I love outdoor space, and as cities get denser with growing urban population, streets and public spaces provide room to relax, socialise, and occasionally riot. We, as urban designers, are guardians of this space. A bit of nip and tuck, a sprinkle of street trees and we have a new pavement culture. A slight widening of a street, better sight lines, and tanks can suppress disorder.

Now, imagine that I wrote this article sitting outside a small café in our idyllic street, watching the world go by. The dappled morning sunlight shines through the trees. At my table, there’s the newspaper, a half finished coffee, a croissant and with it a large knob of butter and a small pot of strawberry jam. I am vaping – today it’s aromatic possum flavour – and will until, like smoking, it is banned from public spaces. By my side is a poo bag for my pet Chihuahua, Satan, who sits at my feet on the chewing gum strewn pavement; not everything is perfect: if you thought tobacco companies were an easy push over to accept a ban on smoking, try taking on the gum manufacturers. Forget Space Syntax, just follow the chewing gum to identify desire lines and meeting places.

However, I’m not sitting outside a café, and not because it is mid-winter or there’s a riot going on, but I value my health and according to the media, the world that goes by the café table is shortening my life expectancy by a considerable amount. Britain is on the naughty step on account of its poor air quality.

Urban air pollution is not new: the Great Manure Crisis of 1894 threatened cholera, typhoid and other calamitous ailments. The crisis was such that urban civilisation was considered doomed. The saviour of the city was, of course, motorised transport. Initially electric powered, but soon outflanked by cheaper petrol-driven vehicles and then diesel, which leads us on to today’s issue.

Now we all like to do our bit, and there are many interventions that urban designers are aware of such as: the Barcelona super block, which excludes the majority of car, scooter, lorry and bus traffic from nine blocks to create a liveable oasis (no doubt shifting the problem to the unfortunate within adjacent city blocks); Clean Air Zones which discourage the most polluting vehicles from our cities, to be implemented by 2020 in London, Nottingham, Derby and Southampton; the outright banning of cars, by age and licence plate (Paris); and, most recently, being very careful about where you put trees to avoid restricting air flow (a contributing research paper to the draft NICE air quality report). And don’t forget practical measures such as personal air quality monitors (a growing market), air scrubbers for inside buildings, the increasingly fashionable face mask (with no effect on NOx), and building new garden cities in the countryside.

However, it is highly likely that we will soon look back at this crisis - perhaps as we watch life go by from our café - and marvel at the swift uptake of the autonomous, electric car within our urban areas which solved the air pollution issue at a stroke. And hopefully, we won’t have had to try too hard at redesigning our perfectly functional urban spaces to cope with a problem that others are probably best placed to address. A good rule in life is to try to solve a problem at its source, and not pretend to solve it by doing something peripheral (such as cutting down trees). The problem is with the vehicles, and the solution lies with the vehicles.

Colin Pullan, Chair of Urban Design Group and Director of NLP Planning
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Bradford City Park, image by Design Council

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Health: It’s not Rocket Science

This issue of Urban Design looks at the issues of health and the effects of good and bad urban design on how people live. The articles show with great clarity the relationship between the built and natural environments and human physical and mental health. Many of these issues are already intuitively known to us, but it is interesting to reflect on how lifestyles gradually shift away from earlier or younger patterns of healthy living and working, to less healthy lives and outcomes.

Guest topic editor Rachel Toms describes her own journey of understanding how health and urban design fit together, and the actions she takes from that. Interestingly urban design itself has probably become far less healthy as a practice, from regularly standing or perching at a drawing board to consider what has been drawn by hand, to a far more physically limited position in front of a computer. Similarly, face-to-face meetings or gatherings were once the only way of having a good relationship with friends, colleagues and new contacts, where now so much of this can be done from the same physically limited position in front of a computer or with a smart phone.

Will the change in people’s journeys to work or the demands of household chores since, say the 1950s, ever be matched by more active urban design?

Walking to school for many young people remains a key part of growing up, whether taking short cuts through other people’s gardens, chatting or finding lost objects along the way. The ideal of playing out in the street remains the urban designer’s aim of course. But the public realm’s reality in many spaces and streets – whether the area is deprived or not – is dominated by either speeding or nose-to-tail crawling traffic with one driver per car, HGVs thundering between construction sites with heavy loads delivered precariously across footways and cycle lanes, Lycra-clad dare-devil cyclists swerving around new waterlogged potholes and small children, and friendly conversations drowned out by the general din. The neighbourliness, greenness and urban grain of the route to school matters enormously. It offers a chance to learn, ask questions and watch adults’ behaviour in the public realm: yet there are so many ways in which we are not setting a good example to learn from.

As the different articles in this issue describe, it is the role of urban designers to design, help to manage and ultimately live what they preach, and this issue should provide another incentive to achieve these aims.

Louise Thomas, independent urban designer

HOW TO JOIN
To join the Urban Design Group, visit www.udg.org.uk and see the benefits of taking out an annual membership.

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- Small practice (<5 professional staff) £250
- Large practice (>5 professional staff) £450
- Education £250
- Local Authority £100
- UK Library £50
- International Library £100
Film Night:  
*Urbanized (2011)*,  
Director Gary Huswit  
The Gallery, London, 11 January 2017

India has a population of 1.2 billion, only 30 per cent of whom live in urban areas. With one of the fastest growing economies in the world, the major cities are sprawling and many people live in slums with inadequate water and electricity. This half day symposium will discuss principles for ‘smarter urbanisation’ through a series of workshops on avoiding urban sprawl, pollution, and unaffordable housing. It will feed into a project that The URBED Trust is undertaking in the far South of Tamil Nadu with the SCAD Group (Social Change and Development) www.scad.ac.in  

Sunand Prasad, founder of Penoyre & Prasad, and Past President of the RIBA will chair the event. Contributions from URBED members Nidhi Bhargava and Jas Bhalla will set the scene. Brief presentations from Sowmya Parthasarathy (Arups) on what smart cities need to offer, Rajat Gupta, (Oxford Brookes University) on research into social housing, and Nicholas Falk on his recent visit to Southern India, will pose questions for discussion.  

Workshops will consider four inter-related sets of issues:

1. **Transport**  
a. Making public transit more attractive  
b. Improving walking and cycling  
c. Managing the growth of car ownership  

2. **Housing**  
a. Stopping urban sprawl  
b. Planning sustainable urban extensions  
c. Designing and building eco-houses  

3. **Public health**  
a. Dealing with rubbish and building conservation  
b. Upgrading water supply and the green infrastructure  
c. Improving nutrition and well-being  

4. **Community engagement**  
a. Managing and extending public spaces  
b. Conserving neighbourhood heritage  
c. Supporting community and voluntary enterprise  

In the evening, at a session hosted by The URBED Trust, conclusions will be fed back to those interested in India and the growth of emerging economies. It will discuss how Indian and British organisations could work together. Places are free and bookable via Eventbrite. If you would like to lead a discussion, please contact nicholas@urbed.com. For more information see www.smarterurbanisation.org. The two part event will be 2.30-5.30pm and 6-7.30pm at Marshalls Design Space, Unit 4, 1st Floor, Compton Courtyard, 40 Compton Street, London EC1V 0BD (nearest tube stations Farringdon and Barbican).
Urban Design Library


Jan Gehl is an 80 year old Danish architect and urban designer. *Livet Mellom Huse* (The life between the houses) was published in Danish in 1971 but, remarkably, was not published in an English translation until 1987. So my generation of urban designers missed out on an important source of influence during its education.

I would classify Gehl as belonging to a school of urban design which we might call behavioural: one which derives its values, codes and methods from a study of how human beings live and behave. In that same ideological school we can place books by Christopher Alexander, Jane Jacobs, Kevin Lynch, William Whyte, Gordon Cullen, and the Responsive Environments gang. It is sometimes called people-centred urban design, although that term invites the rhetorical riposte of asking what other kind could there be?

Actually there are other kinds, and if we wanted to define the behavioural attitude by its antithesis, we might for example identify the work of Ricardo Bofill, whose formal-istic architecture is illustrated by Gehl. He comments ‘Life between buildings is both more relevant and more interesting to look at in the long run than are any combination of coloured concrete and staggered building forms’.

Gehl mirrors Jane Jacobs’ emphasis on the significance of ordinary quotidian activity, and also her critique of orthodox modernism: not because of what it looks like, but because of its failure to provide spaces that people can inhabit in sociable ways. It is ironic that orthodox modernism was often called functionalism, when in fact its failure was that it didn’t work. Gehl illustrates several modern developments where, as a result of the way space is shaped, people are unlikely to meet: and if they do, their surroundings are unlikely to make them want to engage socially.

Enabling people to meet in a sociable way is seen as the essential purpose of public urban space. Gehl begins with a classification of outdoor human activity that provides the rationale for the rest of the book, and which has become one of the benchmarks of urban design theory, like Lynch’s legibility. He defines ‘necessary activities, optional activities’, and ‘social or resultant activities’. Necessary activities are those over which we have no choice. We go to work, we take the children to school, we visit the GP, and the quality of the environment has little influence over these actions.

On the other hand, optional activities are much more dependent upon having a conducive environment. We will sit outside the corner shop drinking coffee, or sit in the park reading the newspaper, only if these are pleasant places to be in. So a well-designed area will generate more activity in its public spaces. Social activities can also be called resultant because they are the consequence of people being outdoors. They can be the result of necessary activities, but they are more likely to be the result of optional activities. At its most basic, social activity can be just watching other people: a passive act, but fundamental to urban life. Further up the scale, it can be exchanging news with a neighbour or the postman by the front gate, children playing in the street, or drinkers smoking and talking outside the pub.

Most of the remainder of the book is taken up with defining parameters for design which can encourage social activities to take place. Some models are found in unplanned or vernacular settlements, but Gehl cites many modern examples such as housing by Ralph Erskine, Siedlung Halen and Dutch woonerfs. One theme which recurs is the importance of the elaborated threshold between public and private space: the front yard, the porch, the veranda, the stoop.

Gehl employs elements of physiological and psychological science to support his thesis. He examines the mechanics of standing and walking, and the ways in which the human senses of sight, smell and hearing operate to shape our perceptions. For example, at between 70 and 100m one can recognise another person’s age and gender, but a shorter distance is necessary in order to recognise an individual. These factors should inform the design of spaces.

Generally, Gehl embodies a very open-minded and liberal attitude. The book occupies similar territory to *A Pattern Language*, but unlike Alexander, Gehl does not explicitly specify solutions; he analyses, and makes suggestions. Occasionally, and perhaps inevitably, he lapses into spatial determinism, as when he reproduces diagrams of dubious merit from Oscar Newman’s *Defensible Space*. But overall, the book is a statement of faith in human nature, and in our ability to shape an urban environment around it.

Joe Holyoak, architect and urban designer

READ ON

Jan Gehl and Birgitte Svarre, 2013, *How to Study Public Life*, Island Press
Christopher Alexander, 1978, *A Pattern Language*, OUP USA
Oscar Newman, 1972, *Defensible Space*, Macmillan

URBAN DESIGN — SPRING 2017 — ISSUE 142
My Favourite Plan: Emily Walsh

Palmanova, as depicted in 1598

WHY I LIKE IT...
Beautiful, rational but dull….. One of my favourite books is The City Shaped by Spiro Kostof, which explores urban patterns and contains many different and beautiful representations of urban form throughout history. One of the plans in this book that I’ve always been drawn to is Palmanova in Italy. The town was originally planned and built in 1593 as a military outpost, part of the Venetian Republic’s defences against the Ottoman Empire. The plan is orderly, intricate and shows a perfectly shaped town laid out as a nine pointed star, surrounded by a bastioned wall.

The town had three gates and the streets from these gates lead directly to the central town piazza which is hexagonal and was used as a parade ground. Mercenary troops were stationed around the edge of the town inside the wall, with Venetian troops, who were more trustworthy, closer to the centre where there was a military zone. Between this central zone and the bastioned wall was a civilian zone crosscut by streets radiating from and around the central piazza. Each part of the town had a clear and rational purpose.

Although this town was established primarily for military defence, those planning it were also trying to create a model town – a utopia. The design was intended to promote the development of a self-sustaining place with merchants, craftsman and farmers living in social harmony. The snag was that no one wanted to live there. To persuade people (who weren’t soldiers) to live in Palmanova the Venetian Government reputedly ended up taking the extraordinary step of pardoning prisoners and giving them properties there.

WHAT TO LEARN FROM IT...
Why though was this the first plan I thought of when asked to write this piece? Why is this rationally beautiful plan so seductive? Possibly because there is something extraordinarily attractive about the idea of order, patterns and structure that are easily understood. The idea that we can plan rationally, and through this deliver better places is still at the heart of a lot of our approaches to urban planning. However, it often feels like we over-rationalise, abstract and forget people; as a consequence we deliver too many places with ‘the great blight of dullness’ to quote Jane Jacobs. And Palmanova looks dull. Despite, or perhaps because of the pretty layout and order, I have no desire to go there although I’d be interested to hear from anyone who has.

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Associate Director at SYSTRA, the international engineering and consulting group specialising in rail (passenger and freight) and public transport, leading the Movement and Place team, and developing SYSTRA’s urban design-led transport consultancy. Chair of the West Midlands Urban Design Forum.

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Specialisms
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Virtual Reality: a Tool for Engagement
Amanda Gregor explains how urban designers can benefit from the technology

Until fairly recently I associated the term virtual reality (VR) with a gaming subculture that sought escapism in another futuristic world. I saw VR as an individualistic pursuit, and the antithesis to urban design. Virtual reality seemed to be about drawing people back into a private realm, when we are trying to get them into the public realm. I was suspicious of the techno-utopian ideals that were being offered, but how wrong I was...

VIRTUAL REALITY AND AUGMENTED REALITY

Virtual reality is a technology that produces a simulation of an environment, with the aim of creating an immersive experience for the users while they are in this simulated space. This means you wear goggles to block out your surroundings and help to focus your senses in the simulation. Augmented reality (AR) however enhances an existing real-life setting by adding a digital layer to it. The best way to explain this is the example of Pokémon Go.

Pokémon Go is arguably the breakthrough game in terms of public awareness of augmented reality. The location-based AR game was launched in July 2016 and saw tens of millions of people walking round cities trying to catch and train their Pokémon. Last summer, I sat in a park in Ghent with friends watching a continuous flow of people, some in groups, some couples and plenty by themselves walking through the park, phone in hand. I started photographing this, which resulted in a collection of photographs that could be a Hans Eijkelboom tribute. Speaking to a friend’s child, who is ten years old, I tried to understand how Pokémon Go actually works and what the significance is between a snorlax and bulbasaur (I am still working on the latter). However, what I did realise is that this child’s relationship with the built environment is currently largely understood through Pokémon Go: the park where he caught his favourite Pokémon; the building near the beach is his nearest Pokémon gym; the bit of space near the park is where his friend caught a rare Pokémon, etc. Poké-mania spread rapidly in summer 2016 and continues as updated versions of the game are released. The game has sparked numerous debates on how people have reconnected with their streets, parks and cities.

A TOOL FOR ENGAGEMENT

What does this mean for us as urban designers? Location-based augmented reality games are changing the way that people use and understand space, which has triggered debates in the media on health, safety and the use of public space. There are many opportunities here for research and design.

Virtual reality is already being used as a tool for designers to create more persuasive designs and allowing users to immerse themselves in the 3D space. A quick review of Google trends shows the interest in virtual reality has increased by 78 per cent in 2016.

Google also shows that the Netherlands comes up as the top region in terms of interest related to VR: the UK comes sixth.

COMMUNITY ENGAGEMENT

In the Netherlands, VR is already being used as a tool for community engagement. Community consultation and engagement events have a tendency to attract groups who are already aware of or involved in planning processes. By using VR in the consultation process, it offers an additional way to engage with a wider group of people who may not be interested in the more conventional methods of consultation (public meetings, questionnaires, workshops and newsletters). When I first used VR to view a visualisation of a proposed cycle path, I was amazed at how effective it was at communicating the design. The representation of space through VR is much more aligned to the way we actually understand space, as users can experience movement in 3D space, and gives a much stronger sense of depth and height (my tip for when you first try it: look at your feet).

DESIGN FEEDBACK

Communication is a key part of consultation and engagement processes, and therefore it is crucial that it is clear and effective. We are all too familiar with maps and frameworks that depict linkages, connectivity and nodal points through a series of blobs and arrows. But how clear are these blobs and arrows for the general public? An example of trying a different approach was community engagement on the renewal of a sewer system and streetscape project undertaken by Witteveen+Bos in Haarlem, the Netherlands.

The Zaanenstraat is a main road in the city of Haarlem, which recently required the renewal of its sewer system. The street is narrow and struggles to deal with current traffic levels. The existing car parking spaces are tight, and when people open their doors, they step out onto a cycle path. There are two nursery and two primary schools nearby, and a few years ago there was a road accident involving a child. Therefore the design of a new sewer system, road and public realm had to address many existing conflicts.

The project managers decided to make their design decisions visible at this early stage of the project, so stakeholders could highlight concerns as soon as possible. Preliminary designs were done in 3D and from this were made into a 3D model. In the
model, it was possible to show the different scenarios for the road design and how it would look and feel in the future. It also clearly illustrated why design decisions had been made and why certain objectives were not feasible as they would compromise safety and functionality. After a positive response from the municipality, the 3D model was transferred into a full VR experience with headsets. This was exhibited during a community meeting in November 2016. The user experience was personalised by letting each attendee enter their house number into the model and then they would begin the simulation from their front door.

Interestingly this consultation attracted around 100 attendees, of whom 30 per cent were more than 35 years old, and 70 per cent were older than 50. The feedback was that the majority of attendees were not able to read the 2D designs, but understood the 3D design, and the residents’ feedback was constructive and detailed, instead of being oppositional or indifferent. Some included questions such as: can we have some rubbish bins in the street, or widen the footpath, or use elms instead of chestnut trees? Safety concerns were addressed by walking through the 3D model to see the road crossings and sightlines.

After the meeting, the municipality was complemented by residents through social media, and follow-up meetings were arranged to inform residents on how their feedback and comments were used.

BUILDING CONVERSATIONS IN EINDHOVEN

Another example of how the Dutch are using VR as a tool for engagement is by determining the needs of a project before any design solutions have been developed. Eindhoven municipality are using a VR model to assist in identifying solutions for their ‘Experience the Vestdijk’ project (www.beleefdevestdijk.nl). The aims of this project are to mitigate air pollution, reduce motorised traffic, increase space for pedestrians and cyclists, and enhance greenery in the area.

On the project website there are 360-degree views of each location. Respondents can give their feedback to questions proposed within the simulation of the built environment, i.e. this path is for cycling, how do you see it looking? Is there enough greenery here? The website also allows people to add their own ideas. This web platform is used in parallel with three more conventional consultation evenings to introduce more people to the consultation process. To enhance its flexibility, people can respond through the website when it suits them, so that they are not tied to attending an event at a specific time and place. However, when attendees do come to engagement events, it is possible to try out the simulation with a VR headset and controllers making it even more interactive.

In this case, the platform received 350 comments, each of which received a personal response, strengthening the feedback loop with stakeholders. Consultation evenings received constructive feedback, as stakeholders had used the web platform to research the project beforehand. A survey was sent to measure people’s emotional responses to the project which received 1,000 responses, of which 83 per cent agreed on the design problem; 60 per cent agreed on a solution; and, the current government was commended by stakeholders in their overall approach.

When submitting comments, the respondents were asked for their postcode, occupation and relationship to the area, so patterns of opinions could be established between the different stakeholders. This information was filed, categorised and evaluated in a database which created both qualitative stakeholder feedback, but also quantitative stakeholder information. This process created trust, transparency, understanding and reliability for all parties involved.

REVIEW OF VR

Using VR can be an effective tool for the different stages of engagement and consultation. However, like all engagement tools it needs to be part of a tool kit to ensure a broad and varied approach to engagement. VR offers the potential to reach a more varied group of stakeholders, specifically younger generations. Users have more flexibility as VR is not a tool that is just limited for use at engagement meetings. You can interact and give feedback at any time using a simple cardboard headset and your smartphone. For the client, it may be a higher upfront cost than more conventional engagement methods, but it can identify conflicts quicker, and as technologies develop, costs will decrease. For the designers, once the 3D model has been built, designs can be easily updated. Using VR sets a strong foundation for a vision-led approach to urban design and planning. It is also a really fun way to improve communication about urban design to the people who will be using the spaces.

Amanda Gregor, urban designer, Witteveen+Bos UK, based in London
The impact of Business Improvement Districts

Peter Williams shows how an area of Southwark is being improved

The major political events of 2016 are being interpreted as a protest against globalisation, the power of large corporations, and the concentration of power and resource in fewer hands. Across the developed world public services are under increasing pressure and growing numbers of the population are complaining that they aren’t sharing in the proceeds of growth. It is evident that a debate is overdue at the macro level.

What is happening through Business Improvement Districts (BiDs) and other initiatives at the local level can feed into that debate. BiDs operate within a defined area in which a levy is charged on all business ratepayers, to fund a programme of projects and services, which will benefit businesses in the local area. They have been operating globally for more than 30 years and across the UK for over a decade.

A BiD gives businesses the means of identifying and funding priorities for the place where they are located. They are a powerful tool for directly involving local businesses in local activities and allowing the business community, local authorities and other stakeholders to work together to improve the local environment. Through aligning the interests of these different sectors BiDs can realise new forms of resource to aid cities’ liveability.

**ESTABLISHING A BID**

To establish a BID, the majority of businesses in a defined area must vote to support a manifesto of measures that are additional to services provided by the local authority. The subsequent levy raised on businesses in that area must then be spent within that area on a programme identified by the board, which includes owners of local businesses large and small.

The initial focus of a BiD is often to deliver more of the clean, green and safe services that improve the local trading environment. As BiDs mature these core services widen to encompass everything from corporate social responsibility projects and employee engagement events, to strategies for urban realm, air quality and public art.

Like many other BiDs, Better Bankside has long acknowledged the complexity of the neighbourhood in which we operate. This begs the question of how we as a Business Improvement District can respond to the needs of both businesses who pay the levy and the broader interests of residents and others in the local community. Part of our response has been the inclusion and engagement of community and resident groups at board level. Developing a more inclusive model that identifies common cause for businesses and residents has had undoubted success on Bankside.

**BIDS FOSTERING URBAN REGENERATION**

Through collaboration with a range of stakeholders, BiDs can be at the forefront of urban regeneration and governance.

Here at Better Bankside we are working with partners including Network Rail to realise the ambition of the Low Line. This long-term project recognises the impact railway viaducts have had across this neighbourhood and finds a new opportunity to link and carve out creative and commercial spaces. In the past the viaducts have been a barrier to footfall and to business activity in Bankside. Through transforming the public and private realm alongside them, and opening up a pedestrian walkway that encourages greater exploration across the neighbourhood, we can turn these Victorian structures from a threat to an opportunity.

The project is already gaining traction, with inspiring new public spaces, a new food and music hub in railway arches at Flat Iron Square, and a home to two theatres and several new restaurants at Old Union Yard Arches. As well as bringing new names to the neighbourhood, opening up these previously inaccessible stretches and increasing pedestrian footfall supports our strategy of driving social and economic activity away from a crowded riverside, while increasing the supply of space to give small, independent businesses the opportunity to thrive. In particular, as we see more creative industries moving to Bankside, the railway arches offer unique spaces in which to work.

The Low Line shows how we can positively change both physical structures and commercial perception here. As a model it has the potential to be replicated in viaducts...
across London and beyond, but while the market’s interest in repurposing under-performing spaces is important, the project’s real success is rooted in its underlying conceptual steer, and partners who share a distinctive vision for the Low Line from tenant mix to design solutions that will open up the heart of Bankside.

THE GROWTH OF BIDS
Looking back at 16 years at Better Bankside, it is clear that the BID model can play an important role in fostering development that is more appropriate to the context, forward thinking, and sensitive to its impacts on both businesses and residents. Standards are rising, if not as consistently as we would hope. But have BIDs had the same impact nationally?

An analysis of the growth of BIDs since their inception in 2005 shows that their spatial spread has been incredibly uneven. The different levels of financial and moral support from local, regional and national governments has played a part in this. But this begs a second question as to why this has been so variable. London has over 50 BIDs and Scotland has been quick on the uptake, but other areas such as the North West and, until relatively recently, Wales and Northern Ireland, have been less enthusiastic. Why have some locales been much quicker to adopt this mechanism?

Are we approaching peak BIDs? Personally I suspect not. But the next generation of BIDs must carefully consider the fundamentals of the concept. It will not be enough just to import successful projects and services from elsewhere. Programmes must be firmly based on a full understanding of place and local conditions, and the mechanisms that deliver these programmes made fully fit for that purpose.

If we can avoid the dangers of standardisation while achieving the efficiencies of operations that maturity can bring, then the BID model can grow further both in London and in other urban areas across the UK and Europe, encouraging and facilitating economic growth and positively impacting on businesses and those living and working there.

Peter Williams, CEO, Better Bankside
Preserving Slave Island
Gihan Karunaratne describes Sri Lanka’s Slave Island communities in Colombo

As you walk along the narrow streets of this meandering labyrinth, it encompasses all of the senses from rich vibrant colours, smells, a symphony of noise and sounds from pickle-sellers’ chants, chatting mothers, to children playing cricket on improvised spaces. This is not an ordinary neighbourhood, it is a contrasting community which services the great city of Colombo, a nucleus of this urban tissue.

It comprises small businesses and schools, dotted with religious buildings, a mixture of dwellings from ad-hoc incremental shanty-type construction to three and four storey middle class housing. These are public and private spaces designed and built by non-architects, where form truly follows function – an example of utilitarian architecture.

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PUBLIC PRIVATE SPACE
Spatial tectons, typology, or spatial formation define what is public or private space. Physical territories regulate and prescribe the spatial experience and also control the emotional, social, and temporal existence of such a neighbourhood. It makes us question the character, tradition, and artistic life of these self-built improvised environments.

The populations of such communities are constantly shifting, their limits are porous and their very survival is ambiguous due to proposed development and clearance. Given such uncertainty, a strong community spirit, and religious and ethnic links between the occupiers tie this community together. A resilient community, family structure and harmony among social classes characterise neighbourhoods like these. The people are socially and economically integrated within their urban context.

In a place of such informal urbanism, communities and settlements unfold over generations because of the history and the immediate connections to the city. They are legally insecure and infringe on current planning and building codes and land tenure. They are in legal limbo.

Most of the residents are employed within close proximity of the site with a varied income and occupations, from tuk-tuk drivers, day labourers, to key government council workers and middle to upper income businessmen. There is generally a high level of employment for mostly small cottage industries such as paper-bag making, coconut scraping, and handicraft to tuk-tuk repair workshops.

The complexity and ambiguity of these public and private spaces question the boundaries of private and public space. Change in levels, materials, colours, textures and community surveillance begin to define spatial boundaries and personal territory. In many houses washing is hung outside to create an invisible psychological barrier or separation of public from private space.

HOUSING ARRANGEMENTS
Given such cramped spatial conditions, individual and personal space is far less compared to conventional contemporary urban places. In general the community consists of three housing typologies: a single family unit, and extended family unit and a shop-house unit.

The typical spatial arrangement of an extended family dwelling can be seen as you enter the front of the house: with no natural daylight and inadequate ventilation there is a living room, an enclosed bedroom in the middle, a kitchen, and a toilet located at the rear of the house. A typical house plan area is approximately 45sqm in size. Two parents, two children and living grandparents will live in a typical dwelling, and in extreme cases up to three generations of one family occupy the dwelling.

It is fascinating to observe how each family member occupies space in the public and private areas. There is an order and unwritten rule that when the females of the house need to change their clothes or chat privately, all of the men leave the house and wait outside; it is momentarily transformed into a feminine space.

During the day, many residents sit outside their homes on plastic chairs due to the lack of natural light, inadequate ventilation and heat building up inside. As most dwellings have private sanitations, few still share the low quality public sanitary faculties.

But some parts of the settlements are deprived of basic amenities such as clean public washing, bathing facilities and adequate infrastructure for sanitation. As in other similar housing typologies in Colombo, the residents refer to the settlement as ‘our community’ and take offence when outsiders refer to them as slums or shanties.

EDUCATION AND TECHNOLOGY
Many of the alleyways along the 57 main streets are guarded by elderly grandparents during the day, and it appears safe from illicit activities. Most afternoons and evenings young children convene and have Sinhala, Tamil and Maths tuition classes in a chosen
private residence. As many as 30 children’s shoes can be seen outside.

Apart from the low-tech environment, the young are generally technically savvy and almost everyone has a smart phone. They are constantly updating Facebook or Instagram pages and uploading videos on YouTube. Although the majority can speak a basic level of English, most people’s native language is either Sinhalese or Tamil. The majority of children attend Colombo’s leading government schools and a number of them attend international schools.

**PLANNED CHANGE**

Today, the local authority and the Urban Development Authority plan to reclaim this land for prime commercial development, pushing the inhabitants out to newly built high-rise council apartments. The local and central government policies are able to justify this because some of the occupants have no legal ownership to the property. Most of the residents worry about their survival after such changes.

It can be argued that we should preserve such rich diverse communities and their architectural character. Their organic spatial configuration and self-built architecture possess parallels similar to many medieval European city models and layouts. For architects, students, urban planners as well as social anthropologists, Slave Island is a deeply historical example of incremental prototypical urban morphology.

Gihan Karunaratne, Director of Architecture, Colombo Art Biennale 2016, Colombo
Health and Urban Design: The Unfolding Story

Rachel Toms recounts her road to enlightenment, finding the evidence on the way

The British Social Attitudes survey (2014) found that 89 per cent of adults in Great Britain support a national health system that is tax-funded, free at the point of use and provides comprehensive care for all citizens. In essence, this is because people want to be healthy. People want themselves and others – regardless of how much money they have, or where they live – to not suffer with disease. People want those with power and influence to create structures and systems, and to use money wisely, to prevent and cure disease. As urban designers, we have some power and influence in relation to health. This issue of Urban Design looks at how we can play our part in preventing people from suffering with disease. But first, a personal story...

A NEW MISSION

It is August 2014 and I have a new job at the Design Council. By September, I’ve inherited a programme championing physical activity through the built environment – Active by Design.

As I read about it and attend events, I realise how much ill-health, physical and mental, is caused or made worse by sedentary lifestyles, and how places where people rely on cars to get around effectively design inactivity into people’s lives. Some people overcome this by going to the gym, mountain biking or playing football, but massive numbers of people don’t – inactivity is hardwired into the places where people live in and use. We sit to travel to work, to learn at school and to wind down in front of the TV, and the tough reality is that it all contributes to cancers, strokes, diabetes and dementia.

As the weeks unfold, I learn that physical inactivity kills more people in the UK each year than smoking, and the NHS spends almost £1 billion a year treating its effects. The lack of physical activity is estimated to cost the overall UK economy £7.4 billion each year. Don’t we end up spending more on treating illness when people live longer? I read that this is only the case when people have multiple long-term health conditions. Without preventable diseases, people would live longer and in better health, and the cost of treating the non-preventable decline of older age would be much lower. In this issue of Urban Design, Kevin Fenton and colleagues at Public Health England show graphically why we need to create healthier places and what is being done nationally to achieve this.

Over the months, I build links with other organisations and learn about public health: the art and science of preventing the preventable. I learn about health inequality as almost all health problems affect the poor more than the rich, and many choices that boost health, like going to a gym, are easier for the affluent to make.

Looking at the evidence, I realise how lucky I am to be able to cycle to work – the benefits of the physical activity outweigh the effects of air pollution – but it would be nice if my route smelt and tasted less like an exhaust pipe. I’m speaking at events, so I collect information and examples to present the case for designing physical activity into buildings, streets and public spaces. People are keen for more and in fact there is more to say; the built environment does not just need to encourage activity, it needs to do other things to tackle preventable disease. In her article, Laurence Carmichael summarises some of the evidence on health and place, and provides useful pointers on how to use this and to inform future research.

In December 2014, based on what I have learnt, I expand the scope of the Active by Design programme to ‘healthy placemaking’: creating places that fully play their part in the mission to avoid preventable disease, through design. Mental health is as much a concern as physical health, but as in the world of healthcare treatment, it can get side-lined. Layla McCay’s article explains how urban design can increase or decrease the mental distress that contributes to many mental health conditions.

On my way to work, I now see a boy, who looks about 12, cycling to school. In the eleven years I have been cycling to various offices in this city, he is only the third youngster I’ve seen using the carriageway on a bike in the rush hour. How ridiculous that we’ve created an environment – whether it’s physical or cultural – in which there are so few kids for whom cycling to school is the first choice.

SEIZING THE OPPORTUNITY

January 2015: I manage to get hold of some funding – quite a coup these days, and invest in developing materials to run training sessions on healthy placemaking, and to collate a set of case studies. These are examples of healthy places and projects in the UK, to show that it can be done, and what characterises a healthy place. Working with Design Council’s Built Environment Experts, by the end of March we have 30 case studies, eight of which are strong examples with great photos, and a foundation for training.

I get a standing desk in the office, so I mainly stand when I’m using the computer and sit down in meetings. This was prompted by a back issue I’ve had for years and by my recent learning curve on how bad sitting all day is for you, even if you do a decent amount of exercise. At first I feel a bit foolish, being the only person standing in the office, but I’m more energised and engaged: my body and my brain don’t end up slumping.

WALKING THE WALK

Slicing in and out of my other duties (I’m also developing our design advice services to clients), I look at more research into
health and the physical environment. It’s all pointing towards walkable places, or more accurately places where walking is the first choice for getting around. Compact, mixed use neighbourhoods are also part of the story, places where people walk to the shops, doctor’s or playground. In terms of green infrastructure, the answer is as you’d expect is: leafy streets, parks and parklets that are easy to reach, enable a range of activities for people of all ages and abilities, and are well-maintained.

How do I feel about my favourite mode of travel not being at the top of the list for creating healthy places? I have to go with the evidence, and walking comes out as the most health-boosting activity that we can design into people’s everyday lives, particularly in deprived areas where stresses, preventable diseases and healthcare demands are high and money is tight. What about people with mobility problems? The answer is a given: walkable places have to enable people of all physical abilities to use neighbourhood facilities, and to get the positive social contact that is also such an important part of good health. In her article, Lucy Saunders talks about the role of streets in supporting healthy lives, the ingredients for a healthy street.

And what about the most tranquil places to live in the country – leafy villages – aren’t they good for health? The greenery is definitely beneficial, as are country walks and having a social network around you. But wherever you are, having to drive everywhere really doesn’t help. Inactivity increases a person’s likelihood of developing type 2 diabetes, heart disease and depression, and journeys, however short, are the best opportunity for most of the population to be active as part of everyday life. Car journeys contribute to diseases triggered or worsened by poor air quality, including asthma, heart disease and lung cancer. They also increase inequality: poorer people generate less air pollution but suffer from it more, because they are less likely to own a car and more likely to live in the cheaper, less appealing places where traffic is concentrated. And of course we now know that diesel cars emit higher levels of toxins than we previously thought.

What about public transport? Evidence shows that a routine walk to and from the bus stop or train station makes people slimmer and healthier, and the congestion and air quality effects are much less per kilometre travelled than for journeys by private car. What about electric cars? Better in terms of local air pollution, but no different in relation to congestion or the damaging effects of time spent sitting. None of this is new information but we’re not acting on it properly in the way that we create and transform places. In their article Dr Eime Tobari and Nicholas Francis show how spatial analysis can shed light on walkability in relation to jobs and services.

There are public health priorities that the built environment does not have a strong influence on, like reducing smoking and increasing breast-feeding. In relation to the health issues that we do influence, I look at how urban design can help to reduce levels of preventable disease. Drawing on the evidence, we create a graphic that shows the top four functions of good health, physical and mental, that can be designed into the physical environment to make healthy behaviours an integral part of daily life. All people need these functions to be healthy, regardless of their age, background or level of affluence so we advocate building these functions into the places – buildings, streets, public spaces and neighbourhoods – that people use as a matter of course. I test the four functions with public health professionals and healthy placemaking specialists to make sure they work from a range of perspectives.

**Talking the Talk**

It is summer 2015 and I am speaking about healthy placemaking at many events. I use the case studies to show how other project drivers, like boosting a local economy, can go hand-in-hand with creating a healthy place. And when I show the four functions diagram, people always get their phones out to take a photo of it.

At the same time, NHS England launches its Healthy New Towns programme to help housebuilders, local authorities and housing associations put health at the heart of new communities. 21 months later, ten demonstrator sites are busy joining up prevention, placemaking, health care and social care, as Danny McDonnell explains in his article. Another organisation that has made strides in creating a greener, healthier city is Bristol City Council. George Ferguson talks about the steps he took to design health into people’s lives when he was the city’s Mayor.

In November 2015 I get a new boss. I talk him through the issues relating to healthy placemaking and the aims of the Active by Design programme. He seems
keen and I’m eager to make the most of his enthusiasm. We start by sharing the speaking engagements on creating healthy places and he makes the glaring point: it’s all totally common sense, so why aren’t we doing it? At the same time, we are asked to advise on new guidance on creating healthy places that other organisations are preparing to publish. There is some good content coming through although in the UK we do not yet have a single repository of practical tools that professionals can use, as they do in the USA and Australia. I meet lots of people who are passionate about the subject, from different professions and a big range of organisations. Everyone talks about the need to create healthier places and the frustration of seeing car-orientated streets and edge-of-town sprawl continuing to be built.

One of those people is Graham Marshall of Prosocial Place, who uses evidence to show how hostile places lead to hostile behaviour, and to advocate for more humane streets and neighbourhoods. In his article, Graham talks about the inspirations of the city of Yangzhou in China in creating a healthy environment for its citizens.

My route to work is definitely still in the hostile category, with lumps, bumps and holes in the road; big trucks accelerating and turning centimetres away from my handlebars; and car bumpers pulling up unnervingly close to my shins. The alignment of a lot of motorbikes’ exhaust pipes – angled upwards and pointing directly at my mouth when they’re in front of me at traffic lights – is getting particularly unpleasant. And I’m noting a few things en route, like the cars and trucks blocking the pedestrian crossings used by children walking to their primary school. Seemingly, it feels like a good idea to drive onto the crossing when the lights are green, even though you might be stuck there when they turn red, and when there’s a five-year-old, a toddler in a buggy and a flustered parent, all getting rained on and waiting to cross. Some cyclists also do unhelpful things, like giving pedestrians a fright by slicing past them when the green man is lit. I wonder what role the design of the junction and the signals plays in making this hostile behaviour feel right.

DOORS CLOSING…AND OPENING
In January 2016 we bid for a piece of work on creating healthy places and I work until 3am finishing the tender. The lack of sleep and the cold cycle home set off a muscle issue that takes weeks of physiotherapy to sort out. Maybe I need to take this health thing more seriously. We don’t win the bid and it feels like a real setback.

We are recruiting practitioners to join our network of Built Environment Experts (BEEs) and a good number of specialists in public health and planning or design apply. This gives us a strong cohort of experts in healthy placemaking and I am looking forward to drawing on their skills to provide advice and support to clients.

Some specialists suggest adding a fifth function to the four we have been using as a framework for healthy placemaking. The fifth function relates to an environment that is free from pollution in terms of air, water, soil, noise, vibration and debris, all of which can affect people’s health. In some parts of the housing market in the UK, poor ventilation and heating indoors are a significant risk to health. And in parts of many cities, outdoor air quality is frequently unsafe, noise levels are harmful, and dirty litter-strewn streets contribute to poor mental wellbeing and discourage walking.

In December 2016, I enter a competition to win a research project. I submit a bid to use surveys to uncover what stops built environment professionals from creating healthy places. The aim is to then tackle the main causes of unhealthy placemaking. Three other people in the office have now got standing desks too – great to see it catching on. And I read the news with interest: higher levels of traffic correspond with higher rates of dementia, a condition that people particularly fear as they get older. My home and my commute to work must make me high-risk.

Come the New Year and I’m devising a system that will make healthy placemaking central to the advice and support that we give our clients. Then we win the competition for a research project so I’m delighted. The research includes a survey on what professionals are doing, and are prevented from doing, to create healthy places.

Right now, this Urban Design issue on health has some important, practical pointers on using design to make healthy behaviours and experiences integral to people’s everyday lives. You may wish not to sit down to read it. (See designcouncil.org.uk/healthy-places to take part and to receive the findings.)

Walking comes out as the most health-boosting activity that we can design into people’s everyday lives, particularly in deprived areas where stresses, preventable diseases and healthcare demands are high and money is tight

Rachel Toms, guest topic editor and Insights and Standards Manager, Cities Programme, Design Council.

4 Cathedral Gardens, Leicester
Designing the Healthy Environment

Kevin Fenton, Carl Petrokofsky and Rachel Hunter explain Public Health England’s strategy

Public health springs from the attempts by social reformers and others to address poor health in 19th century cities, largely caused by infectious diseases that arose from the terrible conditions, squalor, poor housing, overcrowding and poor sanitation that followed early industrialisation and urbanisation. In the UK the need to tackle infectious diseases wrought by poor living conditions in cities is largely a thing of the past due to the work of planners, urban designers and public health professionals working in partnership throughout the late 19th and early 20th centuries.

MODERN HEALTH CHALLENGES

Today, our success and increasing prosperity as a nation has significantly changed both the structure of the population and the types of diseases it faces. Increased wealth, improved living conditions and better healthcare have resulted in a decline in mortality and infectious diseases, especially in early childhood. Consequently deaths from communicable diseases associated with 19th century squalor, such as tuberculosis, have significantly declined. Instead, non-communicable diseases such as coronary heart disease or cancer cause the large majority of avoidable deaths in the UK. Other diseases associated with ageing, such as musculo-skeletal diseases like arthritis, cause significant disability, distress and pain.

With the decline of infectious diseases in early childhood and improved health and care services, people are living longer and we have an increasingly ageing population. As a society we have a clear challenge both to recognise and to fully realise the contribution that older people can and do make to the workforce, the economy and within communities. From a public health perspective, there is an opportunity to maximise healthy life for this ageing population, which must begin in their earlier years.

The priority here is addressing the inequality of health outcomes between the most and the least disadvantaged people in England. For example, life expectancy for men born in the most affluent area of the country is more than nine years longer than for those born in the most deprived area; for women the

WHAT IS PUBLIC HEALTH?

The Faculty of Public Health defines public health as ‘The science and art of promoting and protecting health and well-being, preventing ill-health and prolonging life through the organised efforts of society’. In other words, public health is about creating the conditions in which people can live healthy lives for as long as possible and working with those who can help make this happen.

1 Barton and Grant’s diagram illustrating how health and wellbeing are determined by age, sex, genetic heredity, lifestyle, behaviour, and location on the Planet.
The healthy life expectancy between those living in the most and least deprived areas is seven years. Both sexes experience an even greater gap for ‘healthy life expectancy’ – an estimate of how many years they might live in good health – between those living in the most and least deprived areas. Put another way, if the levels of health in the worst performing regions in England matched the best performing ones, then England would have one of the lowest burdens of disease in the world.

Importantly, those living in the most deprived communities also experience poorer mental health. In fact, the Global Burden of Disease (GBD) study demonstrates that mental illness is the largest single cause of disability and represents 23 per cent of the national disease burden in the UK.

The bar chart illustrates the percentage of risk factors attributable to the total disease burden as measured in Disability Adjusted Life Years (DALYs) across a range of diseases. The way we live has a significant impact on our health. Good diet and more exercise would help us live healthier lives.

Current data for England shows that:

- Nearly a third of children aged 2 to 15 are overweight or obese, and younger generations are becoming obese at earlier ages and staying obese for longer
- Obesity doubles the risk of dying prematurely
- Obese adults are seven times more likely to become type 2 diabetics which may cause blindness or limb amputation, than are adults of a healthy weight
- Obese people are more likely to get physical health conditions like heart disease, and more likely to be living with mental health conditions like depression.

In short, reducing obesity levels will save lives. The next graph shows obesity prevalence for children at reception age and in Year 6 mapped against where they live, as measured by the Index of Multiple Deprivation. It illustrates that children living in the most deprived communities are most likely to be overweight or obese, compared to those in less deprived communities.

There is more than a twofold difference in obesity rates between the least and most deprived communities. As the government’s childhood obesity plan says, ‘Obesity is a complex problem with many drivers, including our behaviour, environment, genetics and culture’.

PREVENTABLE DISEASES: THE CAUSES

The proportion of preventable deaths can be attributed to different factors, and yet healthcare services contribute only 10 per cent to reductions in overall premature death. Thus to make significant reductions in premature death we need to address other factors including the environment, behaviour and lifestyle choices. We also know that urban design, although not specifically mentioned above, can have a huge impact on all of these factors.

Barton and Grant’s diagram illustrates how health and wellbeing are determined by a complex interaction between:

- Person – who you are: your age, sex, genetic heredity
- Behaviour – what you do: your lifestyle and behaviours such as smoking, taking drugs, keeping active, having a job, education and social networks
- Place – where you live: whether your physical environment support you to stay healthy
- Planet – where you don’t live: global environmental conditions that may affect your health, such as climate change.

In other words, good health and wellbeing are about much more than healthcare. A good start in life, education, decent work and housing and strong, supportive relationships all play a major part.

Economic prosperity is integral to closing the gap in health outcomes between the poorest and the most...
4 The obesity prevalence for children at reception age (Year 0) and in Year 6 mapped against where they live as measured by the Index of Multiple Deprivation

5 The proportion of preventable deaths attributable to different factors

affluent. It can create jobs for local people, bring benefits to their children, help their family to stay well and as people get older, help them to live at home for longer. Public Health England’s physical activity strategy, Everyday Active Every Day notes that adults are over 20 per cent less active now than they were in the 1960s. At current rates we are predicted to be 35 per cent less active by 2030.

Physical inactivity is responsible for 1 in 6 UK deaths and for up to 40 per cent of many long-term conditions. It has been estimated that nearly 37,000 deaths per year could be avoided through increased physical activity. Indeed, physical inactivity costs the nation’s economy an estimated £7.4bn every year.

PLACE, BEHAVIOUR AND HEALTH

There is a complex interplay between behaviour and place. Environments can, for example:

- promote physical activity in everyday life, such as walking or cycling, which can help people maintain a healthy weight
- facilitate easy access to healthy, affordable food
- promote active travel, fewer injuries, connected neighbourhoods, cleaner air, and economic development.

The design of neighbourhoods and urban centres can have a significant impact on the way that people behave. For example, a recent study in Cambridgeshire has found that the provision of a guided busway and cycling infrastructure has significantly increased the numbers of people cycling and using active modes of travel, which all increase physical activity. In other words, people who did not previously cycle or walk on crowded roads with traffic felt inclined to get on their bikes and cycle when appropriate infrastructure was provided. The study is part of an emerging evidence base demonstrating that providing appropriate infrastructure for people travelling to work is essential in achieving truly significant modal shifts away from cars to walking and cycling.

The design of roads and transport networks has had significant impacts on health and wellbeing, from road collisions to traffic noise and the increasingly recognised effects of air pollution. There are also wider impacts on communities such as the disruption of social networks, which are in turn so important for health and wellbeing.

A recent study in Bristol by Hart and Pankhurst found that the number of friends and acquaintances reported by residents was significantly lower on streets with higher volumes of motor traffic. Thus the dislocation of neighbourhoods or ‘community severance’ by traffic has significant impacts both directly and indirectly on health and wellbeing. And there is a further deprivation angle to this, for we know that:

- Children living in the 10 per cent most deprived wards in the country are four times more likely to be hit by a car than children living in the 10 per cent least deprived.
- 66 per cent of all carcinogenic chemicals are released in the 10 per cent most deprived areas in the country.
- People living in the most deprived areas are 10 times less likely to live in the greenest areas; and the most affluent 20 per cent of wards in England have five times the amount of parks or general green space compared with the most deprived 10 per cent of wards.
- Green Infrastructure: The recent WHO study Urban green spaces and health – a review of evidence (2016) concluded that urban green spaces provide many public health benefits through diverse pathways, such as psychological relaxation and stress reduction, enhanced physical activity, and mitigation of exposure to air pollution, excessive heat, and noise. Urban green spaces particularly offer health benefits for economically deprived communities, children, pregnant women and senior citizens. It is essential that all populations have adequate access to green space, including small, local green spaces very close to where people live and spend their day, as well as larger green spaces.
PUBLIC HEALTH ENGLAND AND LOCAL AUTHORITIES
Public Health England (PHE) was established in April 2013. PHE is the expert national public health agency that fulfils the Secretary of State's statutory duty to protect health and address inequalities, and executes his power to promote the health and wellbeing of the nation. It works closely with national and local government, the NHS, industry, academia, the public and the voluntary and community sector to seek improvements in the public's health.

At the same time, local authorities were given lead responsibility for public health; local Directors of Public Health and their teams were transferred from the NHS to local government to support this function. Local authorities lead on place-based health planning by hosting local health and wellbeing boards bringing together local partners to prepare a joint strategic assessment of health needs and commissioning services to meet those needs.

HEALTHY PEOPLE, HEALTHY PLACES PROGRAMME
PHE recognises that the built and natural environment are major determinants of health and wellbeing across the life course and can determine the establishment of social networks, the location and quality of housing, and human exposure to air and noise pollution. The built environment can promote connectivity within a neighbourhood, the creation of a safe and accessible transport system and active travel. It also plays a crucial role in promoting access to open space, employment and healthy food options.

As outlined above, some of the UK's most pressing health challenges, such as obesity, mental health issues, physical inactivity and the needs of an ageing population, can all be influenced by the quality of the built and natural environment. In other words, the considerate design of spaces and places can help to promote good health, provide access to goods and services and alleviate, or in some cases even prevent, poor health, helping to reduce health inequalities.

PHE established the Healthy People, Healthy Places programme in 2013 to show how the built and natural environment can improve health and reduce health inequalities, within PHE and with national government, national agencies and local authorities. The aim is to reduce the overall burden of disease, mortality and health inequalities by addressing the wider determinants of health across the life course through improving the quality and accessibility of the built and natural environment.

The vision is to promote a future where everyone, wherever they live, is able to live, work and play in a place that promotes health and wellbeing, sustains the development of supportive and active communities and helps to reduce health inequalities. In short: healthy places to grow up and grow old in.

The Healthy People, Healthy Places programme aims to promote and deliver local and national policies and resources in support of this vision, through four main work streams:

- Provide system leadership, advocacy and high level engagement
- Build networks and partnerships with a wide range of stakeholders
- Build up an evidence base, information and tools
- Build capacity at local and national levels through learning, training and development.

The team has a strong network of partners from a wide range of national and local stakeholders such as the Design Council to inform the development and roll out of the programme. PHE has supported the Town and Country Planning Association’s Reuniting Health and Planning initiative, together with local public health teams. Public health teams are now firmly embedded into local authorities, where they have real opportunities to work across council services such as planning, regeneration, transport, leisure, licensing and environmental health to address the wider determinants of health. And of course, underpinning many of these functions is the way that services and spaces are used and delivered on the ground through sensitive design.

One example is the Town and Country Planning Association (TCPA) and PHE’s guide to Planning Healthy Weight Environments, which acknowledges the role that local authority planners have in creating places that enable people to achieve and maintain a healthy weight. A healthy weight environment ‘supports people in avoiding being overweight or obese through how the place is designed and what it provides’.

Our aim in the forthcoming year is to strengthen our work with designers, builders and developers to see how we can turn emerging evidence of the impacts of the built environment on health into action on the ground. We look forward to working with urban designers to see how we can take further steps together towards achieving our vision of healthy places for everyone to grow up and grow old in.

Some of the UK’s most pressing health challenges, such as obesity, mental health issues, physical inactivity and the needs of an ageing population, can all be influenced by the quality of our built and natural environment.
Healthy Cities: the Evidence and what to do with it

Laurence Carmichael shows how urban designers can help improve wellbeing

Cities have driven positive economic and social developments for many years, but nowadays urban living and activity are damaging human health and wellbeing, as well as ecological systems. Urban settlements might only use 2 per cent of the total land, but make up 70 per cent of global GDP, over 60 per cent of global energy consumption, 70 per cent of global greenhouse gas emissions and 70 per cent of global waste. Based on these statistics, ‘the future of the world's climate will be decided in the cities’ concluded the German Advisory Council on Global Change in 2015. Within European affluent and economically dynamic environments, city dwellers often ignore the links between their own resource use and its environmental impact, until floods occur or newspapers headlines highlight the death toll from air pollution.

Of course urban health is not just determined by the state of the environment or the effectiveness of resource management, but also by how individuals or groups experience and use the city, its buildings, streets and neighbourhoods. Global economic and political drivers, including domestic and international migration or ageing populations, can also affect health and wellbeing, potentially contributing to non-communicable diseases, including mental ill-health.

Overall, individuals and organisations share the responsibility for exposing people to multiple health risks in cities. Built environment professions themselves have contributed to urban growth at the expense of the environment, wellbeing and social equity. Yet planners and urban designers are also in a strong position to encourage more sustainable and healthy behaviours. More challenging, but even more rewarding for them, is to make the city an equal place for all. An increasing body of evidence from public health, medicine and environmental science can support professionals in the built environment to transform challenges into urban design opportunities.

1 Bradford’s six acre ‘park in the city’: City Park Centenary Square with the popular Mirror Pool, opened in 2012

The Evidence on Urban Design, Health and Wellbeing

Research links place with wellbeing in a variety of ways including the influence on physical activity, provision of privacy, safety and security, closeness to nature, accessibility, sense of attachment to a place, independence and equality (Burton, 2015). Happiness is also emerging as a facet of our urban health which can be delivered through urban design, as Charles Montgomery wrote in 2013. Individuals are happier for example living in urban areas with greater amounts of green space.

Evidence on environmental health probably offers the most compelling argument for built environment professionals to rethink how people work, play and move around the city. In the 20th century, improved transport links and personal mobility have encouraged urban sprawl in Europe and urban transport now accounts for more than 50 per cent of emissions of air pollutants. Indoor and outdoor air pollution remains the biggest single environmental health risk; outdoor air pollution kills around 3 million people each year. Globally, only one in ten city dwellers lives in a city that complies with the World Health Organisation’s air quality guidelines.

Urban designers, architects, transport and urban planners can contribute to reducing air pollution by promoting a range of policies in transport, urban planning or power generation for cities. We can prioritise rapid urban transit, walking and cycling networks, and inter-urban freight and passenger rail travel. We can make it easy for people to safely park their bikes. With so much evidence linking urban living with air pollution, some cities have modelled urban transport for a healthy city. Dresden’s Sustainable Urban Mobility Plan is based on the three overarching aims of: meeting the mobility needs of the population, meeting the mobility demands of the economy, and, reducing the undesirable consequences of traffic. Copenhagen and Kuopio have prioritised walking, cycling and public transport in their city centres. Freiburg has developed urban extensions on new tramlines, reducing car use.

Tackling pollution and promoting active travel through compact cities also...
creates the right environment for physical activity. In sedentary societies, increased levels of physical activity have proven health benefits for adults and children, reducing a number of chronic and cardiovascular diseases. Architecture, city and transport planning can encourage people to be more active. Research has shown that the following features of the built environment promote physical activity:

- Compact neighbourhoods and higher residential density
- Good public transport facilities within easy residential reach
- Networks of parks and public open spaces
- Local access to shops and services
- Access to sport and recreational facilities
- Active travel facilities: pedestrian areas, cycle lanes, and
- Feelings of safety: well-lit streets, natural surveillance from buildings.

Clearly there are also health benefits to improving energy generation, industrial processes and waste processing, to make them more efficient and less polluting. Neighbourhood-wide combined heat and power generation and on-site renewable energy and waste systems can all play their part.

Finally with cities associated with stress, depression, perception of crime and other attacks on mental wellbeing, evidence shows that a more positive and holistic urban experience can be supported by urban design, as Layla McCay’s article shows.

**USING THE EVIDENCE: BE STRATEGIC**

Urban systems – heavily regulated and pressured by the market, multi-level governance and funding – can be a challenging place to implement scientific evidence advocating healthier place-making. There are signs, however, that professional silos and conventions are starting to shift in the light of evidence. Opportunities are emerging to develop collaborations for sustainable and healthy environments through strategic approaches such as the European Green Capital Award, which supports innovation, multi-sector partnerships with experts and academics, and exchange of good practice. Copenhagen, Malmo, Stockholm, Bristol and Ljubljana have all exploited their green credentials. Eco-towns, such as Stockholm’s Hammarby Sjostad can also drive local innovation and partnership building to tackle climate change and deliver health benefits. In the UK, NHS England’s current Healthy New Towns programme is using cross-sector partnerships with local public health teams to achieve better health outcomes in housing delivery projects.

Over the last two years, a seminar series led by the WHO Collaborating Centre for Healthy Urban Environments and Public Health England, and funded by the Economic and Social Research Council (ESRC), showed the demand from built environment and public health professionals in the UK to improve their mutual understanding and increase collaboration between these disciplines. There were also calls for better sharing of evidence and good practice from around the world, in an increasingly resource-poor local authority environment.

Built environment professionals are instrumental in using the evidence on healthy urban design and communities. But how easy is it to convince national decision-makers to take evidence into account? In the UK, there have been many calls for a Chief Architect, Built Environment Advisor or a strategic unit to advise government and reintroduce expert leadership and evidence into national built environment policies. Some in the civil service and the professions however express doubt about establishing such a structure, citing the short-lived precedent of Chief Construction Advisor in the UK (2008-2015) and the failed attempts to set up similar structures in the USA, due partly to deep-rooted institutional silos. So if partnership with government offers precarious alliances, who should built environment professionals partner with in order to act on the evidence about healthy urban design?

**COLLABORATION**

First, collaboration is needed with the research sector to build on the findings of academic studies which, however rigorous, do not necessarily offer an exact fit to inform built environment policies and shape healthy cityscapes. Research will not necessarily explore qualities and features of the built environment that can be easily imposed on developers as no policy or statutory hooks are in place. Professionals can help science to ask the right questions and present findings that they can act on. With research councils and other funders now requiring research projects to tackle societal challenges, collaborate with stakeholders and communities, and deliver research with impact on policies or on professional practices, there has never been a better time for professionals to engage with researchers to explore specific topics.

The use of social media can bypass the need for introductions, and academics will be receptive to suggestions. Professionals can help to secure the market and policymakers’ buy-in to evidence-based design for health, by testing research findings in the real world. Witness to this change is for instance our ESRC-funded seminar series (above), which engaged with key stakeholders in the development process, and our Wellcome Trust project Factoring long-term health impacts into urban development. The project funded under the Wellcome Trust’s Our Planet, Our Health programme aims to explore the barriers and opportunities in creating healthy urban environments through collaboration with the UK’s major delivery agencies and public engagement exercises.
Collaboration between researchers and practice must remain ethical and rigorous, and academics kept aware of the balance of power in policy and market processes. Developers will be interested in whether health sells houses, with potentially the perverse effect of pricing many out of the market. Local authorities will be interested in the cost for the community and for healthcare systems of bad design and how built environment can promote health equity.

Second, built environment professionals can help to develop guidance or toolkits that embed research findings into urban design through design criteria for health, wellbeing and sustainability at buildings, neighbourhood or city scale. Examples include Berkeley Group’s 13 criteria for successful places, WHO’s healthy planning principles and BREAAM Communities.

Third, built environment professionals can also engage with local communities to co-design healthy places or use Health Impact Assessments. Expert evidence offers scientific answers to a human environment, but nothing replaces user experience. With the ageing of the population in particular, local communities can help to identify urban design challenges and opportunities for an age-friendly city. Tools such as the Place Standard (www.placestandard.scot) exist to help communities and practitioners to assess places for health, wellbeing and equity.

Finally, built environment professionals can use the evidence in creative ways. Bringing together the right partnerships, funding and design for new communities is one thing, but even more creativity is needed to retrofit health into existing communities – the main way in which most of the urban population can benefit from healthier cities.

Dr Laurence Carmichael, Head of the WHO Collaborating Centre for Healthy Urban Environments, University of the West of England, Bristol

REFERENCE

What is a Healthy New Town?
Daniel McDonnell sets out a new NHS England initiative

The built environment is not routine territory for the NHS but with increasing numbers of people living longer and potentially in poorer health, we recognise an opportunity to ensure that homes and neighbourhoods promote wellbeing and enable independence. Planning and urban design can play a crucial role in achieving this.

Across the country, local authorities, and providers and commissioners of health and social care are planning how they will deliver joined-up services for the future and putting together Sustainability and Transformation Plans (STPs). At the heart of STPs are the communities in which services are delivered. NHS England’s Five Year Forward View identified new housing developments as an opportunity to rethink how health and social care services are provided to those communities. New housing also offers the opportunity to encourage healthier behaviours through the built environment and urban design, preventing ill-health and encouraging greater independence and self-care. From this starting point,
the Healthy New Towns programme emerged in 2015.

The key question often asked of the programme is ‘what does a healthy new town look like?’ The programme is currently exploring and testing the answer.

Through the Healthy New Towns programme, ten demonstrator sites were selected from 114 expressions of interest and announced in March 2016, representing a diverse cross-section of housing developments across England. A range of developers are involved, from high volume builders to housing associations. The size of the developments ranges from 15,000 to fewer than 1,000 homes. The sites also vary significantly in terms of land values, socio-economic profiles – and crucially from an NHS perspective – population demographics and health needs. This myriad of local circumstances means that the sites have differing lists of priorities for service delivery and for the most suitable interventions. The demonstrator sites’ delivery plans reflect this contextual diversity, although there are common themes relating to new care models, active travel, community activation and digital technology.

NHS England has provided funding and expertise from a range of sources to assist sites in putting together ambitious delivery plans to ensure that health and wellbeing is at the heart of the new neighbourhoods.

**BICESTER HEALTHY NEW TOWN: ‘A WALKABLE AND CYCLEABLE COMMUNITY’**

Bicester is a market town whose population is set to double over the next 20–30 years with the construction of 13,000 new homes. Bicester’s Elmsbrook site is an Eco Town as well as a Healthy New Town, the only site in the UK being developed to Planning Policy Statement 1 Eco Town standards of environmental sustainability. Overseeing the planning and delivery of housing development is the Bicester Healthy New Towns Partnership, whose core members are Cherwell District Council, Oxfordshire Clinical Commissioning Group, Oxford Academic Health Science Network and A2 Dominion Housing Group. A key aim for Bicester is to increase physical activity amongst residents. The Partnership is using physical connectivity, green corridors and community assets and to build a ‘walkable and cycleable community’ that links the new areas of housing with the existing market town. A central green corridor into the town centre will improve air quality, provide cycle and walk ways and reduce reliance on the car. Active travel and green infrastructure will be complemented by community activation activities. In primary and nursery schools this will take the form of a parental involvement strategy, bringing children and parents together to eat healthily and be more active. In workplaces, support will be offered to employees to switch journeys by car to walking or cycling. The Partnership is also working closely with Sport England to encourage physical activity in residents’ daily lives.

**JOINING UP HEALTHCARE SERVICES**

The NHS has major programmes underway to make healthcare provision more efficient and to improve the experience of patients by redesigning and joining up healthcare services, such as through Multi-Speciality Community Providers (MCPs) and Primary and Acute Care Systems (PACS) models (NHS England 2016). An example of redesigned service provision is a diabetes clinic running alongside occupational therapy, dietetics and diabetes support services to enable diabetic patients to receive much of the treatment and support they need in one place on the same day. As part of the Healthy New Towns programme, several demonstrators of new, joined-up models of care are being developed in the form of health and wellbeing centres, where several health services will be co-located. Whitehill andordon, Halton, Cranbrook and Barton are all exploring this approach. In Halton in the North West of England, an old hospital site close to the town centre will be redeveloped to provide housing and a health and wellbeing centre. While still at an early stage of planning, Halton is set to show how healthcare services can be delivered as part of wider commercial development on NHS or government land.

**BARTON HEALTHY NEW TOWN, OXFORD**

Barton is a neighbourhood on the north-east side of the city of Oxford. The new Barton Park housing development of 893 homes is being used as a driver to regenerate and connect with the existing neighbourhood. One of Barton’s propositions is the conversion of an existing neighbourhood centre into a Healthy Living Centre, as part of the development’s Section 106 agreement. The centre will provide sports facilities, units for community organisations, a GP practice and other primary care facilities. Nearby, the Oxford’s John Radcliffe Hospital offers the ideal opportunity to bring services from the hospital and embed them within the community, integrating GP, primary and acute data systems to provide seamless care – a key component of wider plans to transform healthcare in Oxfordshire.

**HOW TO CREATE A HEALTHY NEW TOWN**

To deliver new models of care services in a physical environment that is conducive to good health, a large number of organisations and professional disciplines have to be involved from both the public and private sector. We also need to look at the prevention and treatment of ill health.
Problem: Provide a concise and coherent summary of the main points discussed in the text.

Solution: The text discusses the importance of bringing different disciplines together to focus on health and wellbeing. It highlights the value of bringing different disciplines to focus on health and wellbeing. Many of the built environment proposals planned are not revolutionary, but the health and wellbeing driver of this programme helps to ensure that good planning and placemaking are not pushed aside by other concerns. Going back to ‘what does a healthy new town look like?’ perhaps the question should instead be ‘how do we ensure that everyone can live a healthy life no matter where they live?’ The Healthy New Towns programme is beginning to answer this complex question, with cross-sector working as the foundation.


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TOpiC

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Urban planners and designers might be forgiven for covertly reminiscing about how things were simpler in the good old days. Back then, health was almost synonymous with safety: would the design bear people’s weight, could someone fall over the barrier, might construction materials contain toxins? But for today’s planners and designers, the question has become more complex: it is no longer simply how design might cause injury, but how design might cause health? The question brings an important opportunity for urban design to deliver substantial value to public health. Good population health is essential for thriving, resilient, urban cities, and it has become increasingly clear that urban design plays a role in achieving this. The realisation has unleashed a proliferation of health-themed planning and design guidelines, case studies, recommendations, and recognition for innovation in this space. And yet amidst the flurry to understand and integrate health promotion into urban design projects, one key question is often missing: what about mental health?

**Urban Design For Mental Health**

Swiss urban planner Hans Wirz has identified the problem when he said: ‘It took decades to integrate knowledge about the biomedical effects of the cityscape into (my) profession. But when it comes to mental health, we haven’t a clue.’ Indeed, planners and designers are only just starting to understand their huge potential value and impact in mental health promotion. As such, mental health is still often neglected in discussions. Some planners and designers feel they lack the expertise to integrate mental health into their projects; some say that mental health is too complex, or not the remit of planners and designers; some consider the issue to be lower priority than physical health; and yet others say nothing, fearing that they will experience stigma if they talk about mental health beyond a general nod to the concept of happiness.

And yet, mental illness is no minor issue to be overlooked, dismissed or avoided. Part of achieving thriving, resilient, sustainable cities is ensuring that citizens can realise their potential, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their community. In addition to being a recipe for a successful city, this is the precise World Health Organisation definition of mental health. Clearly the two are intertwined. As such, mental health should already be a priority for city-makers.

Mental disorders are responsible for about 14 per cent of the entire world’s disease burden, and they cause more disability than any other non-communicable disease. This is particularly relevant in the urban context. City dwellers have an almost 40 per cent increased risk of depression, over 20 per cent more of anxiety, and double the risk of developing schizophrenia compared to people who live in the countryside. Certainly the causes of mental disorders can be complex, but this is equally true of many physical disorders. And it is no longer acceptable for planners and designers to shy away from the topic for fear of stigma – particularly given the key role that urban designers can play in helping to reduce mental distress and achieve happier, healthier cities.

**Urban Living And Mental Distress**

But if planners and designers are to address mental health in urban design, where should they start? Part of the answer may come from a better understanding of the reasons that people who live in cities are at greater risk of various mental health problems. There are four main contributing factors: pre-existing risk factors, disparities, overload, and loss of protective factors; each of which I explain below.

**Pre-existing risk factors**

Many vulnerable people who have an elevated risk of having mental health problems tend to gravitate to the city. For example, those with financial problems may move in search of housing, employment or other economic opportunities;
people with mental disorders or drug addictions may move in
search of peers, or health and social support; people who have
experienced traumatic life changes, from divorce to bereave-
ment to immigration or asylum seeking may seek help (or be
placed) in cities.

Disparities
Secondly, people who do have these pre-existing risk factors
often encounter enormous disparities in the city. This can lead
to physical and psychological segregation in the city, affecting
people's self-esteem, feelings of belonging and mental health.
Researchers have studied this effect, particularly in terms of
economic status. They found that poorer people's mental health
is at risk both when they live in physically separate locations
from richer people, but also when they live in mixed-income
communities (known as the 'poor door effect'). The mechanisms
by which this disparity affects mental health are still not fully
understood, but are most likely driven by exposure to compar-
sions, which can lead to feelings of injustice, social inferiority,
hopelessness, and experiences of prejudice and discrimination;
research suggests that the negative impact on mental health may
be greatest for young boys.

Overload
Thirdly, the city can provide overwhelming stimuli: the density,
crowding, noise, smells, sights, disarray, pollution and intensity
of other factors may combine to make people feel overloaded.
This can have the result of increasing stress; it can also encour-
gage people to retreat into their private spaces and reject the
social connections that can promote good mental health.

Loss of protective factors
Lastly, and perhaps most interestingly in terms of urban design
opportunities, the city strips its citizens of the protective fac-
tors that help people maintain good mental health. City living
can decrease access to nature, reduce regular exercise, and
separate people who move to the city from their social networks
of friends and family without building new, strong networks;
cities can reduce leisure time, privacy and security, and through
a combination of crowding, light and noise can even impact
sleep. The cumulative effect can be an increased risk of mental
health problems, many of which could be partially addressed by
smarter urban design.

URBAN DESIGN OPPORTUNITIES
An increasing body of research is accumulating to explore how
urban planning and design can help to mitigate risk factors and
contribute to better mental health and happiness in the city.
There are four key areas of opportunity for urban planners and
designers. These can be conceptualised and applied using a
framework called Mind the GAPS: green place, active place, pro-social place and
safe place. These four design principles facilitate innovative thinking, yet there
is no one city that fully embodies them. Rather, an increasing number of develop-
ments within the wider city are incorpo-
rating these principles to promote better
mental health and wellbeing.

ACCESS TO GREEN PLACES
Research consistently finds links between urban green spaces (vegetated land and
water) and mental health and wellbeing, even after adjusting for socioeconomic
variation. Green space has been associ-
ated with a reduction of depression and
stress, and improved social and cognitive
functioning (including for attention
deficit hyperactivity disorder, or ADHD).
Green space's potential to improve our
mental health is not fully understood by
scientists, but there are several theories.
Certainly green space encourages exercise and social interactions that
both promote good mental health. Three
principal theories compete and combine
to help explain the positive impact:

- Edward Wilson's Biophilia Theory
  maintains that humans have a biological
  need that is sated when they are in con-
tact with other species
- Roger Ulrich's Stress Reduction Theory
  proposes that being able to appreciate
  the aesthetics of a natural setting while
  experiencing some distance from daily
demands is how green spaces have their
effect
- Rachel and Stephen Kaplan's Attention
  Restoration Theory proposes that natural
  settings capture people's attention with-
out the concurrent need for concentra-
tion that typifies non-natural settings.

In reality, these theories are all likely to
play a role in the mental health benefits
that people derive from access to green
space.

However, it is not enough to simply
add some green space into a design and
assume it will improve mental health.
Inaccessible or poorly managed green
space that feels inconvenient or threat-
ening can negate its use and thus its
benefits. Similarly, green spaces must be
designed to feel inclusive and welcoming
to the full diversity of the city's popula-
tion, rather than being monopolised by
certain groups. Indeed, if appropriate
care is not taken, green spaces have the
potential to become places of fear, where
dark corners, poor sightlines and con-
cealed entrances might help encourage
anti-social behavior and engender intimi-
dation. This deters potential users of the
green space, particularly when people
who may make others feel unsafe, such as
drug users, commandeer the space.

Regular access to safe, well-managed
green space should be a priority in urban
planning and designing. The most effective green spaces seem to be walkable and encourage social interaction. However, both physical and visual access to green space can impact on people’s mental wellbeing, and frequency of exposure seems to be important. As such, equally important is a focus on smaller spaces that people will encounter naturally in the course of their daily routines, including streetscapes, workplace gardens, and even views from office windows.

**ACTIVITY IN DAILY ROUTINES**
When designers and planners think about exercise, there can be a tendency to consider it a physical health intervention. However, activity is one of the most important design opportunities for mental health. Exercise can be just as effective as anti-depressant medication for mild and moderate depression; it can also reduce stress and anxiety, and help to alleviate some of the symptoms associated with ADHD, dementia, and even schizophrenia. And yet many people, particularly in the urban environment, struggle to incorporate exercise into their daily routines. A key opportunity is designing active transport options, including safe and convenient pedestrian and bike paths, which harness not just the benefits of exercise but also the reduction of stressful, sedentary commutes, with the added benefit of freeing up leisure time and sleep time to further promote good mental health.

**CREATING PRO-SOCIAL PLACES**
Mental health is closely associated with strong social connections and social capital. Indeed, this is increasingly understood as one of the key opportunities in mental health promotion. As such, there is extensive potential for designers to innovate, creating features within projects that facilitate positive, safe, natural interactions amongst people and foster a sense of community, integration and belonging. This means strategies such as developing public spaces for flexible use (including participation and volunteering opportunities), street furniture for resting and chatting, orientation of entrances to promote social gatherings, and conversely, avoiding long, unchanging facades that extend across city blocks and cause people’s minds to dwell on negative thoughts, or cities that promote individual car use over pedestrian connections.

**SAFETY AND SECURITY**
A particular feature of urban living that impacts people’s mental health is a feeling of insecurity in the course of a person’s daily life. Occasional fear can trigger the ‘fight or flight response’ where the body detects a threat and stress hormones prepare the body for survival responses. As an evolutionary function, this would save people from being eaten by a lion or such, and afterwards, the body would return to a resting state. In the city, constant low-level threats can keep the body in an unnatural habitual state of preparation, which can affect mood and stress in the long term. Relevant urban dangers can include risks posed by other people (such as being robbed), risks from traffic (such as being run over), and the risk of getting lost (particularly pertinent for those with dementia, where this risk can limit their independence and thus their quality of life). The appropriate design of roads, good street lighting, and distinct landmarks and wayfinding cues are just some of the design features that can increase perceptions of safety in a neighborhood.

**TOWARDS BETTER INTEGRATION OF URBAN DESIGN AND MENTAL HEALTH PROMOTION**
The question of how to link health and design experts to identify evidence-based design opportunities to improve people’s mental health was the main driver in founding the Centre for Urban Design and Mental Health (UD/MH) in 2015. This global think tank seeks to explore opportunities to design better mental health into cities. Since its establishment, we have seen an increasing understanding of the opportunities, along with a rapid expansion of interest and commitment to improving mental health through urban design. Even so, the topic often remains an afterthought for many planners and designers, and rarely features explicitly in city policies; a notable exception is New York City’s Guiding Principles for Design and Construction Excellence 2.0, one example of design guidelines that meaningfully address mental health.

It is essential to focus on the truth that people are the very heart of cities. To fully realise the potential and value of urban design in promoting public mental health and wellbeing, opportunities must be appreciated and seized not just by the public health experts and by urban designers, but also by the policymakers, planners, and clients involved in commissioning and approving urban design projects. This is important because mental health promotion adds value to urban design and is needed to achieve successful cities all over the world.
Understanding the Health Outcomes of Urban Design

Eime Tobari and Nicholas Francis explain how Space Syntax can map key health indicators

With health rising up the policy agenda, there is an increasing challenge for urban design professionals to improve health outcomes through their interventions or produce ‘healthy’ places. Understanding how urban design impacts on health outcomes is challenging in many ways. Firstly, the way that the urban environment impacts on health is multifaceted and complex. Secondly, the health impacts of urban design projects have often been seen as highly subjective and poorly understood. Some aspects of the urban environment such as air quality and water supplies have relatively direct, tangible and measurable impacts on public health. However, other aspects, particularly those affected by urban design professionals, such as street connectivity, density, land use patterns, public transport networks and the overall design quality of the public realm, all indirectly affect people’s health by affecting their behaviour. How can professionals deal with the legitimate challenge of positively contributing to public health, and effectively incorporate health concerns into their way of working?

A better designed or wider pavement does not automatically make people healthier by lowering the risk of obesity. However, it may contribute to encouraging people to walk instead of using a car, especially if located in an area where travel time is similar between walking and driving. A number of studies have already shown that physical activities embedded into daily routines positively affect individuals’ health and wellbeing. There is also a healthy feedback effect: fewer cars on the streets will reduce air pollution.

It is imperative that we understand the role and performance of urban design features. Taking green spaces as an example, there are innumerable studies that show their positive impact on both personal and public health. Does that mean that we should provide as many, and as much, green spaces as possible? That might improve air quality but most of the benefits of green spaces, including increased levels of physical activity, are only achieved if they are well used. Green spaces that are poorly designed or managed and badly integrated into cities may well be counterproductive to public health objectives if they feel unsafe or segregate communities. Access to and the quality of those spaces are therefore as important as, if not more important than, their number or size.

Space Syntax has embraced this challenge and has developed tools to address the interactions between urban design and health outcomes. Space Syntax as a methodology offers a unique way of describing urban design features. We have been using spatial analytics that have built a body of evidence linking the spatial design of streets and spaces to the ways in which people choose to move as well as wider social and economic outcomes for over 25 years.

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We have used this approach to inform evidence-led urban planning and design projects across the UK and internationally. Underpinning our approach is a spatial network analysis that describes and measures the spatial structure of urban places. Understanding the spatial structure enables us to identify spatial factors that relate to patterns of movement and interaction and to certain social and economic outcomes of places such as retail performance, land value, crime and even productivity and innovation. Combining spatial network modelling with other datasets such as demographics, transport and land use, we often develop Integrated Urban Models. These models begin to capture the complexity of urban environment and produce simple, comparable measures of the social and economic outcomes of urban design features.
SPATIAL DESIGN AND HEALTH OUTCOMES

We have identified a number of spatial design issues that are associated with health outcomes, which our Integrated Urban Models can be used to address: active travel, access to services, social isolation and so on. These issues are interrelated and have a cumulative impact on health outcomes. For example, individuals’ propensity to choose to walk or cycle depends not only on the availability of different modes but also where their destinations are in relation to their homes, work and other facilities that they might regularly use. If the immediate neighbourhood does not offer services necessary for daily life, such as grocery shops, banks, schools and places of employment, no matter how walkable the area is, people will have to travel to other centres, increasing the likelihood of their using cars or public transport.

How long we spend in a car or walking, or how much physical activity we carry out, affects our health negatively or positively. Furthermore, certain physical conditions may reduce the likelihood of social interactions due to the costs of transport, which are not solely financial. Time, availability (such as car ownership or public transport provision) and psychological costs (such as the perceived safety and attractiveness of the public realm) could also be contributing to inactivity and social isolation.

Space Syntax is developing a set of tools based on Integrated Urban Modelling techniques to support an objective, consistent and comparable assessment of the impacts that urban areas have on health and wellbeing. These tools can help designers and decision-makers understand existing conditions and forecast the impacts of planning and design ideas. They can be used to identify areas that are conducive to high levels of physical activity or, on the contrary, prone to high levels of car dependency. In the Royal Borough of Greenwich, for example, we analysed access to town centres using various transport modes. The use of a spatial network model allows a more detailed catchment area analysis than the commonly used isochrone-based analysis, where journey times are mapped as bands. The results can be easily overlaid on a GIS platform to explore correlations with other factors and to identify target areas for physical interventions or ‘soft’ initiatives such as campaigns. Overlaying Index of Multiple Deprivation (IMD) data with a walking catchment analysis shows areas that do not offer good access to town centres on foot and are more deprived on average. Interventions suitable for these areas may differ from those for another area with similar levels of accessibility, but which is less deprived.

A similar methodology was applied to assess how well Milton Keynes creates the conditions for active travel in relation to daily commuting trips. Using the Integrated Urban Model for Milton Keynes, the number of commercial addresses within 15 minute travel time was calculated for each street segment for different transport modes: the illustrations show the concentration of employment uses within a 15 minute walk of all streets in the town, and how each area encourages the use of buses as opposed to private vehicles. The comparison between buses and private vehicles in terms of simple journey time identifies areas that are naturally conducive to car dependency and areas where residents can be encouraged to use public transport through the physical environment, service provision or other nudges.
We compared this result with car ownership data as an indicator of car dependency, although we recognise that ownership does not necessarily mean dependency. In some areas, the car ownership level is high despite the advantage of cars against public transport being relatively small. The analysis is still underway and we plan to extend it to include other transport modes, such as walking and cycling and to incorporate different land uses such as retail, schools, GP surgeries and hospitals. The results of such analyses would inform the development of intervention ideas, such as a change of speed limit or the introduction of shared space, which can then be tested using the Integrated Urban Models.

EVIDENCE TO INFORM DECISIONS

These tools allow us to make health and wellbeing more visible in urban design and planning discussions by quantifying and presenting the impact of planning and design decisions on health and wellbeing-related outcomes. The tools can be used for Health Impact Assessments and in a design review context. We have found that despite its obvious importance, health and wellbeing have not always been given a high priority in the urban planning and design agenda. This appears to be partly due to their complexity and to a lack of evidence linking urban planning and design decisions with health outcomes. However, it is encouraging that new evidence is emerging and Integrated Urban Modelling tools can begin to break this impasse, by comparing health and wellbeing outcomes with other criteria such as financial costs, economic productivity and energy efficiency to allow a more holistic urban planning and design.

Thanks to the increasing availability of data and the advance of data analysis tools, complex analysis using Integrated Urban Models is becoming much easier and faster. The application of our tools to health issues is still in its infancy, but the results can inform a range of activities from the development of visions, policies and area strategies to the assessment of individual planning applications and design development. This approach seems to help create a common base for discussions amongst different groups of people by replacing speculation with objective and comparable modelling results. It also enables a wider range of stakeholders, including residents, to co-create healthier places by making urban planning and design processes more transparent and dynamic.

Dr Eime Tobari, Associate Director, and Nicholas Francis, Senior Consultant, Space Syntax Limited
The International Self-Care Foundation (ISF) presented its first World Healthy City Award to Yangzhou City, China, in 2016, for outstanding achievements in developing an urban living environment conducive to self-care and healthy lifestyles for its citizens. The ISF is a UK-based charity championing self-care around the world. In practical terms this involves helping to develop evidence-based self-care concepts and practices, and helping to promote the role of self-care in health. We were invited to be part of the accreditation team undertaking the assessment for the designation, which is awarded on merit. The team also included ISF President Dr David Webber and Professor Debra Moser of the University of Kentucky, USA, and was supported by members of the ISF Hong Kong team.

The award is an important achievement for Yangzhou City at a time of rapid urbanisation across the world, especially set against a backdrop of diverse evidence increasingly telling us that cities can be bad for our health and wellbeing. The overall objective of the assessment was to identify and understand the approaches that the Yangzhou City authorities have taken specifically to support and encourage citizens to lead healthy lifestyles and look after themselves through self-care. We were looking specifically for policy implementation in health care, education and urban planning.

For an urban designer who identifies city development as a human ecology, the offer to join the accreditation panel of health and wellbeing experts was irresistible; an opportunity to review positive efforts to create a healthy city through the lens of another culture. The accreditation was undertaken over two full days in Yangzhou, supported with detailed background papers, and concluded with a seminar with senior civic leaders and managers. We also took the opportunity to spend additional days in the city to take in its cultural history, which reinforced our positive image of Yangzhou.

Prior to this visit, our knowledge of contemporary planning and design in China came from built environment journalists and pundits disseminating bright images of new sustainable cities, designed along Western principles. The mainstream media oblige with stories about the Chinese love of building Cotswold villages and pastoral golf courses, replicated ad nauseam. More recently, investigative journalists have uncovered a darker side to urban development in China; vast new cities lying empty, banal facsimiles of Paris etc., their developers in jail for corruption; farmers driven from their land, urbanised and ghettoised.

Thank goodness for an open mind and the background papers. Putting this into perspective, we have volume housebuilders delivering the same Cotswold pastiche, Trump golf courses and council estates currently referred to as sink estates in government initiatives.

MEETING THE LEADERSHIP
Over dinner, we listened to the Secretary of Yangzhou Communist Party of China Committee and Director of the Standing Committee of Yangzhou People’s Congress, Xie Zhengyi, speak of his aspirations for Yangzhou’s citizens and the city region. He explained the Chinese greeting ‘Have you eaten rice today?’, in short ‘Have you eaten?’ as undernourishment.

KEY STATISTICS
- 70 per cent of the NHS budget is spent on people with long-term conditions
- Between a third and a half of people with long-term conditions do not take their medication as prescribed
- Each A&E attendance costs the NHS £132 on average and a GP visit £45
- One in five GP appointments is for minor conditions, such as back pain, headaches and colds, costing £2 billion a year
- Four in 10 people who visit A&E leave without having any treatment
- One million emergency admissions are thought to be preventable
- In 2014, nearly a quarter of all deaths (23 per cent; 116,489 out of 501,424) in England and Wales were from causes considered potentially avoidable through timely and effective healthcare or public health interventions
- There were 583 million visits to NHS Choices in 2015 (a rise of 83 million on the previous year).

LGA 2016
2–5 Parks include features to encourage active lifestyles for people at all stages of life. Community facilities for self-care and volunteering are available within the local without insurance often defer addressing minor problems until they become chronic.

In Britain, our National Health Service is widely described as being in crisis, with increasing privatisation, and sometimes a lottery in the quality of or access to health care, depending on the postcode and the services required. In short, it is looking unsustainable in terms of the demands we have of it. In 2013, responsibility for public health was transferred from the NHS to local councils. Whilst this may have led to a lack of coordination between different services and continuity of care for the patient, it also prompts us to think differently about health. In 2016, the Local Government Association published a guide on self-care, Helping People Look After Themselves. As Simon Stevens, Chief Executive of NHS England puts it, ‘At a time when resources are tight, we’re

All residents have access to the same range of facilities within each neighbourhood, complex and building. Developers must provide internal space where neighbours can meet; the use of these spaces depends on the community, but central to all of them are health and self-care

Yangzhou’s contemporary urban planning continues to focus on these baseline needs, with the quality of food high on the agenda. The local cuisine is about freshness and simplicity which equates to a very healthy diet. Yangzhou Food Industrial Park focuses on food growing and processing for the wholesale fresh and prepared food markets – it is a transformational development that combines ecological science, technology and food security. Its first phase covers three square kilometres and drives three economies: food processing, manufacturing and industrial tourism. It aims to be internationally first-class in these areas and has already won many awards as a demonstration base for the food industry and for experimental agricultural cooperation.

Equally important is water quality, something we take for granted in Britain. The first water plant in Yangzhou was founded in 1960 and its expansion, completed in 2014, includes the most advanced treatment processes available. These are important state-sponsored infrastructure projects that provide the basis for health. In terms of healthcare, the state provides free Western and traditional Chinese medicine at the secondary and tertiary levels – hospitals and specialist centres – with subsidised prescriptions for medicines. However, there is no primary care – GP surgeries – as the cost is prohibitive to the state. This creates a significant health and economic issue. If preventable diseases are not identified or treated early enough, there is an increased economic impact on the health and social care systems further down the line, not to mention the impact on the individual, family, community and wider economy. This Catch 22 is an unsustainable scenario and well represented in the United States where without a welfare system, people

has been a widespread danger to health within living memory. In Maslow’s hierarchy, it is a fundamental physiological need, along with clean water and air. It compares with our greeting ‘How are you?’, in short ‘Are you well?’ alluding to the diseases of urbanised Britain that led to the establishment of our National Health Service.

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going to have to find new ways of...boosting the critical role that patients play in their own health and care.'

**WHAT CAN WE LEARN FROM YANGZHOU?**

Self-care is central to the development of Yangzhou. Mr Xie Zhengyi continued his conversation with a reflection on the history of the city. Yangzhou is 2,500 years old with a population over 4.6 million people and sited at the confluence of two great river systems that create an environmentally rich landscape. It is also the beneficiary of historic decisions to build major canals over the millennia to capitalise on these natural assets and cement Yangzhou's place in China's trade network. The long-term benefit of these projects (regardless of their original purpose) is not lost on the leadership. The ecological value of the inherited water system, and its flow through the city, provides a unique public realm, free and accessible to its citizens. Yangzhou's management of its green and blue infrastructure has won many international awards.

To capitalise upon this, and forming this generation's contribution to the future, 60 new parks and several million semi-mature trees are being planted as part of a five-year plan. Symbolically, six million Gingko biloba trees have been planted. Native to China, they are one of the oldest living tree species on earth, extremely long lived, virtually indestructible (six survived the atomic bombing of Hiroshima), and are a source of food and medicine. The great avenues through the city are a statement of the future linking to the past, connecting every neighbourhood. Whilst cleaner air from this landscape is a benefit for health, the strategy behind it is to achieve a hierarchy of park provision within the city, with every citizen being no more than a ten-minute walk from a local park. The purpose is to encourage active lifestyles for people at all stages of life in a healthy ecological landscape. There is provision for sports, games, dancing, walking, running, tai chi and facilities for watching, along with celebrations of the history and culture of the province. What is created is an inclusive outdoor environment, delivering inter-generational mental wellbeing.

The quality and purpose of this public realm is consistent across the city. In areas of residential regeneration and development, the foundations of good health are delivered ahead of homes to bring immediate benefit: clean water, medical centres and active environments. The driver of this city is the living environment, not the built environment, a different way of valuing place. There is a consistent impression of public space being an inclusive resource, which is much more important to mental wellbeing than merely greening the city.

Like anywhere else, there is a hierarchy in Chinese society reflected in the urban form, but here it is modified by certain physical features that serve as levellers. Residential development is of a predominantly dense, city scale within a positive public realm, rather than taking the form of suburban sprawl. All residents have access to the same range of facilities within each neighbourhood, complex and building. Developers must provide internal space where neighbours can meet; the use of these spaces depends on the community, but central to all of them are health and self-care. In some, equipment is provided where people can check their own blood pressure etc. and access health information via computers. In some complexes, where doctors are residents, they volunteer time to advise their neighbours on self-care. In other neighbourhoods, professionals in local health centres volunteer with the local community. Many other members of the community (such as teachers, musicians and gardeners) also volunteer their time and expertise, enhancing wellbeing for all. This resonates with *Five Ways to Wellbeing* (New Economics Foundation, 2008) which is embedded in the UK government’s health policies.

We witnessed these physical and social approaches to self-care in Wenchang Garden Community, the largest ‘resettlement community’ in Yangzhou, home to 12,608 people in 4,220 households on a 13-hectare site. The programme that has created this new neighbourhood aims to lift people out of poverty and to support individuals and families in the transition from rural subsistence farming to urban living. Many, but not all, of the people here are from former rural communities displaced by the expanding city. In the areas on the urban fringe that we visited, there were still farmers living in unsanitary conditions, housed in makeshift tarpaulin shelters amongst ‘food gardens’ – we might recognise them as allotments. They are precarious places where you would still ask ‘Have you eaten rice today?’ The shift from this lifestyle to a dense urban one where you have few skills on offer, is why new and emerging neighbourhoods like Wenchang Garden Community are so important for nurturing behaviour change, helping to apply skills in a new environment and integrating with a new way of life.

The support structure in Wenchang Garden Community includes 2,600m² of office space plus extensive community rooms that contain libraries, museums, arts, crafts and activity spaces. It is a mixed neighbourhood, where welfare and support systems have been established and are managed by the community, covering social services, employment and training. To prevent isolation, ‘carrying cards’ are distributed to residents, aimed particularly at vulnerable groups. Thirty-five social organisations have been established within this community, with 1,372...
The accreditation team visiting community facilities in Yangzhou

volunteers registered on a time-banking scheme. A community work exchange centre and a community doctor workstation have been established, the latter operating as an educational practice base for the local hospital and university. The workstation enables a mixture of hands-on work and theoretical research into community building and management. There is a lot to learn here in terms of how universities and communities could work together in the UK.

At a policy level, Yangzhou City has implemented a 10 Themes (of) Health Promotion programme, covering hospitals, schools, health providers, companies, communities and families. The city authorities indicate that there are already demonstrable positive benefits from this work in progress. The average life expectancy of Yangzhou City residents is 79 years, three years higher than the national average, and with lower levels of hospitalisation and chronic disease. This has resulted in a surplus in Yangzhou’s health insurance scheme and its wider recognition as a city of choice, attracting new residents, business and responsible high quality inward investment.

WHAT ARE THE CHALLENGES?
Whilst the shape and form of developments and infrastructure can be planned, taxation policies put in place to cross fund public works, and volunteer schemes facilitated to nurture a sense of citizenship, stewardship of the future city is a potent issue. Yangzhou city planners were open about the threats inherent in the success of the city, demonstrating a preparedness (as paraphrased below):

- The growth of motor vehicles is rapidly creating pedestrian conflicts, with environmental and health problems for the city at large.
- The city layout is loose and not conducive to walking, while the cost of private transport is high for most residents, creating inequity within the city.
- Greater provision for an ageing population is required to overcome a serious lack of health care institutions and a good building mechanism (we interpreted this as lifetime homes, though the extra-care facilities we saw were excellent).
- The environmental situation remains challenging, with air and water pollution continuing to hamper urban development.

Movement is a big issue. Whilst neighbourhoods are walkable, getting around the city on foot is challenging. Cycle infrastructure is established at a significant level across the city, with 2,000 bicycle hire stations supplying 20,000 cycles for public use. There is extensive use of electric mopeds and scooters, but near-misses with cars are everywhere to be seen. The highway network is generous, and attractively designed from a pedestrian and cycling perspective. Whilst there is time, it will be crucial to capitalise on this positive environment with public transport infrastructure that reduces the space available for private motor transport, moderating its dangerous influence.

The cooperative city leadership, working with concerted coordination between departments, is implementing a thoughtful and consistent people-oriented philosophy, allowing a resilient environment to emerge from a healthy, sustainable community.

Graham Marshall, Prosocial Place and Visiting Senior Research Fellow, University of Liverpool, and Professor Rhiannon Corcoran, Academic Director, Heseltine Institute for Public Policy and Practice, University of Liverpool
People are living longer than ever, so do we really need to make places healthier? Yes we do, because while we are living longer, we are living more of our lives in poor health. This is a result of how we go about our daily lives – travel, work, leisure – which is inherently connected to the places we live in.

We know that urban form and the quality of the public realm can impact on our health in many ways: air pollution, social connectedness, access to food and services, mental wellbeing, road danger, noise and physical activity. How do we know which of these health impacts is the most important and what is the best way to address them? The most effective thing to do is to address all of them at once, rather than focusing on individual issues. The health challenges we are facing are both significant and urgent, but we can go a long way by implementing good practice in urban design, doing it at every opportunity and at the largest possible scale.

**HEALTHY STREETS**
Creating places that work for people will deliver places that are healthful. When it comes to the public realm, this largely means reducing the dominance of motorised transport. While motorised transport is a great asset for performing some tasks in urban areas (e.g. carrying large bulky objects), it is currently being used for a lot of tasks that it is not needed for (e.g. carrying a person who could walk or cycle instead). This impacts negatively on both human health through air pollution and physical inactivity, and what urban places feel like to be in: noisy, intimidating, unwelcoming. A car-centric urban realm also reinforces health inequalities with the most disadvantaged people experiencing the worst impacts of air pollution, road danger and poor access. Taking an approach that puts people’s needs at the centre of decision-making can serve to reduce these inequalities and this is what the Healthy Streets approach is all about.

Healthy Streets identifies ten indicators of a street environment that tell us how well we are serving people through our urban design and transport policies. Each of these indicators has a scientific evidence base for its role in improving health, reducing health inequalities and encouraging sustainable travel. There are two top level indicators: ‘Pedestrians from all walks of life’ and ‘People choose to walk and cycle’. The ultimate aim is to create environments in which everybody is able to participate in public life and where the healthiest and most environmentally friendly transport choices are the first choice.

While these two indicators are the ultimate objective, they also serve as indicators of how we are performing and what we, as designers and planners, need to do. If there are no children playing in the street, we need to ask ourselves why and what we can do to change that. The other eight indicators also prompt us to think about what we need to do to create a healthy, inclusive environment. Streets that do not feel safe or relaxing, streets which are noisy and where there is nowhere to stop and rest or shelter from inclement weather are unappealing to the majority of us but, even more importantly, can mean that some people simply cannot use those spaces.

The ten Healthy Streets indicators are not all within the gift of transport professionals to deliver. Landscape architects create green, inviting public spaces; community groups and artists activate spaces with art and activities; planners, developers and designers ensure buildings face onto streets and provide active frontages and destinations for local trips on foot or by bicycle. All these are essential for creating Healthy Streets.

The Mayor of London, Sadiq Khan, has committed to taking the Healthy Streets approach in his vision *A City for All Londoners*. We can expect to see decision-making by Transport for London...
The Healthy Streets objective is to make streets and public spaces healthier and fairer environments... moving the conversation beyond which mode of transport gets the most space to what mix of uses delivers the best place.

and parts of the Greater London Authority reflect this people-centred approach. This is not only an opportunity for London; the Healthy Streets approach can help politicians everywhere talk to their communities about what they want to do to make urban places better. We can all relate to what it feels like to be on a street: it is tangible to us in a way that talking about transport or regeneration policies may not be. Using the Healthy Streets indicators also helps communities to communicate what they want to change without having to know what the means of delivering that change will be; that task can be given to the policy makers, planners and designers.

For policy makers, planners and designers there is plenty of guidance on what to do to achieve the Healthy Streets outcomes. The Faculty of Public Health recently published Local action to mitigate the health impacts of cars (2016) which points to the effective measures that can be taken by a range of practitioners to reduce the dominance of traffic on people. The National Institute for Health and Care Excellence (NICE) have also produced Public Health Guidance for hard and soft measures to increase walking and cycling. Best practice design guidance includes Designing for slow speeds by Urban Design London, and Transport for London's London Cycle Design Standards and Streetscape Guidance.

MANAGING COMPETING DEMANDS
One of the biggest challenges in putting design guidance into practice and applying the Healthy Streets approach is the need to manage the competing demands of different stakeholders on the limited space between buildings. Streets are complex and contested spaces and there is no single blueprint that can be applied to every street to deliver the Healthy Streets objectives. Instead a process of negotiation is required on every street to deliver the best outcomes within the physical, financial, political and social circumstances. Taking the Healthy Streets approach at least establishes from the outset that the objective is to make streets and public spaces work better for people, and to be healthier and fairer environments. This can be incredibly helpful in moving the conversation beyond which mode of transport gets the most space to what mix of uses delivers the best place.

There is growing recognition of the importance of designing and managing public spaces well for keeping people in good health and reducing inequalities. However it can take years to demonstrate that good urban design is delivering reductions in the burden of long-term conditions such as heart disease, which can mean that practitioners struggle to demonstrate the health benefits of their work. Professionals in this field can demonstrate the value of their work by showing how it is helping to deliver health outcomes using the Healthy Streets indicators, to illustrate the benefits of taking a holistic approach. Changes in the ten indicators of a Healthy Street can be shown from the design-stage and increasing the number and range of people choosing to spend time, walk and cycle on the street can be shown easily through street surveys. These simple measures are a great proxy for a successful and healthful environment.


2 Sydney: new cycle tracks and planting to reduce traffic dominance and encourage walking and cycling
3 Montreal: planting and seating create a meeting space
We have been very good at creating unhealthy cities. We may not, in the 21st century UK, have slums with open drains and foul smelling streets, plagues of rats and flies, open coal fires and lung-destroying thick smog, polio and rampant tuberculosis, all typical of our 19th century cities, – but in the process of modernisation, we may have created less visible, but more insidious life-threatening syndromes.

IS THERE A FORMULA FOR THE HEALTHY CITY?
The easy answer to this question is that no two cities are the same, but in my time as the elected mayor of Bristol, a city defined by its difference, it became very clear to me that there is a common city agenda: the healthy city. I was impatient to make change in just four years but knew that change is slow and often strongly resisted. I used to claim that the collective word for those who resist change is adults, which went down well in schools!

There is a real urgency for action. We need to encourage healthy lifestyles, and clean up our act, reduce air pollution and the factors of city life that put unnecessary additional pressure on our physical and mental health services. This is a huge challenge in a democracy. So the first rule is that we desperately need courageous city leadership that is more interested in step change than in political survival.

A LABORATORY FOR CHANGE
My election vision was that: ‘Bristol becomes a place where young and old are respected and valued members of society and where living healthy, happy and safe lives is the shared hope of everyone.’

We started with schools and with the youngest children: the line of least resistance and our greatest investment in the future. It is individuals that make a difference, so I was extremely fortunate to be introduced to Julie Coulthard, an enthusiast for this approach with a great track record working within Bristol City Council’s Public Health team. Bristol launched its Bristol Healthy Schools initiative for which I announced the Mayor’s Award for Excellence.

Healthy Children = Healthy Learners = Healthy City: The healthy schools programme encourages schools to promote healthy lifestyles and behaviour across a range of issues, physical, environmental and social. Pupils are encouraged to explore healthy growing, cooking and eating as well as learn about personal safety and the importance of introducing physical activity into their lives. It is also about mental health, an issue of huge and growing concern amongst the young. Young people learn how to build positive relationships and manage difficult feelings, talk about their anxieties and discover where to go when they need help.

We set the bar high. The primary schools in particular responded magnificently, with the happy spin-off of involving not only teachers and staff but also parents – even sometimes unwittingly. One of my signature policies was ‘One tree per child’: a primary school programme that became a key part of Bristol’s year as European Green Capital 2015, with the aim of it spreading to other cities across the UK, and working with an Australian charity of the same name and purpose, across the world. I have no doubt that this programme will be a great driver for change, but it is just part of a bigger plan.

Safer streets and healthy travel: We have stolen streets from our children and dominated them with cars, impeding children’s freedom to play, walk and cycle. We have allowed cars to take over the majority of spaces in cities and made streets more dangerous and polluted. Creating safe routes to school and breaking the damaging habit of driving kids, creating a third rush hour, should be a priority. In Zurich kindergarten kids walk unaccompanied to school and parents are strongly discouraged from giving them a lift.

In the UK any such edict is seen as ‘nanny state’ interference but this is where the idea of the carrot and stick is so necessary. After-school play streets advocated by Playing Out (http://playingout.net/) are a great eye-opener to remind people what a neighbourhood street is for.

1 The Mayor’s Healthy School Food Awards in 2015, presented by George Ferguson
and that city children have lost the freedom to roam as previous generations could. Play is an essential element of the healthy city and should not be confined to parks and playgrounds.

**Taming and containing traffic:** We must free our polluted historic city centres of all but essential traffic, and enable traders to spill out into the streets and people to have space to play, dance and socialise. My Bristol programme Make Sunday Special was designed to open streets and to open eyes and minds to the huge benefits of a car-free environment, as a precursor to a permanent return of the city to its people, not only in the centre but also in the hearts of its urban villages.

Now essential to many, cars are the great destroyer of cities. If I had had the power, I would have set an early date to ban the internal combustion engine from my city. It has replaced the open coal fire as the principal urban danger and environmental health hazard. In the meantime we can reduce speeds to civilise streets: 20mph is plenty on all but the main radial routes, with 10mph on shared surfaces.

**Making public transport and cycling sexy:** I believe that individual car ownership will decline but it won’t do so without viable alternatives: i.e. green corridors combined with zero-emission segregated transport corridors into and out of the city. We have been left behind by our continental counterparts in failing to invest enough in light rapid urban transport systems. Bordeaux has seen what investment can do in terms of tempting people out of their cars and creating a beautiful and healthy public realm in the process.

By selling my car and buying a better bike, I did my bit towards this goal, which has hugely benefited my health and fitness. Cycling has massively increased in Bristol, which is a hilly city, but it takes more than inspiration to wrench people out of their cars. For example discouraging commuting into the city by reducing parking, especially in central residential streets that have become free commuter car parks to the detriment of residents’ health and amenity, or including cycling proficiency by those who are able, as part of the driving test and a condition of renewing a driving licence.

**City as farm and nature reserve:** Bristol is fortunate in having the highest ratio of green open space of any major city in England, but we could use it more imaginatively to grow trees and food. While we need to build higher density communities, we should ensure easy access to green recreational space and wildlife. Contact with nature and wildlife is fundamental to our wellbeing and we need to embed it into city planning, working with local Wildlife Trusts amongst others, harnessing the huge potential for volunteering.

To create a healthy city that is good for wildlife, we need to build green corridors and to reach out into the surrounding countryside in a more imaginative way than that encouraged by the 1947 Planning Act. This resulted in low density, car dependent, suburban extensions or satellite housing estates.

**Redefining city boundaries:** In too many cases cities have grown into neighbouring authorities with seemingly little interest in or understanding of the city that is their lifeblood. The current UK city region devolution process with directly elected metro mayors is a step in the right direction. But without strong planning powers and leadership, and with all the legal and bureaucratic hurdles of central government, it will fail to make the type of radical changes that my hero city of Copenhagen has been able to make over the past 40 years.

Truly strategic planning should take the bull by the horns; cities should be prepared to do deals with surrounding landowners, as was done by architect Mayor Jaime Lerner in the city of Curitiba, creating both city parks and forests alongside high density development. Curitiba turned from being a polluted, car-dominated city into the place that has inspired green and healthy change across South America and beyond.

**It’s the little things that matter:** Creating a healthy city is not just about big gestures. It is about being more thoughtful. Why do we use the car when we could walk? Why opt for the lift rather than the stairs? It’s often too easy to do so, and as urban designers, architects and planners we should be making the healthy option the easy one – the walking or cycling route the quicker one. As cities and as individuals we should be investing in energy-saving measures and renewables, but most of all we should be creating polycentric cities of mixed use self-sustaining urban villages, which foster happy and healthy lives. It is healthy, happy cities that will win in the economic stakes and we all have a part to play, whatever our age or occupation. Let’s start now! ●

George Ferguson CBE PPRIBA, Mayor of Bristol 2012-16
http://www.happycity.org.uk/
Healthy Placemaking as the New Normal

It’s now Spring 2017 and it’s been an education collating articles for this edition of Urban Design. From Public Health England we learn about the value of evidence and health data to tackle some of the most pressing health issues: inequality, physical inactivity and obesity. From Layla McCay we learn about the urban factors that contribute to poor mental health and the priorities for designing out mental distress in towns and cities. Lucy Saunders has explained what a healthy street is in clear, practical terms and Space Syntax have shown how spatial analysis can help us create places where, for example, we maximise the number of people who can walk to work and walk to the shops. We learn from George Ferguson about leadership that supports changes to activities, places and attitudes and Laurence Carmichael has reinforced the importance of active travel in increasing physical activity and reducing air pollution. Prosocial Place have set out the policies, places and social structures that underpin Yangzhou’s incredible achievements in boosting population health, and NHS England have explained the broad cross-sector working that creating healthy places here will depend on.

We continue to build low-density sprawl and car-orientated streets and it’s just not on. The NHS budget won’t stretch to treating multiple, long-term preventable diseases en masse and people really don’t want to suffer from those diseases. We understand a lot about the role of the physical environment in shaping people’s behaviours, wellbeing and health. We need a new normal in placemaking.

Drawing on the expertise of the contributors to this journal and many others, this is my advice for building health into the physical environment, to help to make healthy placemaking the new normal.

1. Say it out loud and keep saying it. Healthy placemaking will only happen when it becomes real for everyone involved in planning, design and decision-making. Compact, mixed use, walkable neighbourhoods. Cycling and public transport. Neighbourhoods that are clean and feel safe. Healthy food and positive social contact for everyone in society. Accessible and appealing green spaces. Say it in meetings and in informal conversations. Say it with colleagues, clients, politicians and stakeholders. And say what’s bad for health: low density, single use, car-orientated, polluted, unfriendly, lonely places: get that elephant in the room out.

2. Bring health people to the table. Work with the people responsible for health prevention, physical and mental health care and social care. Share issues, data, objectives and if possible, funding. Find solutions together.

3. Use the frameworks that exist. Work with the people responsible for health prevention, physical and mental health care and social care. Share issues, data, objectives and if possible, funding. Find solutions together.

4. Do it with your new friends. Work with public health practitioners and with health and social care professionals to decide how success will be measured and to create the healthy neighbourhoods you dream of.

Good health and good luck.

Rachel Toms
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www.designcouncil.org.uk/healthy-places
Beyond Live/Work, The Architecture of Home-Based Work
Frances Holiss, Routledge, 2015, ISBN 9780415585491

Tracing historic and contemporary combinations of homes and workplaces, this book offers a fascinating insight into what we regard as a modern phenomenon enabled by technology, but which is based in how people have long lived and earned a living.

Citing the White House as the ultimate live/work example, the author seeks to celebrate and learn from cases: from medieval and Industrial Revolution workhomes, iconic architect-designed Workhomes, to the everyday reality of combining work and life in one place.

Looking at the modern city and how it detached work from home in an effort to make cleaner and safer living conditions, Holiss explores the suburbs, housing standards, the Garden City Movement and functional zoning laws. These are shown as separating men (the principal breadwinners) from their wives and children, and relegating home-based working to an ‘underground’ activity, rather than a natural part of the city’s social capital, and one of lesser value, a view which lingers today. Charles Booths’ detailed accounts of middle and working class London is used alongside Jane Jacobs’ four generations of diversity in city streets, to show the social and economic value that living and working together can bring. Usefully, the book looks at governance, which has wrongly portrayed home/work as an unwelcome illicit way of working (or conversely living), with planning policies, laws or taxes that penalise home-based enterprise; resourceful workers who have to find ways to make a living without upsetting the neighbours.

Bringing the debate into the 21st century, the final chapter looks at sustainability. The energy consumption involved in corporate vs. home based work typically means that environmental efficiencies are side effects rather than the primary goal. Economically there is a risk that the lessons learned here are not being heeded, so that in modernising many cities in India, the essential but informal economy is being swept away with the slums, eliminating opportunities for home-based working in new western-style housing typologies. The section on social sustainability (and the everyday reality section above) draws upon the views of 76 interviewees that the author surveyed for the book. Despite the problems of working at home or living at work, almost all valued the autonomy and control that the model offered them: to be more involved in family time – young or old – or avoiding time-consuming commutes. The benefits to the local economy are also explored, and where home/work is not allowed, this has the effect of isolating the hidden worker. The book is a great read, well illustrated and seeks to encourage designers to find simple ways to promote living and working in the same building and across neighbourhoods.●

Louise Thomas

Ruralism, The Future of Villages and Small Towns in an Urbanizing World
Vanessa Miriam Carlow, Jovis, 2016 ISBN 9783868594300

The term urbanism is well-known and in common use, so it was perhaps inevitable that the term ruralism would be coined. Vanessa Carlow is not the first to use it, and there still seems to be some fluidity in the way that the term is used. Paula Cocozza, for example, used it in 2012 to describe the taking over of city spaces by what she described the ‘pastoral idyll’. In this book, Carlow has drawn together a series of essays from different disciplines with varying foci, but with a common concern for sustainability. It has a northern European emphasis, and with a final glance at the global perspective, which includes examples from China, Columbia and Oman.

There are three core themes. The first examines the urban-rural dichotomy. This is followed by a series of studies of aspects of ruralism in Germany, Sweden and Switzerland. The global section concludes the book. In her introduction, Carlow highlights the issues facing small settlements in rural areas but seems to fall into the trap of treating rural areas as merely an adjunct to the needs of urban areas. However the vital link between rural areas and demands of sustainability is established.

Perhaps the most significant aspect of this collection of papers is not their immediate relevance to urban design practice, but the way in which they demonstrate the incredible depth of thinking about urban settlements that thrives throughout Northern Europe. The ease with which the contributors express complex ideas is salutary. There are occasionally difficult and contorted phrases, but the display of sheer erudition is astounding.

The practice of collecting the papers given at a conference and presenting them as a coherent argument is problematic and the use of recorded interviews is not successful. Clearly the quality of the papers presented varies but one by Eckart Voigts, while initially appearing of little relevance to urban design, is well worth reading: it provides an opportunity to stand back and look at contemporary attitudes towards the urban-rural dichotomy.

There are the usual problems of reproducing large maps in a small book, but the illustrations are well presented. It is telling that the photographic essay, which introduces the main text, portrays such a sad and sterile environment. Is this really what ruralism means?●

Richard Cole architect and planner, formerly Director of Planning and Architecture of the Commission for New Towns
Urbanism


What is the relationship is between the Urban Design Group and the Academy of Urbanism (AoU)? The two bodies have similar objectives, in promoting urban design and the importance of place quality, but pursue them in different ways. One of the similarities is that they both give annual awards. The difference, and perhaps a constructive one, is that the UDG gives awards to people, and the AoU gives awards to places.

The Academy has been giving annual awards for ten years, in the five categories of Cities, Towns, Neighbourhoods, Streets and Places. The first two lots of winners have been published earlier. This bumper book gathers together the shortlisted places, 75 in total, considered in the next five years, 2009 to 2013. The fifteen cities are selected from European countries as well as the UK: entries in the other four categories are all British or Irish.

Each of the 75 entries is documented by a thoughtful text, dealing with historical development and analysis as well as description, photographs, a figure-ground plan, and attractive line drawings by David Harrison. In addition there are poems about each place by the Academy’s poet in residence Ian McMillan: sometimes with something distinctive to say, but mostly rather formulaic.

It is not a book that one is likely to read through from front to back. Nor is it really a reference book, although you might look for information on Antwerp or Bournville or Tobermory if you remembered that they were included here. It is a record of five years’ work by an institution and a lot of individuals, and it is a handsome book of a type sometimes unhelpfully and dismissively classified as coffee-table.

I have not done a contents analysis to identify what makes a great town, street, etc., although with diligence one could. I suspect it might come out something like Jane Jacobs’ four conditions for Diversity in Death and Life. It is a disappointing fact, but predictable, that nearly all the great places in this book are old places. There are several reinvented old places, like Nottingham’s Lace Market and London’s Coin Street, but the only entirely new places are the Accordia development in Cambridge, and City Park in Bradford.

Even these cannot be understood in isolation from their older context. Build Accordia in Bradford or City Park in Cambridge, and they would be different places, and not as successful. To give awards it is necessary to crowbar things out of their context, and this act can misrepresent them. But it’s a well-constructed book, which I gained pleasure from. One little grumble – great to have all those meticulously-drawn figure-grounds, but why no drawn scales?

Joe Holyoak

Global Cities: a short history


Why write about global cities? Who should read about global cities? These questions are difficult to answer here as the vision of global cities depicted by Greg Clark seems to be completely without human beings, without life. Yes, he mentions talent, entrepreneurialism and diversity many times, population sometimes, youth unemployment once. Other euphemisms include liveability but rarely quality of life. What and who are these global cities for? People, consumers, producers or simply city dwellers, let alone their unpredictability, fallacies and insubordination seem to be completely absent in this abstract world.

Clark states what he is not doing: providing a definition of ‘global cities’, estimating how many of them exist and why, how long they will keep their global status. So what is this booklet for?

He gives a very edited history of ancient and modern global cities and how to understand and measure them by means of growing numbers of rank order city indices; he then moves to ‘global cities today’ and ends with ‘challenges and leadership needs of future global cities’ which divide into existing, emerging and new ones. They arise with urbanisation, which in his view takes place in accelerating waves, the latest after the financial crash in 2008. For him, global cities are about economic hegemony and global competition, possibly domination owing to their command and control powers. They are about trade (of goods and services) and connectivity (over cross border routes, illustrated from historic times, e.g. Silk Road in Asia, slave trade routes across the Atlantic, port networks everywhere). His schema, albeit mentioning technology and innovation, could be interpreted as a set of nodes and links between them across which commodities are being shifted, without much attention to where they are being produced (value added) and why, and especially by whom (livelihood of urban society or robots).

Global cities seem to exist in their own right, certainly not for the purpose of people living, working and playing in them. Precious little is said about the context of these global cities, sometimes interchangeable with ‘world cities’.

The problem with such a global stance is the difficulty in scratching more than just the surface, and examples given in boxes being more than arbitrarily selected global cities from different periods and different parts of the world. Implicit in all of this is that global cities emerging as global leaders are a good thing. How does that help ‘anyone who lives in or is influenced by the world’s great concentrations of people and capital’? How could urban designers make professional contributions to ‘the leadership that can make these cities competitive and resilient’? Urban design has to take into consideration globalisation, however this book may not offer them the best way forward.

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I am working for a heritage regeneration trust, making a masterplan for the regeneration of the Chance Brothers glassworks site in Smethwick, Sandwell. It is a very historic place: a scheduled ancient monument, in a conservation area, with eight listed buildings. Chance Brothers began making glass in Spon Lane in 1824, and became the greatest glass manufacturers in Britain. They developed the process of making sheet glass, and made all the glass for the 1851 Crystal Palace, producing 300,000 panes of glass in a few months.

They also made the opal glass for the four clock faces of Big Ben, but possibly their greatest claim to fame is their lighthouse lenses. They became specialists in designing and making rotating Fresnel lenses, huge mechanisms several metres tall and weighing several tons, which can focus the light from a lamp into a single powerful beam penetrating miles of darkness. There are hundreds of lighthouses with Chance lenses working today, all over the world.

The eight listed buildings in Spon Lane are mostly empty and ruinous. Most of the site, on top of the scheduled ancient monument, is occupied by a skip hire and waste recycling business, recently refused an extension of its planning permission by Sandwell Council. It’s not an attractive place. The trust has decided that the first step in its regeneration of the site should be to build a lighthouse – a monument to Chance Brothers, and maybe a Midlands equivalent of the Angel of the North. We have an offer of a used Chance lens from the Isle of Lewis. The idea is to create a landmark which will surprise people; a lighthouse 175km from the nearest coast.

The local authority is keen on the lighthouse plan. Sandwell is not a place with a clear identity, and many people would be unable to find it on a map. But I had a very negative response when I ran the idea past Highways England (HE). The problem is that along the northern boundary of the Chance Brothers site, on a viaduct on top of James Brindley’s canal, runs the M5 motorway. HE does not wish to see anything near the motorway that could distract a driver’s attention from the road ahead – not even a lighthouse with no light – and it will advise the planning authority accordingly when we submit our planning application.

I am sceptical about the validity of HE’s policy: I have looked at some of the research done into driver distraction. Research can indicate correlations between accidents and external factors, but it’s more difficult to demonstrate causation. The logical result of HE’s policy would be a barren landscape devoid of any points of interest worth looking at: the antithesis of the distinctive and legible landscape populated by landmarks which urban designers seek to make. Would it in fact be possible to make the opposite case, arguing that an eventful and distinctive landscape could contribute to safety by keeping a driver stimulated, orientated and alert? I think fondly of Appleyard, Lynch and Myer’s 1964 book *The View from the Road*: a hymn to the kinetic experience of driving through the American landscape and townscape, and a toolkit for urban designers to code that experience.

When I drive along the M5 some miles south of Sandwell, what I mostly find myself looking at outside the car is the sharp profile of the Malvern Hills across the flatland of the Severn Valley. Are mountains a dangerous distraction to the driver? In the name of safety should we obscure them from view by tall fences? This reminds me of Roland Barthes’ ironic reference, in his 1957 book *Mythologies*, to the Hachette Guide Bleu. He writes that, for the driver, the Guide identifies the ultimate signifier of scenic mountainous landscape as being the road entering a tunnel – *inside* the mountain. Perhaps driving through a tunnel would be HE’s ideal situation – environment degree zero.

Joe Holyoak, architect and urban designer
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