incorporate natural landscape elements into the environment.<sup>11</sup>

There is generally positive although mixed evidence about whether green space directly reduces clinical diagnoses of mental health issues<sup>16</sup>. The quality of research on this area has generally been low and there is an important developing research agenda on how street design influences wellbeing and resilience.

The provision of high quality parks and open spaces has been shown to increase walking and physical activity, especially in the elderly<sup>5,17,18</sup>

Other ways of improving wellbeing are to give people a greater feeling of control over the environment. Designs that encourage the use of the space, such as movable furniture or other interactive features and invite participation and make people feel more empowered.<sup>11</sup>

Engaging communities and understanding the needs of groups who use the street can draw out more opportunities to improve wellbeing.<sup>11</sup>

Streets can have a positive role on the mental wellbeing and development of children, and it is important to look beyond playgrounds when considering how to design public space for children. Children often have different needs for independent active play than is typically provided, and currently many urban spaces do not have the diverse range of flexible play spaces that children prefer.<sup>19</sup>

Children in neighbourhoods with less traffic have more positive feelings about their neighbourhoods and this in turn increases their connection with the local area and development. Children can draw more accurate maps of the areas where they enjoy playing.<sup>20</sup>

### People living there know each other and there is opportunity to socialise

Improving both health and social cohesion are often achieved by taking the same approaches to urban design. Busy roads reduce the social cohesion of neighbourhoods by weakening the number and strength of friendships on the street. The sense of community is an important aspect of feeling

safe and walking in urban environments<sup>21</sup> and lower levels of social cohesion can reduce the amount of walking.

As well as social contact having a positive impact on mental health, there is a positive knock on effect that people who can walk with someone else are more likely to do so for exercise.<sup>7</sup>

A walkable environment will have an impact on other important issues. Greater amounts of walking for transport improve the sense of community or community cohesion.<sup>21,22,23</sup>

Streets can be designed to encourage interactions. This can be done by providing spaces to meet around focal points and which are accessible to children, families and people of all abilities. High streets particularly benefit from this type of focal point and this approach can re-enforce them as the heart of neighbourhoods.<sup>24</sup>

Housing developments that have low traffic or are traffic free promote social contact. Public spaces that are shared or have direct access from housing have more community activity.<sup>9</sup>

### **The street carries people efficiently and wayfinding is clear**

Active streets can carry people efficiently. Manual for Streets recommends a hierarchy of user priorities, with the needs of more physically active modes such as walking or cycling considered first, followed by public transport and then private vehicles.

This approach can help to produce the walking-friendly infrastructure that does increase the amount of walking.<sup>5</sup> This is true overall as well as in specific groups, and pedestrian infrastructure increases the likelihood of children walking to school<sup>25</sup> and walking amongst the more elderly.<sup>17</sup>

Similarly where cycling and walking tracks are provided, including alternative routes, it can help people maintain the amount of walking that they do over time or increase the amount of walking in people who had otherwise stopped.<sup>26</sup>

### **People of all abilities feel safe and able to use and cross the street**

The feeling of safety can have a large influence on whether people walk or cycle. Environments that appear unsafe reduce the amount of walking.<sup>5,26</sup> This is especially true in some groups, and poor perceived safety is likely to reduce the amount of walking that women do during the day<sup>27</sup> and the elderly.<sup>17</sup>

People might feel unsafe for a range of reasons. The fear of crime has been linked with decreased walking<sup>26</sup> fear of traffic also discourages walking and cycling<sup>28</sup> with traffic speed and volume on roads influencing perceptions of safety. 17·18

Given some of these perceived barriers, supporting people to cross the road is a way to mitigate some of these issues. However, research consistently shows that times at pedestrian crossings do not give sufficient time for elderly individuals to cross.<sup>29,30,31</sup>

One way of reducing crossing time is to reduce crossing distances by using build outs that narrow the road at the crossing. Wider crossings also increase the feeling of comfort in busy spaces.<sup>10</sup>

People use many visual environmental clues that tell them about the safety of the environment, including litter, vandalism and decay<sup>17</sup> benches and other places to sit<sup>17</sup> and also the presence and

condition of pavements and lighting.<sup>32,33</sup> The same is true of likely destinations, and suitable and well maintained pavements close to places of work increase the amount of walking to work.<sup>34</sup>

There is some developing evidence that noise and air quality are also factors that influence perceptions of safety.<sup>35</sup>

### **The street is well connected to places people want to go**

Well-connected streets increase the amount of walking. Sometimes land use mix is used as a proxy of residential areas closer to places of work, and this does increase walking for leisure as well as travel.<sup>8,17,36</sup> Some studies found residential density as the important factor instead.<sup>2</sup>

Accessible shops and services has been repeatedly and strongly linked to increased amount of walking<sup>5,17,26,27,36,37</sup>. Making shops accessible by foot is an important part of increasing footfall to creating social high streets. Being able to get to shops can have a huge impact on the quality of life of elderly residents in particular.<sup>9</sup>

Parks or other green space are another important local asset that increases the amount of walking<sup>5,26,27,38</sup> showing the importance of local or communal green space as well as green design being integrated into the built environment. Children in particular can benefit from local green space as they do not travel as far from home.

Transport connections also increase the amount of walking, and either the total number of transport connections<sup>2</sup> or how close by they are<sup>34-36</sup> are important factors.

As well as destinations, streets need to be well connected themselves. Direct routes increase the amount of walking<sup>36</sup> Cul-de-sacs and dead ends decrease walking, especially for leisure, and areas with fewer cul-de-sacs have more walking.<sup>8</sup>

Connected walking routes that connect popular destinations are important. If they are provided in places where they are not needed then they are unlikely to be used well.<sup>9</sup> A reallocation of road space for more active forms of transport or closing roads off to some traffic can help to locate infrastructure in the right place.<sup>39</sup> A mix of social public spaces, local landmarks and interesting frontages can create more interesting walking routes.<sup>10</sup>

### **The air is safe to breath and the noise does not interrupt daily life**

Protecting people from the harmful impacts of environmental hazards such as noise and poor air quality are fundamental to the role of streets. People are often aware of the type of environments that have poor air quality and it is related to their experience of streets.<sup>40</sup>

On a street level, this can also include designs to reduce exposure to individuals, especially including buildings such as nurseries, schools and care homes that more vulnerable individuals are likely to access. Street layouts can also avoid the build-up of pollution in areas where people are expected to use and landscape trees and other vegetation can also be methods of reducing exposure to air pollution where they don't restrict ventilation.<sup>41</sup> In some areas, vegetation has been used to reduce noise. NYC

Environments with high buildings might cause air pollution to build up on streets that people use and these should be avoided. NICE DISABILOITY

## Traffic speeds do not cause fatal injuries in a collision

Approaches to safety such as Vision Zero in Sweden and Sustainable Safety in the Netherlands are endorsed by WHO and stress the importance of a forgiving environment. These make it unlikely that a crash results in a death. The WHO set out the following key principles that inform a Safe System approach and speed limit setting:

- people do make errors when using the roads, and that can result in a death. These errors can be reduced through behaviour change but are not entirely preventable
- people are vulnerable to injury in a crash. The greater the speed of a collision, the more likely the injury is to be fatal.
- the responsibility for safety is shared between the road designers as well as the road users
- it is unacceptable that common errors lead to deaths and these are not inevitable in a crash
- streets play a wider role in society beyond ensuring safety, including economic development and improving health <sup>42,43</sup>

Town or city wide 20mph speed limits are a recommended way to reduce vehicle speeds, and can be particularly effective when used alongside measures such as raised junctions. Engineering measures to provide safe routes can be considered where children are likely users. <sup>44</sup>

## The street is designed to protect the most vulnerable from harm

There are a wide range of potential harms that arise from transport and travel that have been highlighted throughout this strategy. The needs of the most vulnerable users and children need to be considered during street design.

Seats with arms and backrests can be important to encourage many groups to walk and can be used to add to the social life and informal surveillance of spaces. <sup>9</sup>

Maintained pavements to replace or prevent broken paving slabs can remove trip hazards and improve the feel of the environment. <sup>10,45</sup> Keeping pavements free from obstruction allows easier use for people with disabilities or parents with pushchairs. Dropped kerbs to street level or other ways to prevent steps between roads and pavements can be essential for many disabled users. <sup>45</sup>

## 2. References

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