132

URBAN DESIGN

Autumn 2014
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DATA, TECHNOLOGY AND URBAN DESIGN

URBAN DESIGN GROUP

VIEW FROM THE CHAIR: KATY NEAVES

This is the first of my honorary duties as Chair of the Urban Design Group and I want to start by saying thank you to my predecessor Paul Reynolds for all of his work over the last two years, especially for his leadership during the smooth transition to the new membership categories and rates. Also to the members of the Executive Committee and the various Regional Representatives, whose volunteering has helped to introduce a new award for developers at our annual awards ceremony (which has been positively received and should be promoted by us all), and the successful events held in such locations as London, Southampton and Manchester. The value of the voluntary time people devote goes beyond the group's financial turnover and I am grateful for everyone's support.

This article provides an opportunity to briefly set out my aims during my tenure. In summary, they are to increase the membership of the group through the further strengthening of our regional activities and networks, and to continue to nurture links and provide support to the various universities that offer urban design or have an interest in the subject, to further stimulate debate and strengthen knowledge.

I became aware of the Urban Design Group when, having completed my degree in Landscape Architecture at Leeds Metropolitan University, I was considering an MA in Urban Environmental Design. This led me to be involved in STREET (the UDG's network for young built environment professionals) and then join the Executive Committee. Both of these groups provided an important network and support for me during the uncertain times of the recession.

At a recent Urban Design Group event in London, all three of the speakers claimed not to be an 'urban designer' (they were a town planner, community engagement professional and transport planner); this is a common thought and is concerning. All those who work in the built environment are urban designers as the subject overlaps with many professions.

The Urban Design Group's network plays an important role in joining people together through sharing experience and knowledge; this helps us to grow and develop, no matter what level we are at. Our events, this journal and the conference, all provide an opportunity to exchange ideas and gain inspiration on how to tackle particular projects. Along with the annual awards ceremony and the Recognised Practitioner programme, we continue to promote urban design skills and a commitment to strive for the creation of quality environments.

I now have a request for you: to help strengthen the network, please get involved in your region and encourage a colleague (no matter what their background) to join the Urban Design Group community!

● Katy Neaves

URBAN DESIGN GROUP

COMMITTED HIGH-CALIBRE VOLUNTEERS

Every quarter, as *Urban Design* arrives in the post, it continues to have an unchallenged reputation as the leading and most professionally presented journal in the field. And it is produced by volunteers. *Urban Design*'s Editorial Board meets regularly throughout the year to discuss trends in cities and urban design, to plan future editions, identifying topic editors and authors. Then, the behind the scenes work goes on with Louise Thomas and Sebastian Loew working to ensure the material is available in good time for each edition. It's a huge task.

It is because of volunteer involvement and leadership that UDG members can come to the Annual Conference on Urban Design for at cost prices. This year Stefan Kruczkowski and Laura Alvarez have done much to pioneer an innovative and ambitious format, arranging novel tours and visits, and succeeding in involving speakers from across the globe.

All in all, this means that double or triple your membership fee is regularly given as professional time by willing volunteers. You can get even better value out of your membership by letting other people know about urban design and its value, especially developers, house builders, local politicians, and people from other professions.

100TH RECOGNISED PRACTITIONER IN URBAN DESIGN

At the July meeting of the UDG Executive, Christopher Church, Patricia Gomez, Chris Styles and Gary Worsfold were appointed as Recognised Practitioners in Urban Design, with Christopher Church being the 100th successful applicant.

FAREWELL TO LOUISE INGLEDOW

Following seven years of devoted service, Louise Ingledow left the UDG at the start of September to become a programme manager at the Weidenfeld Scholarships and Leadership Programme. Louise has worked tirelessly for the UDG, working evenings and weekends, as well as involving her parents and husband Mark too. Many of you will have met them at special UDG events such as the conference, awards or Christmas parties. She will leave a great gap. Professional institutions are often mired in a culture of bureaucracy, internal focus, lack of urgency or concern about the outside world, but she has had a relentless determination to get things done and have an impact. We have been very lucky to have had her as a supporter and friend for such a long time. Watch this space to meet the new faces who will take the UDG forward later in 2014.

● Robert Huxford

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Urban Design is free to Urban Design Group members who also receive newsletters and the directory at the time of printing

UDG Office
Tel 020 7250 0892
Email admin@udg.org.uk

Individual (UK and international) £50
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This issue has been generously sponsored by SAVILLS

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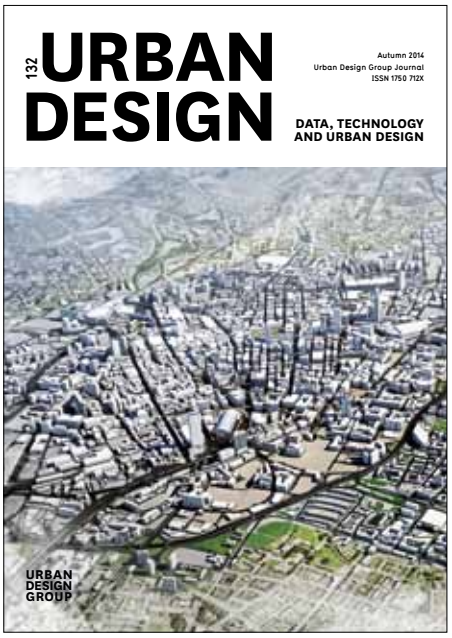

DIARY OF EVENTS

Unless otherwise indicated, all LONDON events are held at The Gallery, 70 Cowcross Street, London EC1M 6EJ at 6.30 pm.

Note that there are many other events run by UDG volunteers throughout the UK. For the latest details and pricing, please check on the UDG website www.udg.org.uk/events/udg

WEDNESDAY 15 OCTOBER
Street Design – International Dimension
A comparison of street design practice in different countries. Speakers which include Joe Holyoak looking at the National Association of City Transport Officials Urban Street Design Guidance, and Graham Smith considering the latest German Street Design practice, will be followed by a discussion on how the UK should progress.

WEDNESDAY 12 NOVEMBER
Data, Technology and Urban Design
Led by Polly Turton, the evening will focus on the topic of this issue of Urban Design, addressing how the design of cities and towns could develop in response to new technologies, and how at the same time the practice of urban design may also change.

WEDNESDAY 26 NOVEMBER
Kevin Lynch Memorial Lecture 2014: Professor John Punter
Professor John Punter, winner of the 2014 Lifetime Achievement Award for Urban Design, will deliver this year's prestigious Kevin Lynch Memorial Lecture: English planning reforms, unaffordable housing and a socially exclusive urban design?

HAMBURG STUDY TOUR 2015
If Daniela Lucchese's article (p13-15) whets your appetite for a visit to Hamburg, Sebastian Loew is planning a guided tour of the city from 8-12 April 2015. Including visits to HafenCity and the IBA, it will also to take in the city centre, historic warehouse district, and an early example of a garden suburb on the Alster, as well as meeting people involved in the regeneration schemes. The price per person will be approximately £350 including flights and accommodation in a double room (B&B) for members of the UDG. Booking early will ensure that we can get reasonable fares. Please express your interest in participating in this tour by emailing sebastianloew@btinternet.com

CONSULT, ENGAGE OR JUST COMMUNICATE?

Most urban designers probably find it hard to pass a planning notice in their neighbourhood without stopping to check what it is about. This particular notice looked ominously long, so I stopped to read it. Contrary to appearances, the notices, in highly convoluted legal language, were not announcing the planned demolition of the adjacent building; instead they were good news: setting out the policy of safeguarding the small mixed-use building from future residential conversion. Feeling pleased that the council was doing a good thing, I was then struck by how badly communicated this was: what a clunky way of conveying positive planning action! It is hardly surprising that many people do not have great faith, interest or understanding of our planning system when the public 'interface' is so poorly considered.

This issue of *Urban Design* looks at data and technology to reveal the many new ways that urban design can benefit from better information, communication and open channels to garner more participation in decision-making. This is a quiet revolution in communication, which should make planning more open and valued, but perhaps only if it avoids creating new jargon that will alienate others.

On the reinterpretation of words, Eleri Thomas throws down the gauntlet on Garden Cities (p14-15) and what this expression means, to whom and why. We are planning an *Urban Design* issue on Garden Cities: please do get in touch if you want to contribute to it.

● Louise Thomas

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Material for publication
Please send text by email to the editors, images to be supplied as jpeg

Events at the Gallery

The following events have been organised by the UDG and held at The Gallery, Cowcross Street, London. Many are recorded by UrbanNous and are available to watch again on the UDG's website, thanks to the generous support of Fergus Carnegie.

URBAN DESIGN IN CENTRAL AND EASTERN EUROPE

The Gallery, Wednesday 4 June 2014
Speakers: Daniela Patti CEIT Alanova and Levente Polyak, Hungarian Contemporary Architecture Centre; Aleksandra Stupar, University of Belgrade; Szymon Nogalski; Natalia Trossero, Grimshaw

Three of the contributors to issue 130 of Urban Design presented their urban design work: Daniela Patti and Levente Polyak showed how intermediary uses could assist in recycling neighbourhoods in Hungary; and Aleksandra Stupar opposed central planning to market forces' in New Belgrade. From the UK Szymon Nogalski compared urban design in Poland and the UK, while Natalia Trossero presented Grimshaw's masterplan for Tirana, Albania. A smallish but active audience discovered how similar urban design issues were in Eastern Europe and the UK, showing that exchanges and cross border cooperation can be mutually fruitful; hopefully this UDG event offered a start.

VITALITY AND VIABILITY

The Gallery, Wednesday 18th June 2014,
Speakers: David Waterhouse, Design Council CABE; Liz Kessler, independent consultant; Martin Wedderburn, independent consultant

Design can run the risk of becoming abstract, removed from the financial realities of the development process and long-term use and impact. David Waterhouse discussed design review, house-building trends, whole-plan viability, and Bicester's Eco-town. Liz Kessler, who has led a regeneration programme over a long period and has been in a position to make joined-up working happen, reflected that it is lack of care that causes places to decline. Martin Wedderburn covered the economic, social and health impacts of public realm projects, reviewing the different evaluation systems in use, what they measure (changes in footfall, social interaction, etc.) and their benefits and biases. He observed that if someone is sitting in the sunshine in your new public realm scheme, it has been a success. Yet sitting in the sun has no place in typical evaluation frameworks; nor is it 'efficient movement'. This event followed the UDG's AGM, and is not available on UrbanNous.

WATERFRONTS

The Gallery, Wednesday 9 July 2014
Speakers: Jody Slater, Spindrift Consulting; Oscar Silva, The Dar Group

Jody Slater of Spindrift Consulting, topic editor for UD issue 131, gave the first talk of the evening on Marinas emphasising the practical aspects that an urban designer needs to take into account when commissioned a masterplan for such a specific land use. These ranged from understanding the market and the customer base, to clarifying the possibilities of the site in relation to tidal range, orientation, wind, etc. She outlined potential pitfalls and indicated how to avoid them offering a check-list which included involving specialists earlier in the process and striving to achieve quality from the outset and at every stage.

She was followed by Oscar Silva who explained the complicated process of masterplanning the regeneration of Port Beirut to create a major cruise terminal and a new waterfront. The questions that followed centred on whether small-scale marinas could work in the UK as the market may not be able to sustain them.

Sir Richard MacCormac CBE (1938-2014)

Richard was a Patron of the Urban Design Group for two periods and was involved in a number of annual conferences. His greatest attribute was his ability to see things in their wider context, probably gained from his own education, initially at Cambridge, and his early years in practice working for the London Borough of Merton, following on his experience with two distinguished firms. Leslie Martin at Cambridge was already pursuing his ideas about peripheral development working in association with Lionel March, which must have influenced Richard, and he put some of those ideas into practice in Merton. He worked on a series of housing developments which provided a central open space fringed by a continuous form of housing taking advantage of the park like setting.

I first met him when he was awarded the design of the Sainsbury Wing at Worcester College in Oxford, later unfairly termed by the *Architectural Review* as 'romantic pragmatism'. He went on to design a number of buildings for other Oxbridge colleges including accommodation for Wadham College with its high level tower rooms reflecting aspects of Hardwick Hall, and the Garden Quadrangle at St John's College, both in Oxford. He considered his work at Trinity College Cambridge to be the pinnacle of his college work. As most architects know, he did not supervise his design for the BBC but the intention can be seen in what has been built and the way that spaces, both internal and external, relate to the setting.

He contributed many articles to this journal and their titles indicate the nature of his interests: *Public and Private Domains*, *Utopia*, *The Street*, and *Humane Urban Environments*. He was always passionate about the Spitalfields area of London and produced proposals very different in character to what finally appeared and covered the whole development area. Projects in Durham and at the Coventry Phoenix Initiative were illustrated in issues 64 and 76 of the journal, and the Phoenix was revisited in issue 128. In Milton Keynes (issue 42) he designed a number of housing projects including one alongside the community route, which introduced qualities of identity and boundaries enabling the development to be recognisable in separate elements.

Jeremy Estop, the managing director of MJP (MacCormac Jamieson Prichard until 2008), described Richard as being 'able to speak through design, but also with a rare gift with words, allowing him to lucidly articulate architectural ideas and philosophy. He wore his intellect lightly, constantly perspicacious, but always ready with an anecdote or joke. He was eager to exchange ideas with everyone regardless of age or experience'. His contribution to design and new ideas will be missed by many.

● John Billingham

Courtesy of Planning Magazine

Professor Sir Peter Hall (1932-2014)

It is with great sadness that we mark the passing of Professor Sir Peter Hall, a true colossus in the world of planning, and a much loved colleague and friend to so many of us.

Peter's contribution to the world of planning academe is so significant and so extensive that it almost belies description, but is perhaps best represented in the catalogue of around 50 books that he authored or edited since beginning his academic career in 1957, many now seminal texts in the field including his latest, *Good Cities Better Lives*, which is in essence a book about urban design. Indeed Peter was a great supporter of the Urban Design Group including a term as Patron (1997-2000), delivering the Kevin Lynch Memorial lecture in 1992, the UDG Annual Lectures in 1998 and 2004, contributing to the 100th issue of *Urban Design* on visions of the future in 2031, and most recently in 2011 being the topic editor for issue 120 on transport interchanges, with Christopher Martin.

During his career Peter taught at the LSE, the University of Reading (where he was appointed Professor at the age of just 36), Berkeley, and UCL (from 1992). It is in these places that his greatest ongoing contribution to the field will continue to be felt long into the future in the minds and works of the many thousands of students that he inspired over his academic career. But Peter's contributions were not limited to academe. As well as advising governments around the world, he conceived many of the most influential planning ideas in the UK, such as enterprise zones, London's orbital rail and strategic growth corridors, and recently contributed to the revival of interest in Garden Cities.

As an indication of the esteem in which he is held worldwide, Peter was recipient of a huge range of honorary doctorates, awards, prizes and accolades of all descriptions from around the world, and was knighted in 1998.

But for us at The Bartlett School of Planning he was quite simply our inspiration. Peter's intellectual curiosity and physical energy was legendary, as was his encyclopaedic mind about all things planning (and anything to do with trains). Yet despite his greatness, Peter was always prepared to spend time with all of us, encouraging us in our endeavours and supporting the School of Planning and the University in every way that he could, whilst always looking optimistically to the future.

Indeed despite his illness, which he never complained about but simply accepted, Peter was working at full pelt on ideas for the future, including developing new research and hatching student projects, right up until his final few days. And this is how we should remember him, a man always able to draw from the lessons of the past, but firmly focused on the future and on planning as a force for good. Peter, you were a force for good, and we shall miss you greatly.

● Professor Matthew Carmona, UCL, Bartlett School of Planning

STREET North West: Life after the 1996 IRA Bomb

Manchester Walking Tour, Wednesday 4 June 2014

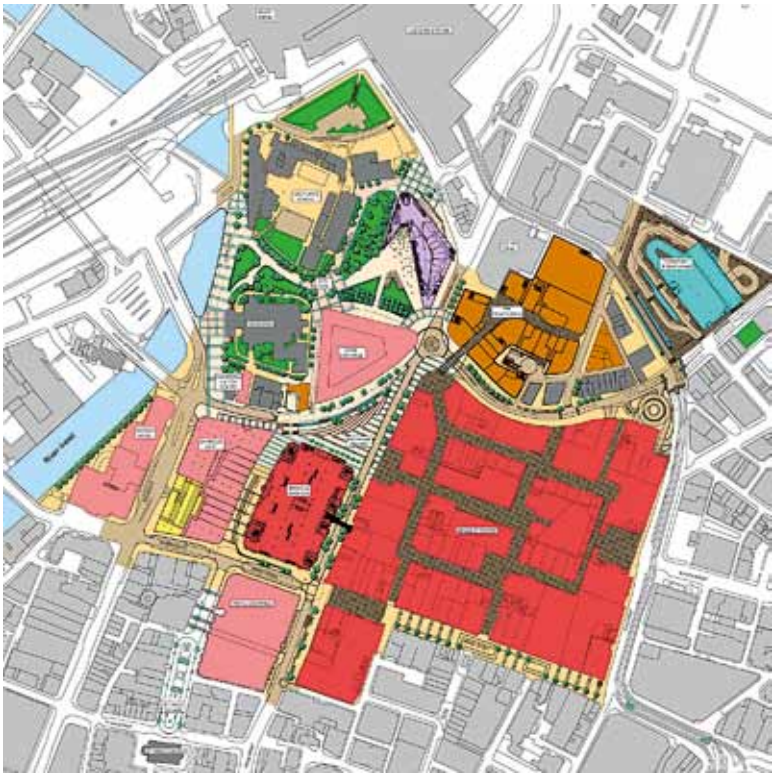
Although rain threatened to soak all who attended, about 40 people gathered for a walking tour, followed by a presentation by Mick Timpson on the master plan to rebuild the city centre, and subsequent discussion at Turley's offices.

● **Rebecca Newiss and Mark Foster**

↑ The Royal Exchange Theatre on Cross Street felt the blast of the explosion: the stage was lifted some 6ft in the air, and the domed roof was damaged .

↑ The royal mail post box which survived the blast, but was later damaged (and replaced) when being moved during the rebuilding of the area.

Courtesy of AECOM



← Ed Glinert from New Manchester Walks explaining the location where the bomb disposal squad set up their base whilst attempting to diffuse the bomb.

Time to move on

It is hard to believe that when this journal is published I will no longer be Manager of the Urban Design Group. The thought saddens me but, after seven years, the time has come for a new challenge. I am moving on to take up the position of Programme Manager for the Weidenfeld Scholarships at the Institute of Strategic Dialogue, a step which I hope will begin to reconnect me with my academic background.

However, my experience at the UDG will remain with me for many years to come. When I joined the UDG in 2007, the built environment was alien territory to me and urban design, at a guess, a euphemism for graffiti! However something – perhaps the sharp intellect and wit of Rob Cowan who introduced me to the Group – told me it was the right thing to do; that this was a role I could truly make my own.

And I was not mistaken; I look back over my time here as the most formative of my life. I have been honoured to play a central role in the UDG's most important initiatives of recent years including the launch of Recognised Practitioner and the development of the Urban Design Awards, which continue to go from strength to strength; it is great to see the first batch of this year's finalists published in this issue (pp. 42–49). I have also enjoyed organising countless events, making my own mark with quirky Christmas celebrations and the UDG annual dinners.

I have met and worked alongside many wonderful people – from the enthusiastic members I encounter each day to the Group's highly committed Executive Committee and the outstanding team behind this journal. It feels wrong to single out individuals however I will make two exceptions: firstly the inspiring John Billingham who shares my own exacting work ethic and is responsible for so much of what the UDG is today. Secondly 'the boss', my dear friend Robert Huxford, whose energy and eccentricity ensured that no two days were the same. He has supported, encouraged and at times infuriated me, but we have been a good team and the UDG is fortunate to have a Director with such character and heart.

So adieu and thank you; I'm going to miss you tremendously but be assured I will never walk down a street again without noticing the buildings around me and appraising the quality of public realm, right down to the paving materials and refuse provision. I now proudly declare myself a fully-fledged urban design anorak!

● **Louise Ingledow**

← In the plaza of New York's Seagram Building, studied by William H Whyte in *The Social Life of Small Urban Spaces* – one of my many urban design pilgrimages since joining the UDG.

Urban Design Group's Annual General Meeting

The Gallery, 70 Cowcross Street, London 18 June 2014

Paul Reynolds, the outgoing Chair of the Urban Design Group Executive Committee, presented the annual accounts, and highlighted two significant points :

- **Events:** The UDG's popular events continue both in Cowcross Street and throughout the UK. Members were encouraged to get involved to sustain this momentum.
- **Membership rates:** The subscription rate increases implemented in January 2014 have been positively received by the membership and appear to be significantly increasing the UDG's resources. Paul Reynolds and UDG Treasurer Colin Pullan were thanked for their efforts in leading these important changes.

Katy Neaves was elected unchallenged as the new Chair of the Urban Design Group. Colin Pullan was re-elected as Treasurer. Paul was praised for his great commitment over the past two years, and in recognition of his efforts, he was presented with a Gritstone sett, reflecting his interest in paving materials.

URBAN DESIGN

Over the past year the journal has published a number of high quality contributions, and the Editorial Board encourages members to continue to suggest issues to cover.

URBAN DESIGN DIRECTORY 2015-17

Preparations are being made for the publication in spring 2015 of the UDG's biennial *Urban Design Directory*, and Louise Thomas is currently working on ways to make it even more useful.

NATIONAL URBAN DESIGN AWARDS

Over 60 submissions to the various award categories were received in 2013, including those for a new Developer Award. The successful ceremony at the Victory Services Club, London, in February was sponsored by Routledge and 2013 Practice Award winner Allies & Morrison. The Francis Tibbalds Trust sponsored the financial prizes for the practice and student categories.

EDUCATION GROUP

The Education Group met in 2013-14 led by Katy Neaves with a well-attended symposium at the conference in Newcastle, which will be reconvened at the conference this year in Nottingham.

EVENTS

The UDG has expanded its ambitious programme to around 20 events per year at Cowcross Street alone. The 2013 Kevin Lynch Memorial Lecture was delivered by Lifetime Achievement Award Winner Kelvin Campbell, and the National Conference took place with the help of Georgia Giannopoulou at Newcastle University on The Pursuit of Growth. The group has also collaborated with CPRE London and Urbanista on two series of events. Good attendance levels, particularly by students, are an indication of the group's vitality and its importance as a centre for urban design ideas and debate.

URBANNOUS

Thanks are due to Fergus Carnegie who continues his largely voluntary work making the UDG events at Cowcross Street available online as videos on the UrbanNous website. This provides a valuable archive of presentations given over recent years.

UDG REGIONS

With Colin Munsie as UDG Vice-Chair for the regions, the following activities have taken place:

- **Scotland** – co-convenors Francis Newton and Jo White ran a successful Public Art in Dundee event, and have plans for a new programme for 2014-5.
- **East Anglia** – Paul Sallin of Essex County Council wants to establish a network to include the local council and Anglia Ruskin University.
- **East Midlands** – as well as preparing for the 2014 conference, Laura Alvarez and Stefan Kruczkowski of Nottingham Trent University have run monthly lectures on topics from garden cities to water-sensitive urban design.
- **South (Solent)** – Peter Frankum of Savills has brought together the public and private sectors on matters of design in the Solent area, and organised presentations from solar master planning through to cycling. The Solent Design Competition is being supported by the UDG.
- **North West** – Mark Foster and Rebecca Newiss of Turley, convenors of UDG / STREET North West, organised events including a tour of the Manchester Town Hall extension and the city in the aftermath of the IRA bomb. The group is collaborating with North West Young Planners, the Institute for Structural Engineers, the Institution of Civil Engineers, and CIOB.
- **North East** – Georgia Giannopoulou of Newcastle University played a central role in the 2013 National Conference on Urban Design.
- **Wales** – Noel Isherwood has taken up the role of Wales convenor.

UDG PATRONS

The UDG's patrons have continued their committed support and encouragement. Lindsey Whitelaw made a particularly significant contribution as topic editor for the autumn 2013 issue of *Urban Design* on *Art in the Public Realm*.

URBAN DESIGN STUDY TOUR

This year's study tour led by the indefatigable Alan Stones visited Germany, taking in Dresden, Meissen and Leipzig and meeting local planners to hear about regeneration projects in the area.

POLICY AND CAMPAIGNS

This year, members of the UDG have worked on a series of initiatives including:

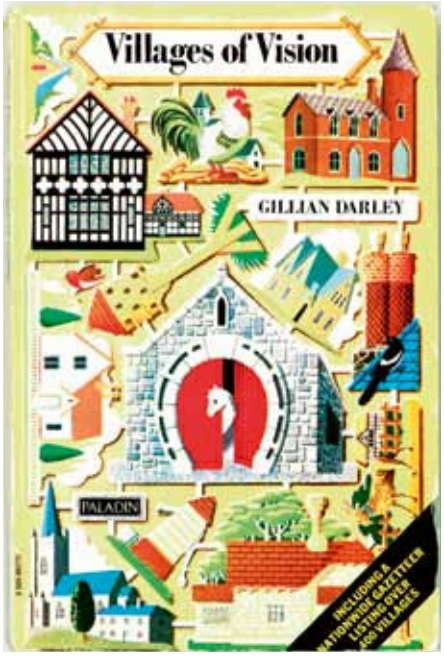
- **The Farrell Review of Architecture and the Built Environment:** representation from the UDG compiled by Nidhi Bhargava.
- **Designing the Underworld:** paper to the Institution of Civil Engineers developed by Ranjit Sagoo and letter in the London Evening Standard on the costs and restrictions caused by poor utilities planning in streets.
- **Industrious Cities:** consultation draft report by Jérémy Hernalesteen and Robert Huxford on the need for a balanced economy.
- **SCOTS Roads Development Guide:** commentary supporting the development of this guide by Karen Cadell and Robert Huxford.
- **Manifesto for Urban Design:** events on policy issues including a presentation by Roger Evans.

FINANCIAL REVIEW 2013

	Totals
INCOMING RESOURCES	
Subscriptions	£76,781
Publications and Awards	£13,354
Donation from Urban Design Services Ltd	£9,824
UDSL Contribution to Office Costs	–
Activities to Generate Funds	–
Interest Received	£920
Inland Revenue: Gift Aid	£3,992
Miscellaneous Income	£335
TOTAL INCOMING RESOURCES	£105,206
RESOURCES EXPENDED	
Charitable Expenditure	–
Publications & Awards	£30,933
General	£79,431
Development Expenditure	–
Governance costs (accountancy)	£1,140
TOTAL RESOURCES EXPENDED	£111,504
NET (EXPENDITURE)/INCOME FOR THE YEAR	(£6,298)
FUND BALANCES BROUGHT FORWARD	£100,265
FUND BALANCES CARRIED FORWARD	£93,967
CURRENT ASSETS	**£125,359**
CURRENT LIABILITIES	**£31,393**
TOTAL NET ASSETS	**£93,967**

The Urban Design Library # 13

Gillian Darley: Villages of Vision – A study of strange utopias, Architectural Press 1975



As pertinent now as it was when first written, this is a fascinating account of the enduring English obsession with the concept of the village. The idea of the village retains the romance of and nostalgia for a community in which everyone had their place, a microcosm of society at large, with the squirearchy of lord of the manor, vicar, schoolteacher, postmistress, peasant etc. A village summons up components of cottage, church, village green, shop and school, in other words a fairly self-contained community where people both lived and worked, in which it was possible to know and be known by almost everyone. Perhaps it retains its power in part due to the post-war spread of suburbia, which turned into today's residential dormitories, bisecting life between work and home, and where people largely remain anonymous, a feeling exacerbated by the isolation involved in the use of the private car over walking, cycling and public transport.

In fifteen chapters, *Villages of Vision* traces the displacement of rural hovels and their restitution in the designed landscape brought about by enclosure and 'emparking', as part of the Picturesque movement in 18th century landscaped estates, where aesthetics often trumped convenience of design; through to the industrial model villages of Saltaire and later Port Sunlight, Bourneville et al, where self-interest and philanthropy went hand-in-hand, providing housing that was both close to the workplace and well-laid out by standards of the day to ensure a healthier and more reliable workforce. Twentieth century examples exist in Critall's Silver End or Bata's East Tilbury and Maryport, all of which included the provision of a hotel, ballroom, and cinema. In between lie chapters on planned villages from Blaise Hamlet to New Ash Green, Garden Cities, and forays into other types of planned communities such as orphanages and 'aesthetic retreats', which demonstrate underlying philosophies, notably those of non-conformists, socialists or idealists: hence the sub-title of 'strange Utopias', perhaps not so very strange, but none the less fascinating.

In the final chapter the author dwells on the twin obstacles of planning (always the bogey) and finance to achieving anything like a fully realised vision of the ideal place in the making. Span's New Ash Green is cited as an example of where aspiration and reality parted company. The intention of creating a truly mixed community was scuppered when the Greater London Council (GLC) failed to take up 25 per cent of the housing for its tenants. The lack of facilities is a common failing in many new developments since; left to the market these vital attributes do not materialise. A contemporaneous example with New Ash Green was Bar Hill in Cambridge (also 1965) which envisaged a chain of villages to accommodate the city's expansion that never materialised either. One hundred houses were built by Cubitt, less than 10 per cent of the whole, and sold on: 'Then followed the familiar tale of lower standards in the name of economy, loss of confidence and disappearance of original ideas'.

Gillian Darley sees the image of the village as 'potent, with its connotations of a semi self-contained and tight knit community' which she perceives lies behind much of the neighbourhood planning of the post-war new towns. Prior to that was the GLC programme for new and expanded towns – a 70 mile radius of market towns round London, like Huntingdon or Stowmarket, that had new estates grafted on to their medieval hearts, often with a Radburn layout. They too suffered from housing being built first, with unmade roads and no other facilities, but at least people moved with their workplace (i.e. Myers bed factory to Huntingdon) and social links were maintained. It was only later as de-industrialisation occurred that they became ghettos of worklessness.

At the time *Villages of Vision* was published, its author held out little hope for the future of the village due to 'discrepancies in thinking at official level and inflexibility of planners and engineers'. Design Guides became slavishly followed rather than interpreted. Looking ahead to a time of less easy oil-fuelled mobility she saw that this might enable or necessitate a return to village life – a place where people both lived and worked.

What struck me most reading this for the first time was not just the enduring attachment to the village as an ideal but how the main components of the village, the individual houses, are still caught up in the idea of the Picturesque. The housebuilders' standard models hark back in their love of the vernacular to Tudorbethan suburbia and beyond that to the rustic cottages of earlier planned villages. If we are ever to achieve something other than soulless suburbia, we perhaps need to be less afraid of 'the mistakes of the past' that Modernism is blamed for in the high rise estates that have so extensively been demolished, only to be replaced by ever higher densities of the recent rash of rabbit hutch flats arising out of Rogers' Urban Renaissance, and again embrace 'strange Utopias'. If 'Generation Rent' is to have any hope of affordable accommodation, we need to enable more flexible models such as the shell that can be fitted out and customised, or self-build, and rediscover the mutuality that created building societies before they were corrupted into becoming banks. There is a role for the shrinking state and that is to temper the worst excesses of the free market, to regulate the might of the new wealth and encourage it to mirror something of the philanthropy of the past and provide an enduring legacy. Having the vision is essential; getting the balance between private and public delivery that maintains standards, is the challenge. ●

READ ON

Utopia, collection of essays (Five Leaves Publications, 2012)

Greg Grandin, *Fordlandia* (Icon Books, 2010)

Charles Montgomery, *Happy City* (Penguin, 2013)

● Alexandra Rook, landscape architect and planner

Urban Design Interview: What does Urban Design mean to me?

Amy Burbidge

Current position and work
Design Manager at North Northamptonshire Joint Planning Unit (Corby, East Northamptonshire, Kettering and Wellingborough). My role was initially part funded by CABE and the Arts Council to support the, then newly adopted, Core Strategy vision of making North Northamptonshire an exemplar for design excellence.

Education
Diploma Urban Design (University of Westminster)
MA Buildings Archaeology (University of York)
BA History and Archaeology (Leicester University)

Past experience
Design and Conservation Manager, London Borough of Harrow
Conservation Officer, London Borough of Harrow
Assistant Conservation Officer, South Oxfordshire District Council

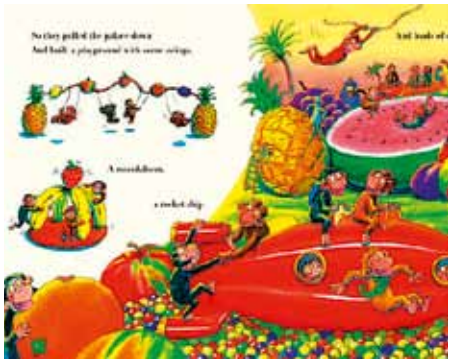
Ambitions
Get a *woonerf* in Northamptonshire
Start having play streets in my village
Get more experience of water sensitive urban design

Specialisms
Strategic urban design
Conservation

↑ Jet fountains occasionally erupt from the grills in this Portuguese street – brilliant!

↑ Karl Kropf's system to colour-code streets in 11 North Northants towns to assess their overall urban structure and connectivity.

↑ Depressing highways dominated streets.



↑ *The Chimpanzees of Happy Town* by Guy Parker Rees. How I explain to my kids what I do: Chutney lives in Drabsville USA, but everything changes....

↑ Early inspiration: the garden designer, Barbara Hunt is my Mum, and from a young age taught me how to really look at places.

↑ With three small children, I'm always on the look-out for play spaces, especially in streets and squares. (Peter Ljunberg, Sweden from play-scapes.com)

↑ The love of an old brick wall.

↑ Buriton, Hampshire: low key rural placemaking street design. (Image: Living Streets, designer Hamilton Baillie Asssocs)

↑ Past project: securing HLF grant for restoration of Canons Park, Edgware.
(Image Friends of Canons Park)

DENSITY MATTERS

Christopher Boyko explains common misunderstandings and misinterpretations

The people currently making decisions about density in cities are often the wrong people. As a result, the decisions about what is efficient versus what is simply stressful and unhealthy can be made at the wrong time, and based on misunderstandings and misinterpretations.

Density matters, not as a hard and fast ratio, but as an issue that is at the heart of whether cities are liveable: where people can experience high levels of wellbeing alongside the benefits of living in concentrated areas of economic activity, workplaces and services.

The risks of overcrowded cities are well-documented – the higher levels of stress and poor health, higher rates of crime, lower levels of aspiration – and have long-term implications for individuals, their communities, local government and public services. Social problems are both created and exacerbated by these dysfunctional environments.

At a basic level, density is just about the concentration of 'things' in an area. Collecting information and monitoring dwelling or population densities is straightforward, and the Office for National Statistics and most local authorities will do this. Armed with these figures, along with other information (such as the location and availability of brownfield land and services), decisions are made about how land is used, how it is described and what future uses might be needed. The question is whether this bald data on density is enough. We need to take into account what else shapes how cities look, feel and are experienced, for example the density of fast food outlets, retail chains, car parks or construction sites. Density needs to be considered as something far more visceral.

GOOD OR BAD?

But is there such a thing as good or bad density? There do not appear to be any right answers; many scholars would argue the benefits of a more compact city model with higher overall densities outweigh or help to ameliorate issues of wellbeing, supporting better and cheaper public transport, promoting greater energy efficiency in buildings, creating more opportunities for mixed tenure housing, and engendering more social equality. At the same time, high-density cities can lead to more pedestrian casualties, urban heat islands and waste, poorer ecosystem quality, loss of privacy and direct sunlight, and reductions in physical and mental wellbeing. Cities are messy, complex places with both the good and bad parts tightly intertwined.

Those involved with planning cities could be smarter about how they approach the issue. Recent research done with my colleague Professor Rachel Cooper involved a survey of built environment professionals, and found that developers are perceived to be the ones who tend to make many of the density-based decisions, followed by local authority planners and designers. When asked who should be making those decisions, it was local authorities, designers, councillors and residents who came out on top. People also seemed to be making decisions too late in the urban design and planning process, with more happening during detailed design, rather than earlier, at the conceptual design and developmental stage.

While 95 per cent of respondents agreed that urban density was important or very important for decisions on design and development of cities, the concept of density was perceived as unclear, complex and easily misinterpreted. We explored the reasons for increasing levels of density and the rationale for supporting change. The most common reasons were:

1. making what was perceived as more efficient use of land
2. increasing profitability or return on investment on an area of land
3. making more use of public transport
4. making efficient use of existing resources and creating a critical mass to justify and support service provision.

The first three drivers in particular appear to align with the idea that developers and local authority planners make most of the density decisions on planning projects.

INFLUENCING DECISIONS

Cities with good densities are not necessarily high-density or low-density, but are ones in which more people with a vested interest in the welfare of the urban fabric and urban experience have the opportunity to make or influence decisions. These people also need to be able to make and influence decisions early on and regularly in the process of designing, developing and maintaining

their cities, so that innovative and integrative ideas around good density are taken on board and are contextually appropriate. The research respondents pointed to the importance of case studies from around the world that demonstrated what good density looks like, reflecting the complex and subjective nature of density, and showing the potential and impacts of trade-offs between density and transport systems and social issues like equality and privacy. Involving key urban decision makers and stakeholders earlier and more often into the process of decision-making can create better opportunities for consensus-building around density. One way to achieve this would be to create a team to be involved throughout the lifetime of any development project (construction agencies, financiers/investors, local authority planners, residents), and whose responsibility it would be to ensure that appropriate and sustainable decisions about density are taken.

Schools of planning, design and engineering are mainly focused on readying their students for employment, which often involves learning formal, technical skills, such as Computer Aided Design or Geographical Information Systems. But when it comes to considering density in cities, students need to have a broader skillset that embraces the more informal side of working with individuals and communities, understanding community cultures and sensitivities; these kinds of skills need to be regarded as important, rather than something that professionals will pick up on the job.

● Dr Christopher Boyko, Senior Research Associate, Lancaster University

OUR AGEING POPULATION

James Parkinson explores how this issue could shape the future of our cities

Over the next 20 years, the number of people aged over 60 in the UK will increase by over 40 per cent, six times the rate of increase for those aged under 60. This is part of a global phenomenon that will result in 2 billion people aged over 60 worldwide by 2050, with 75 per cent of the global population expected to live in cities by that time.

Urban societies have previously revolved around a young demographic; from popular culture to economic growth, it has been the youth defining the state of the nation. Cities are products of that history and older generations have often had to make do in a world that was not necessarily designed for them.

This is all set to change. As global society ages, we will witness an increasing number of older people living, working and participating in mainstream society for longer, and the elderly will cease to be a minority group. While industrialisation and urbanisation have happened in different parts of the world at different times over the last couple of centuries, urban ageing is likely to be one of the defining global characteristics of this century, something that will impact the developed and developing world's cities simultaneously, as the latter makes great strides in life expectancy levels.

In Britain we can expect up to a third of our population to be aged over 60 by 2035 and, with a more equal distribution of age groups within society, we should not underestimate the influence that this older cohort could have; indeed, in the last general election, the group aged over 65 had a 76 per cent turnout compared to 44 per cent for 18-24 year olds, and a 65 per cent average. After decades of courting the aspiring middle classes, it would not take much to get the attention of those in power, and designing for the needs and desires of a lifetime will become as much a political imperative as a socio-economic one. This is an enduring condition; we are unlikely to return to the young populations that our ancestors knew and our cities will be forever shaped by the way in which we adapt now to this unprecedented phenomenon.

HOW COULD TOWNS AND CITIES RESPOND?

Much of the debate around the impact of older people on future society or indeed, the design requirements of older people, remains focused on the issue as a challenge: to what extent will this group be a burden on public expenditure and how can we retrofit inclusive design strategies into established approaches to buildings and public spaces? Even when designing specifically for the very old and infirm, such as the care home, innovation is often in short supply with a very pragmatic approach to requirements.

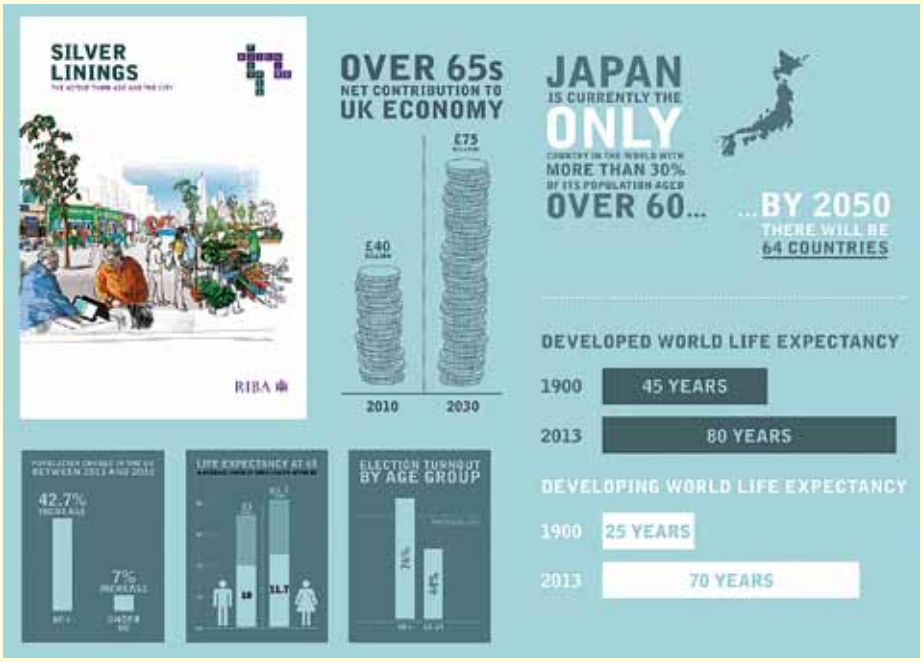
What if we saw this issue less as a challenge and more of an opportunity? Could urban design practice play an integral role in harnessing the social and economic potential of the older cohort by developing approaches to place that embrace and support older age as an active and engaged phase of urban life?

THE ACTIVE THIRD AGE

As life expectancy increases in the UK, we are also living in good health for longer – a trend set to continue. At age 65, both women and men can now expect to live on average a further 10 years in good health, which could equate to at least half of our remaining lives from that point.

This increased number of active, healthy people approaching or beyond retirement, represents an emerging and potentially exciting new stratum of society: an 'active Third Age'. At 60-74 years old, people are still very much involved in leisure and cultural pursuits, and the active Third Age can be a meaningful period of healthy life between formal retirement and the time when they may require assistance or care in old age. Unless we see retirement ages increasing substantially, this group could enjoy a new and exciting period in life which could be liberating, becoming a cohort fully able to contribute to both society and the economy but on its own terms.

The active Third Age will be crucial in shifting the debate about ageing from the time bomb rhetoric of burden and reactive intervention, to one of opportunity: how best to nurture a dynamic and productive phase of life by pro-actively designing cities that think laterally and holistically about everything from housing and infrastructure, to public health budgets and incentives for enterprise? Life is a journey and our cities must better reflect the various stages that we move through, being flexible and responsive enough to ensure that we can



← The High Street Revived. Illustrations by Patrick Vale and Amelia Mashhoudy, Teatum + Teatum
→ The Reality of our Ageing Populations.
↘ Reinventing the Family Home

all live much more dynamically than we have in the past.

INTERGENERATIONAL COMMUNITIES

Both individual homes and wider communities that embrace intergenerational living are not new as an idea within cities, nor are they unprecedented in Britain. However, they tend to conjure up an image of a time where generations were forced to live in close proximity and share resources, rather than choosing to do so. Following half a century of socio-cultural shift towards individualism, we have seen less need for the lives of our elderly parents to be intertwined with our own. New generations aspire to own their own homes and forge their lives independent from traditional extended family structures; advances in technology (the world really is a much smaller place) and socio-economic change, have facilitated and accelerated this. Similarly, when the elderly can no longer look after themselves, we now see the care home as the only viable option, not willing to see our new-found independence compromised. These attitudes and circumstances have meant that the intergenerational bonds within British communities have almost certainly weakened.

We may very well be forced to rediscover these intergenerational dependencies to mitigate the impact of our housing crisis or the changes we can expect surrounding the provision and value of the next generation's pensions. However, we may also see intergenerational collaboration much more as a potential opportunity, with significant mutual benefit, if only our buildings and cities were designed differently.

With many more active Third-Agers than in previous generations, might we see a shift again to families living close together and supporting each other? With finances tight and the increasing cost of both childcare and elderly care, many grandparents could certainly come to provide home-based care or even schooling for their children's children, in exchange for support in old age and the ability to live out that old age in their own home. Indeed, this extended family home may well be the only way that their children can get on the property ladder with active Third Agers exploring equity release to help their children to purchase a home for the entire family, whilst having some cash themselves to enjoy a decade of good health after retirement, whether travelling the world, returning to education, starting a business or just enjoying the city.

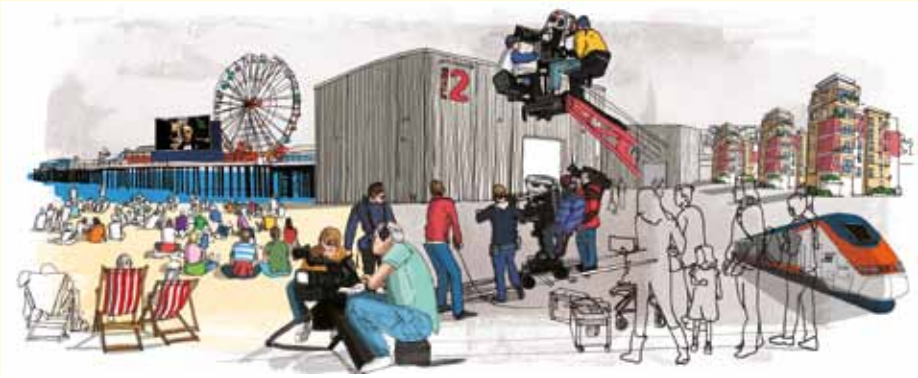
A modern, intergenerational family home may well be a social leap too far for the market driven housing industry, but the real innovation could come first at the scale of the neighbourhood through the intergenerational masterplan.

Building on the ideas explored within co-housing schemes, the design industry could take the lead to demonstrate a more innovative approach to larger scale housing developments that provide the infrastructure for a real multigenerational support network to grow in a sustainable way. Where will the family or neighbours need to come together? And how will individuals of differing ages maintain their own lives and independence without compromising others? What do the shared spaces, facilities and even values or responsibilities look like when intertwined with private housing in a thoughtful and meaningful way? Could we come to see a mix of generations becoming a desirable attribute in planning terms, alongside mixed use or mixed tenure?

HIGH STREETS REVIVED

Urban infrastructure could be a tool to approach regeneration. High streets across the country are struggling, under pressure from the threat of out-of-town retailing, large supermarkets and increasing online shopping. These changes in the way that trade is conducted have had a knock-on effect on the social function of the high street and undermined the sustainability of some neighbourhoods. However, its urban character is often intact; high streets remain strategically positioned within walking distance of numerous local communities and are able to host a mixture of uses to anchor public life. There could be a significant opportunity for an active Third Age to reinvigorate our high streets if we shift the functional balance to create diverse and active hubs to support intergenerational communities.

Instead of considering the most important exchanges to be between retailer and consumer, the high street could benefit from focusing more on social transactions. In a low-carbon future, acting locally could regain its significance and the increasing presence of an active Third Age may well be the catalyst to galvanise high streets as destinations to host many more local services, support recreation and facilitate intergenerational



↙ City Networks: healthy infrastructure
↙↙ Seaside Enterprise Zones: a new local economy

mixing. If Third Agers, for instance, were to play a much larger role in their grandchildren's care, then playgrounds with a crèche, nursery or even infant school could become a common feature. Equally, there could be many alternative opportunities to reconfigure the public realm on the high street from gardens to allotments with entrepreneurial Third Agers growing food to support a new café, driven by an increased footfall. Local services, from NHS health centres and town hall functions to fitness clubs and sports facilities, could be delivered as part of a new synergy between the built form lining the street and the potential for public space in between, providing a crucial spatial dimension to new local health and social care budget responsibilities. Technological advances could see high streets as the perfect place to deliver university courses or host knowledge exchange workshops or apprenticeships between older skilled people and younger generations. Elderly or ageing tutors could work more flexibly away from the company HQ in the years around retirement.

Indeed, by promoting the local clustering of expertise and with the time and technology to innovate, we could create the conditions for new enterprise to flourish, from small-scale manufacturing to technical consultancy that spans the current generation divide.

The high street has always been a flexible and adaptable piece of our towns and cities, capable of hosting a whole ecosystem of production and consumption, of learning and working, of socialising and caring. It could be galvanised by the presence of an active Third Age if we encourage this group to take ownership of its future.

PUBLIC HEALTH: THE ACTIVE CITY

Staying fit, healthy and active in the city is going to be of increasing importance to Third Agers in 2030. Those who are active are likely to have the best opportunities and more comfortable or rewarding retirement, not to mention the benefits to the public purse by having active ageing embedded in the wider culture.

Public and private bodies have been slow to react to poor levels of exercise, both in the older population and British society as a whole. But the nature of the built environment or the streets, parks and public spaces between buildings can play a significant role in encouraging fitness, both physical and mental, as part of daily routines.

A new culture of public exercise can keep NHS costs down and ensure that active Third Agers are fit and healthy to remain part of a reliable and productive workforce, or play an active role in their extended family or local community.

Cities need to develop long term, innovative strategies for healthy infrastructures, well designed routes and spaces that provide opportunities for active travel or social exercise. Examples include generous, safe and attractive routes for walking, running and cycling along with sports and games, or dwelling and socialising. These facilities must appeal to a broad demographic to enable intergenerational exchange, and could form routes or networks that connect key landmarks, public parks or even disparate parts of adjacent communities. Water fountains lining active travel routes and regular access to showers or changing facilities could encourage more people to be confident and comfortable crossing cities on foot or by bicycle. These facilities could even be embedded in or managed by existing private enterprise, signing deals with the government to enable their use or subsidised use, and easily located using modern technology.

Travelling by recreational networks and integrated public transport must become the most healthy, efficient and accessible option, the obvious choice for a full spectrum of ages. In the same way that commuting is seen as an opportunity to catch up on the daily news or read emails, we need to see the commute as an opportunity to stay healthy and socialise whilst moving safely and efficiently around the city.

THE ALL-AGE CITY

The potential opportunity for the active Third Age to contribute to the positive experience of life in the city is something that should prove crucial as a design driver for urbanists over the coming decades. We need a wider debate about the way in which our demographic shifts will intersect with the planning, design and experience of our built environment, to consider the interventions and innovations that will shape places in the future; this needs to harness the vast potential embedded in the active Third Age to deliver a more sustainable, resilient and engaging urban experience, a city for all.

● **James Parkinson, Policy Officer, Building Futures, Royal Institute of British Architects**

RIBA Building Futures, *Silver Linings: The active Third Age and the City* (2013)

HAMBURG: GROWING WITH VISION

Daniela Lucchese revisits the city to see progress

The question that many cities are forced to answer, is how can they thrive and progress in times of economic instability and huge climate challenges. Hamburg is certainly not shy of bold and long-term plans aiming to take the city into the future. Building on the success of HafenCity, Hamburg is gearing itself up for even bigger and more ambitious plans, in the form of IBA Hamburg, and the recently approved relocation of the train station at Altona in the west of the city.

These new initiatives, and the many smaller projects scattered around town, all share the same aims and objectives: to attract and accommodate, within the city's tight boundaries, a constantly growing population essential to maintaining the city's economic competitiveness. This is about achieving the necessary critical mass to guarantee its cultural and social mix which gives the city its leading economic and intellectual position, enabling it to continue to compete with neighbouring metropolises.

With the slogan 'More city in the city' Hamburg launched its new 15 year *Spatial Vision Plan* in 2007. The strategy is to build 5,000-6,000 new housing units a year, by targeting higher density schemes, infill sites, and above all, sustainable spatial development, where the emphasis is on urban renewal. Through an integrated and participative planning strategy, the ambition is to mobilise its urban potential, strengthening it from the inside, intensifying the use of space, and becoming a green and attractive water city.

The establishment of a *Municipal Climate Protection Act* and investments of €22.5m a year have helped the city to make real progress in cutting CO2 emissions by 15 per cent (1990-2006), alongside significant improvements in cycling and public transport use. Almost all citizens have access to public transport within 300m of their homes. In recognition of this leading, the city was named European Green Capital in 2011.

HAFENCITY: AN UPDATE

When I was a student in Hamburg, the city had the most curiously inaccurate motto: *Hamburg, Tor zur Welt* or 'Hamburg, Gateway to the World'. It always felt a tad more grandiose than the Hamburg that I grew to know and love. The motto was presumably meant to evoke the harbour's role in the world, but despite it being so close to the inner city, the city turned its back on the waterfront, with very few exceptions (the most notable being the large ships and the cranes you would see on early Sundays mornings). Instead, the city looked inwards at two beautiful artificial lakes formed by the River Alster, surrounded by an impressive collection of late 19th century buildings. This *grande dame* of northern European cities, with its reputation for sober minded business people, was certainly failing to realise one of its most precious assets.

This was overturned with the plans for HafenCity. In connecting the city to its harbour, Hamburg was also providing itself with room to grow towards neighbouring urban districts to the south. The project started in the late 1990s with strong political support, and a city-owned development agency was created to be responsible for the implementation of all projects, to ensuring the highest quality outcomes. The agency funds its activities from the proceeds of land sales, acting as master developer, planning and building internal infrastructure and public spaces, procuring investors, as well as all marketing and communications. External infrastructure like the new metro and special projects like schools, a concert hall and university are financed by the city itself. By 2025, the project will have cost around €10.4bn, of which €2.4bn will have come from a special public City and Port fund.

The potential represented by the southern districts led to a revision of the eastern side of the masterplan in 2010, again based on an intense public discussion. Due to the economic downturn, it has proved difficult to balance the books, leaving sites undeveloped and risking vacant buildings. Some prime locations remain unbuilt and are only now finding new developers. Nevertheless, the area is becoming more vibrant. On a recent midweek visit, the Queen Mary 2 ship was docking at the

↑ Previous page: HafenCity Sandtorkai
← IBA Hamburg and HafenCity, Hamburg. Image by Kunstraum GfK mbH.

temporary cruise terminal, attracting a crowd, and the spaces were buzzing with people.

What has been achieved so far is impressive: some 56 projects have been completed, and another 49 are either under construction or in planning; commercial deals have been closed on around 1,000,000m2 (gross floor area). The area is already home to over 2,000 people and around 9,000 people work in HafenCity' s 450 companies. These include the German headquarters of Kühne & Nagel, Hanjin Shipping, BP, Unilever, Greenpeace, the Maritime Museum and the new HafenCity University with 2,000 students.

The western part of HafenCity is largely complete and offers a strong urban flair, with glass architecture, beautifully designed spaces and a mix of uses that attracts visitors and residents alike. The media see it as *uberdesigned*, disconnected from the city centre, sterile and an enclave for the rich. Rents are high and not many families have moved in, hence it does not feel family-friendly. Arguably, an extension of the city core by 40 per cent, should not, in my view, have the look and feel of some of Hamburg's leafier family-oriented suburbs. HafenCity should instead embrace its role as a more urban, dense, and buzzing part of Hamburg's city centre.

Architecturally, small plots form a mosaic of rather safe modern architecture, neither visionary nor ground-breaking, but also not visually intrusive nor overly daring, allowing for a clearly defined identity of the place. The attention to detail in terms of form, materials, and references to Hamburg's maritime past provide enough playroom for HafenCity's next generation of buildings to evolve and to grow into the whole.

Critics have focussed on the considerable delay, and quadrupling of the original budget for the Elbphilharmonie; it is hoped that this spectacular new concert hall, with a five-star hotel and luxury apartments will become a landmark equivalent to the Sydney Opera House. Residents are coming to terms not only with the cost overruns, but more interestingly, with this grand expression of pride in their city, so alien to Hamburg's innate modesty.

Walking through the recently completed commercial heart of HafenCity, the Uberseequartier, for the first time, the strict emphasis on red brick facades in the design guide is immediately obvious. The intention was to visually integrate the new quarters as much as possible with the old warehouses. Facsimiles may not be everyone's taste but these are stylistic decisions. The enduring success of this new urban environment will be in its streets and spaces, how they look and are organised, and the resulting experience it gives.

HafenCity is still a work in progress. Shops and uses will open, close and change over time until the neighbourhood finds the right balance. Character is more than bricks and mortar, and it will take HafenCity time to develop its own place in Hamburg's urban narrative.

IBA HAMBURG

Just south of HafenCity, between the inner city and urban districts to the south, lies Wilhelmsburg, Europe's biggest river island and at 35km2, Hamburg's largest district. Unlike other boroughs, its density is very low with around 50,000 people of more than 100 different nationalities. Around one third are recent arrivals to Germany, and a very significant portion of the population is first, second or even third generation Turkish people. High rates of unemployment and low incomes present challenges, and people have huge fears about their area being gentrified with the arrival of new housing.

The isolation of the area is largely due to its island nature, partially below sea level, and with a difference in height between the ebb and flow of about 3m. Once a more populated area, the devastating flooding in 1962 left the island increasingly neglected, to become the dumping ground of Hamburg's unwanted projects: large hazardous waste depots, motorway intersections, high voltage power lines close to high-rise council estates, and poorly defined transition zones.

The impetus for change has come from active local residents, who could not bear to watch the deterioration of their island any further, putting pressure on the Senate to do something. A strong collaboration between residents and the authorities began, and in 2004 politicians decided upon the 'Leap across the Elbe' project with its two major urban planning tools – the IBA (International Building Exhibition) and the IGS (International Garden Show). Launched in 2007 and running until 2013, these complementary initiatives have resulted in 54 out of the 63 planned projects completed, two deferred and seven to be completed next year. In addition, a number of cultural, social and ecological projects are still ongoing.

As with HafenCity, a city-owned agency was established to organise and license the projects. It contributed €90 million, along with other partners and private investors backing the scheme.

The goal is 'implementing a forward looking model of urban life'. True to the IBA's history, a masterplan is not developed, instead there is what the Germans call a *Stadtlabor*: a platform for

discussion and experimental thinking. The outcome is a conceptual strategy based on three guiding themes that underpin the project:

- **Metrozones** explores how non-places can become liveable districts. Thirty specific projects tackle this urban patchwork of potential living-working solutions.
- **Cosmopolis** seeks to explore the rich cultural and ethnic diversity. Targeted construction projects with social and cultural initiatives look at living together, rather than next to each other.
- **Cities and Climate Change** aims to reconcile growth in a climate friendly way. The target for the island is to be carbon free by 2050, using renewable local sources.

Hamburg's strategy is to kick-start plans with selected flagship projects, to achieve the highest impact and offer confidence to investors who then follow. Enhancing, upgrading and allowing experimental design with innovative solutions are the means. The IBA attracts investors and inhabitants to its hybrid and smart material houses, and this remains their biggest challenge. But this is a long term vision for Hamburg, where the city can prove its adaptability and foreseeing capacity.

THE FUTURE MUST BE GREENER

The economy, jobs, housing, and climate change are common concerns to all cities, and Hamburg has set clear priorities actively pushing on all fronts to see them realised. The driving force for change has to come from within to maximise a city and its people's inherent potential. It is doing this with bold and ambitious initiatives, and not just bike schemes.

Political will and active residents who care for their neighbourhoods, are a strong combination, and along with controlling land and setting up strong, decisive and well-resourced agencies to pursue the ambitions – these are all lessons that London and the UK could learn from.

● **Daniela Lucchese, freelance urban designer, currently working in collaboration with Urban Silence Ltd**

Read about her last visit in *Urban Design* issue 97 (Winter 2006).

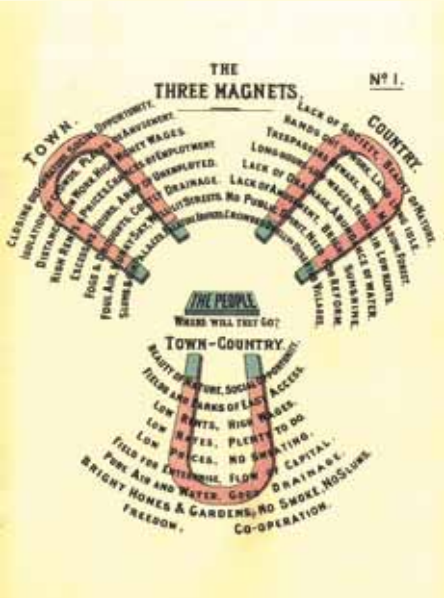
Courtesy of Schenk+Waiblinger

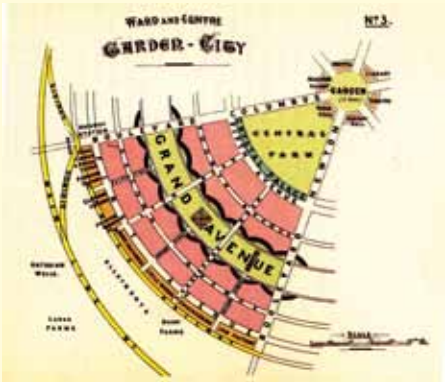
↑ The Queen Mary 2 at HafenCity Dalmannkai
↑↑ HafenCity Dalmannkai

↑ HafenCity Grosser Grasbrook
↓↙ IBA New Hamburg Terraces
↘ Wilhelmsburg centre

WHAT IS A GARDEN CITY?

Eleri Thomas wonders whether we understand what this ideal represents





'A garden city is an attempt to combine housing and green areas in one' (*The Metro*, 5 June 2014). Or is it? Certainly, the name conjures a romantic English idyll long lost, of open spaces and flourishing gardens – but the actual spectrum of ideas that constitute the garden city are many and complex. This article looks back at the architects, dreamers and thinkers of the original garden city, and reflects on those ideas that underpin the recent return to the garden city as a model for new housing in Britain.

CURRENT CONCERNS

Although no garden cities have been built in Britain since Welwyn in the 1920s, they have been something of a recurring theme since, frequently returning to the public agenda as a possible new mode of expanding housing stock. Once more, it has become headline news as a neat and ready solution to our complex housing crisis. According to Lord Wolfson, 74 per cent of people believe garden cities to be a good way of addressing the UK housing crisis. The Queen's 2014 speech, which set out the government's annual agenda, stated a commitment to 'increase housing supply and home ownership by reforming the planning system, enabling new locally-led garden cities'; Nick Clegg promises three new garden cities; and Ebbsfleet has become the recipient of massive public investment to continue its development as Ebbsfleet Garden City. The theme recurs, and through the 2014 Wolfson Prize for Economics, we are seeing something new in the rhetoric of the garden city: a concerted effort to make it a viable economic possibility for the 21st century. The challenge to competitors was 'how would you deliver a new Garden City which is visionary, economically viable, and popular?'. The five shortlisted winners all offer schemes that, in different ways, do just that. But what do they mean by a garden city, and what are we trying to achieve by using an Edwardian term to face the planning challenges of the 21st century? The winner will have been announced by the time you read this, and so perhaps they will tell us.

EBENEZER HOWARD: A UTOPIAN VISION FOR AN INDUSTRIAL AGE

Ebenezer Howard's *To-morrow: A Peaceful Path to Real Reform*, republished in 1902 under the title Garden Cities of To-morrow, is one of the foundation stones of modern British town planning. Curiously however, the legacy of the garden city and the associations that people have to it bear limited relevance to the primary concerns of Howard's book.

A reaction to Victorian urban poverty, slum housing and polluted, overpopulated cities, Howard's vision was in part an environmental one. The first part of *To-morrow* discusses the marriage of town and country, illustrated through the iconic three magnets diagram: providing beauty, opportunity, open space, low rents and rates, and so on. Howard's diagram Ward and Centre: Garden City also indicates his general spatial principles: a small, compact civic centre with open spaces, surrounded by residential and industrial zones, within a large green belt to prevent expansion, supporting agriculture and serviced by a train station. Only a small part of the book, however, is his vision consisting of broad principles, geometric and utopian in style. The image that the name garden city evokes – of open space, fresh air and semi-ruralism – underpins many of our modern assumptions about garden cities. The choice of the name, however, was coincidental, picked from a number of possibilities, many of which said little of open space or gardens. We have become gradually distracted from the primary concerns of his vision.

HOWARD'S SOCIAL AND ECONOMIC VISION

To-morrow is primarily a social and economic treatise on the creation of equitable cities. A massive growth in London's population at the end of the 19th century prompted a public discussion over the inequitable ownership of land, as well as public health concerns. It was land nationalisation that captured Howard's imagination and, learning from other reformers' views on collective ownership, he developed the crucial point of the garden city: the rate-rent system, in which rents collected by the company are returned to the community. Following the repayment of the upfront land costs,

←The Three Magnets.
←← The design ideas of the Ward to Centre structure
←←← The Vanishing Point of Landlords Rent strategy
All Howard's images are from Howard, E, Hall, P, Hardy, D and Ward, C, (2003), *To-morrow: A Peaceful Path to Real Reform*. Original edition with commentary. London and New York: Routledge.

→ The common vision of garden cities. Image from Miller, M., (1989), *Letchworth: The First Garden City*. Chichester: Phillimore. The poster is by the First Garden City Ltd., c.1925.

rent is recycled through a sinking fund back into the municipality for building, repairs, and services. After a time, this contributes to a local pension fund. It constitutes a model for self-governance that advocates the particular needs of the local community over regional or national governance, dealing with the full range of local services on a civic scale. The majority of the book is taken up with his detailed financial costings on the feasibility of the project and a scheme for providing community services through competitive tendering. It stands as an economic model for an efficient, self-managed and sustainable city, rather than a spatial vision.

GARDEN CITY IN PRACTICE

This dominant element of his treatise lay forgotten, perhaps because it failed to appear in Letchworth, the first garden city. Founded in 1903 under First Garden City Ltd., Letchworth took on many of the physical attributes advocated by Howard; a limited town surrounded by a green belt, with an industrial zone attracting employment to the area and a central civic space. However, his key demand for a rate-rent system in the garden city was made impossible by the lease system adopted by the company. Letchworth became known for its rural aesthetic, its open space, and as a retreat for middle-class urban dwellers rather than as a new social and economic model for cities, as did Welwyn and Hampstead Garden Suburb in the following years.

The Arts and Crafts style of Letchworth Garden City is the creation of Raymond Unwin and Barry Parker, the appointed architects. Their design principles embraced a nostalgic aesthetic of anti-industrialism, advocating a return to a village community, associated with the work of William Morris. It was an aesthetic that appealed greatly to the suburban middle classes, and Letchworth became a utopian haven for alternative lifestyles, rather than the working class industrial garden city that Howard had envisioned. Partly thanks to Unwin and Parker, and also thanks to the place branding that Letchworth received as a healthy rural idyll, the concerns of Howard that made the garden famous were not his social ones, but his subsidiary environmental ones.

Howard himself had suggested an appropriate density for the garden city, but *Garden Cities of To-morrow* does not emphasise the size of houses and gardens or low densities as necessarily advantageous. Unwin, by contrast, campaigned for decades against overcrowding, advocating low-density housing through his pamphlet *Nothing Gained by Overcrowding*. Letchworth and the later garden cities became testing-grounds for his ideas, and this focus on low-density development with large amounts of green space informed his later work on interwar public housing. As technical adviser to the Greater London Regional Planning Committee, Unwin made a significant contribution to what became the New Town movement. Arguably, it is Unwin's concerns and the later iterations of the garden city that contributed to the public perception of the movement, far more so than Howard's original vision.

THE ANTI-PLANNING MOVEMENT

Jane Jacobs argued vehemently in 1961 that cities should develop organically rather than through top-down planning. Openly rejecting Howard's approach, Jacobs suggested that garden cities were 'really very nice towns if you were docile and had no plans of your own and did not mind spending your life among others with no plans of their own'. Since then, we have seen a rejection of the approach taken by the New Towns, replaced by a more organic planning process, supported by placemaking, urban renaissance, people-centered planning and consultation. How curious, then, that simultaneously we are advocating a return to this type of planning. If (until recently) 'urban design is the art of making places for people' (CABE and DETR, *By Design*), and bottom-up, community-focused design is the critical factor in successful design, it seems counter-intuitive to advocate its polar opposite as our benchmark.

A NEW GARDEN CITY FOR A NEW AGE

The ideas discussed here have been explored in depth by Stephen Ward in *The Garden City: Past, Present and Future* (1992). His ideas, however, seem all the more poignant as we move ever more decisively towards building a new garden city in Britain. It remains evident that the conversation revolves around a vague notion of what a garden city is or what we seek to mean by using the term. Lord Wolfson, businessman and Conservative peer, who set this year's Wolfson Economics Prize, wrote that:

> 'The aspiration of home ownership, with all the security it brings, has become a distant dream. [...] there is an unspoken, seemingly unbreakable, conspiracy against building the type of houses people want, where they want to live, at prices they can afford. [...] Garden cities provide a verdant alternative to endless infill, shoebox flats, urban creep and strip development.'
> (The Daily Telegraph, 13 November 2013).

When we talk of a garden city, we are calling upon 100 years of ideas and associations; a vision that is complex, ambiguous and controversial. I therefore put the question to all those advocating garden cities today: whose garden city are you building? Which aspect of the garden city are you seeking to recreate? And are those designs garden cities at all, or are they something completely new?

● Eleri Thomas, freelance urban designer and research intern at the Centre for Cities.

We are now inviting articles on the theme of Garden Cities for issue *UD* 134: if you would like to contribute ideas about this or alternative approaches from the UK or abroad, please email the editors.

THE URBAN DESIGNER AFTER THE RECESSION

Georgia Giannopoulou asks which type of urban designer you are

EXCITING AND CHALLENGING TIMES

In the aftermath of the recession, Newcastle University has been studying how urban designers have coped and adapted, seeking to spark debate into what the future holds for the profession. Understandably most of us are probably trying to forget the economic recession: the job cuts, the reduced public sector spending, and total loss of market confidence. The same period also saw significant legislative changes, most notably the Localism Act and the National Planning Policy Framework (NPPF), while the Farrell Review placed the spotlight on the built environment.

All of this provides what we believe is a natural pause and point for reflection on these events and their implications for the urban design profession and field. This is not to commiserate but to learn and imagine what the future could hold for urban designers, and how we can put our best foot forward: where do we fit in?

THE RESEARCH STUDY

At Newcastle University the economic storm was experienced through our strong connections with urban design professionals working in the North East of England and also in the ever-changing landscape of student recruitment. We have spent time finding out what happened to the profession during the recession, asking how, if at all, it has been able to react and adapt in a climate of uncertainty and market failure.

The study focused on the North East of England as a test bed for the methodology and validity of the outputs, with the potential to roll it out to other regions across the UK. Our study draws on the experiences and opinions of urban designers from various educational backgrounds, in both the public and private sectors, and was implemented through one-to-one semi-structured interviews. Data was also gathered through other methods such as website reviews, online surveys to alumni, and admissions analysis.

THE FINDINGS

The experience of participants in the study varied, with some suffering multiple redundancies, others escaping from the private sector for more secure employment in education, or seeking work abroad due to a lack of opportunities within the UK. What became clear was the sheer tenacity of the urban designers that we talked to, not only to survive the crisis, but also to take this opportunity to challenge themselves, and to imbue their practice with their values and passion for place-making. Despite suffering setbacks, a lack of work and cash flow, a huge amount of innovation and creativity has been manifested as urban designers have continuously adapted, upskilled, specialised and generally approached a challenging situation with a positive and curious attitude.

THE END OF DESIGN AS WE KNOW IT?

At a first glance, it seems designing took a back seat on the recession rollercoaster, with a move from doing to delivering design by influencing others, managing processes and shaping constraints, a DDIY (Don't Design It Yourself) approach. Urban designers seemed to see not a recession but an economic challenge, and were stepping forward to become the catalysts for development, whilst advocating good design. This process-focused approach appeared to be a reaction to the stagnant conditions of the recession, directly addressing issues of project viability, initiation and management to drive projects forward. What remains intact and all the more prominent, is the undeniable investment in championing good design in the built environment. What changed, evolved and adapted were the methods and roles that urban designers adopted in achieving this.

The study unearthed a variety of emerging mutations of the urban designer, distinguished by new aspects of design based on their idiosyncrasies, experiences and skillsets. This is our attempt to package and describe these, so see which best resembles you.

EMERGING ROLES

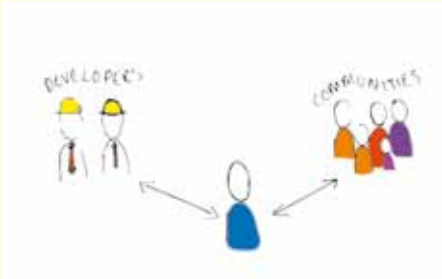
1 **The Visionary Investment Advisor**
This urban designer is actively involved in advising and devising strategies to deliver schemes, stressing the importance of understanding land and property markets, or identifying opportunities in the market for when development becomes more viable and deliverable. Some experienced private sector urban designers have developed a financial acumen and an intuitive ability to assess the viability of schemes at the broader level of master planning, around issues of layout, infrastructure, content and the quantum of development, etc. This focuses around balance and compromise, to create more viable and deliverable schemes.

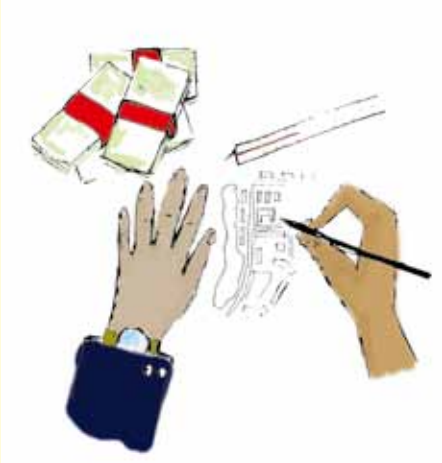
"I've learned how to compromise quite a lot in my master planning to get things that are going to be acceptable, cheaply affordable and are sustainable that can actually be financed… I have a lot of experience of grinding out the statistics to be able to say 'Well, this is what the value of this thing could be, and this is what you could achieve from this site'."

2 **The Project Initiator & Brief Setter**
This urban designer is an entrepreneur of sorts, acting as the inventor, or intellectual catalyst of a venture, responding directly to the collapse of the development market, or the standard common development financial model and the problems arising from ill-conceived briefs. This role extends the master planning process and role of the urban designer to include setting the brief and the desired quantum of development, as opposed to responding to a pre-set brief which can often hinder good quality design. In the era of neighbourhood planning and community-led development models, some urban designers have set up their own community land trust, providing support and scope for projects based on alternative financial models. Others have become developer-designers purchasing sites, producing a viable masterplan that embeds good design, and selling the site and masterplan to a developer to implement it. Similarly in the public sector, urban designers have been preparing briefs for design competitions, and guiding private sector development.

'The skills don't really exist in local authorities to have an alternative idea of development models, community-led models, incremental models or low cost, zero infrastructure models. They're all based on the premise of that traditional model of a large institutional developer with cash will come along. It's changing

→
1 Visionary Investor – balancing ideas and design with development markets
2 Project Initiator – combining the goal of good design with financial viability
3 Design Team Leader – bringing together design teams through a common vision
4 Advocate – communicating good design with and between developers and communities
5 Savvy Negotiator – armed with financial and market knowledge to negotiate good design.





very slowly and interestingly, certainly in the North East…'

3 The Design Team Manager
The Design Team Manager is focused on delivering design through a strategic process and management-led method, designing at arm's length. This urban designer can step into existing design teams to address threats and overcome challenges to a project's progression and the delivery of a scheme, including those that were deemed unviable, or had been refused planning permission. This experienced practitioner questions the process, evaluates decisions, the scope and objectives, to assesses deliverability, and helps to coordinate visions using both design and management skills. These design knowledge and skills, but also direct experience in a variety of built environment professions, help with this role.

'To join professional teams that have been working on complex things for a considerable length of time, to be able to use that skills set and experience to quickly understand how they have got to where they've got to, to understand the challenges they've been working with, and then in turn to challenge them on their responses.'

4 The Advocate
The advocate urban designer uses his/her design credibility to communicate complex proposals succinctly to other professionals, developers and decision-makers, and to communities and lay people. This role can be benign and useful when it builds bridges, creates transparency and simplicity, and affords common languages and desires between various stakeholders. It can also frustratingly mean a bit of lip service for clients who hire urban designers too late in the process to build support and get planning consent. The advocate is often the community's friend, working both with communities as stakeholders in proposals, and for communities, i.e. where the community is the client. The latter implies a more complex, enabling role for urban designers, which demonstrates their suitability to engage in neighbourhood planning processes – a role within which many can find new and fulfilling employment streams.

'You use planning, communication and urban design skills to work with the community to, say, understand the dynamics of the thing, understand the place…how you deal with some of the issues.'

5 The Savvy Negotiator
This urban designer negotiates good design rather than designs per se, aided not only by strong appreciation of best practice and design knowledge but also by a confident understanding of viability, feasibility and construction costs. This knowledge comes from experience but also from purposeful upskilling through professional events such as conferences, lectures and seminars, and engagement with experts within the organisation or further afield. These new skills give the urban designer more clout when engaging with developers. Often, and especially in local authorities, this role extends the full spectrum of the process including written guidance and even design itself.

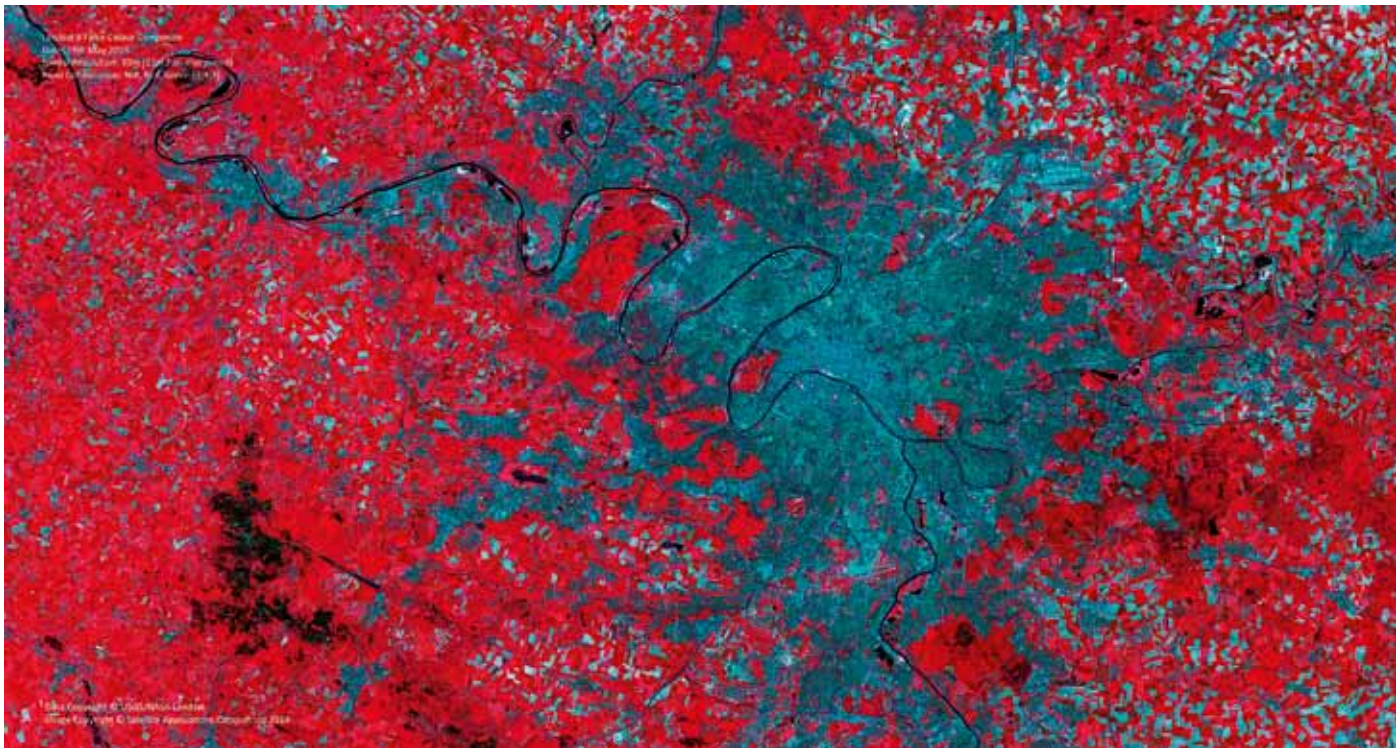
BUSINESS AS USUAL?

All of these roles and professional persona will not be alien to many of us; hopefully we will all smile and nod when we read what we do, but never stop to think about what it really is that we do, where we started out, and what our trajectory has been since. The recession has brought opportunities to look back, reflect and consolidate, and perhaps even to take pride in this not-so-clearly-defined-accredited-and-safeguarded career, in being able to adapt, to change and still remain valuable to others and rewarding for ourselves.

This is not only applicable to urban designers, this is for us as humans. With every change of tide, we need to be able to reflect, learn, adapt and go forward, using the challenges for learning and building resilience.

● Georgia Giannopoulou, MA in UD Degree Programme Director, Newcastle University, with Amy Priestley, student and Ali Madanipour, Professor of Urban Design. All sketches by Amy Priestley.

DATA, TECHNOLOGY AND URBAN DESIGN



↑ Landsat 8 satellite image of Paris, 19 May 2014. [False Colour – Urban (Bands SWIR2, SWIR1, Red)]. © NASA. Data © USGS/NASA Landsat. Image © Satellite Applications Catapult

Whether we like it or not, data about pretty much everything we do, say or buy, is being collected, analysed and used in some form or another by various individuals, institutions, businesses and nation states. Sounds sinister.... indeed, if you consider the revelations about the US National Security Agency made by Edward Snowden and his current plight exiled in Russia, it is difficult not to think about the darker side of the technologies and networks of devices, satellites, cables, wi-fi and people, which make it possible to obtain, analyse and use all of this data in surreptitious and murky ways.

Slightly less sinister, but perhaps just as alarming is the fact that unless you have opted to live in a cave or a utopian self-build community completely off the grid, we all have a permanent and growing digital footprint which ranges from the messages and pictures we voluntarily text, post and tag (usually from our smart phones) on the multitude of social media platforms and apps available to us such as Facebook, WhatsApp or Instagram. In addition, there are all those Amazon purchases, Oyster card journeys, visits to the ATM, searches on Google Maps, and payments at the supermarket to think about.

For those who have the know-how and the inclination, getting hold of much of this data is relatively easy and once they've got it, analysed it, made some connections with other data or turned it into useful information, it can be incredibly valuable and revealing.This is where some of the uncertainty about 'open' data creeps in. Many people are content with (or perhaps oblivious to) how much they are sharing – which is constantly being harvested and commoditised – yet there was public uproar recently over Google's plans to make anonymous healthcare data available for medical research.

This dichotomy between seemingly benign or publicly beneficial data, and data used for purely commercial or ulterior motives, needs to be better understood and communicated before data's role as a force for good in society can be trusted by the masses.

In terms of technology, the number of people who do not own a smart phone in the UK is decreasing every day. I made the transition only earlier this year with free upgrade to an iPhone 5c. So, I am now officially part of Apple's global empire but I no longer get lost, can readily check train times and feel like I am now part of a culture of smart phone addiction. Brave new world.

From an urban design perspective, the impact of the proliferation of data and technological evolutions on the planning, design and management of towns and cities is complex and multi-dimensional, as the following articles highlight:

1 **Open data**
Much of the data which used to be difficult or expensive to obtain and analyse is now freely available for analysis and use, from census or

flood risk data to the more unusual, such as pictures of places taken and tagged on Twitter. Tom Heath of the Open Data Institute explores the impact of increasingly open data in his article, co-authored on Google docs with Damien McCloud of Arup's geospatial information systems team.

2 **Online networks and communities of interest**
The increased familiarity with on-line fundraising combined with on-line communities of interest and austerity have contributed to the modern day philanthropic phenomenon that is crowdfunding. Cutting right through restrictive planning and funding barriers, crowdfunding is enabling significant numbers of small scale urban design projects to be proposed, funded and delivered in a straightforward and timely way. Orsola de Marco of Spacehive gives us her views on how the crowdfunding revolution is changing places as well as people's perceptions of public space around the country.

3 **Digital place-making: planning in the real-time city**
The accessibility and ubiquity of digital data ranging from high-resolution satellite data to data about people's emotions and transport flows, is allowing a broader and deeper understanding of the underlying patterns of behaviours and networks in cities, at much finer spatial and more dynamic temporal scales than ever before. This is giving designers new insights and tools for creating responsive and interactive urban environments all over the world. Josef Hargrave and Chris Luebkman of Arup's global Foresight + Research + Innovation team provide us with an update on some of the visions for the future written back in 2006 (in *UD*100), and a few new developments.

4 **Flood risk data and urban design**
In the context of climate change and extreme weather events, the analysis of data and information about urban and natural systems, and the use of advance modelling techniques are essential inputs to the urban design process if we are to create resilient cities and urban areas. In their article about the integration of 'adaptation tipping points' (ATPs) into the design of flood resilient and adaptive neighbourhoods in Rotterdam, Peter van Neelen and Pia Kronberger-Nabielek demonstrate an approach which has proven effective, and could be applied to other coastal cities around the world.

5 **User-centred design for cities**
The widespread use of smart phones, apps and wi-fi means that people can access web based information about their neighbourhoods and communities, and engage with plans and designs for improving them in ways which may seem more appealing and accessible than a *Planning for Real* exercise in a community centre. Looking at user-centred design for cities, Mike Saunders and David Janner-Klausner of Commonplace focus on how internet based platforms and mobile phones are leading to greater participation and interest in urban design projects around the country. Harnessing the smartness of citizens as well as benefitting from smart cities.

6 **Visual analytics for urban design**
Finally, the way that urban designers can now visualise digital data, urban functions and networks, as well as their visions for improving towns and cities, is blurring the boundaries between the real and the virtual, actual and imagined, using readily available software and more advanced techniques. Michael Batty and Andrew Hudson-Smith of the Centre for Advanced Spatial Analysis at University College London discuss highlights from the latest developments, trends and capabilities in this field.

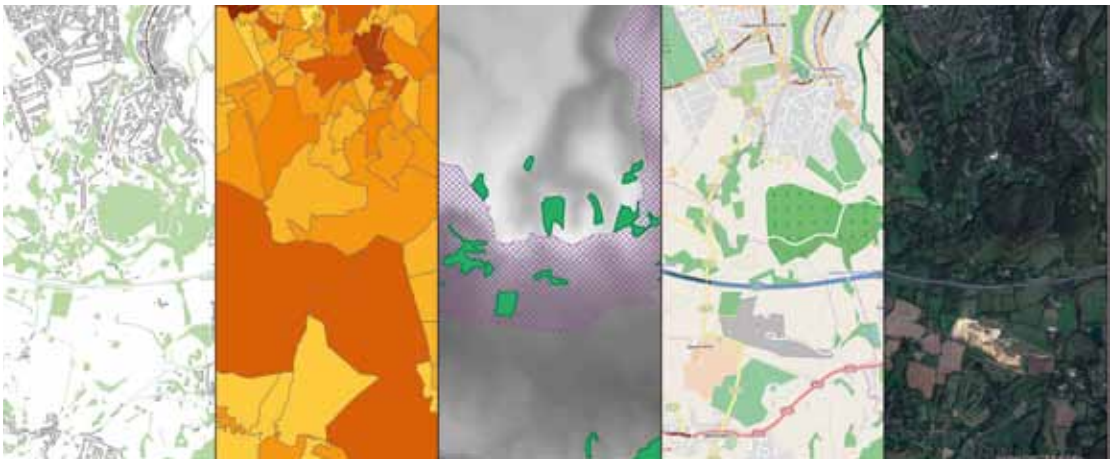
In addition to these themes, another relevant trend is that most under 10 year olds play Minecraft (the modern day Lego) and will probably be able to design and redesign whole cities at a click of a button by the time they have finished their GCSEs. In Denmark, the home of Lego, the whole country has been virtually recreated using Minecraft – and probably by a 10 year old. Not to be outdone, the UK's own Ordnance Survey has shared its OS OpenData with Minecraft to enable players to create representative scale models of Snowdonia and Stonehenge. It makes the whole concept of a geography field trip far more exciting, and bodes well for more spatially and environmentally literate generations.

Whilst buzz words such as 'open data', 'big data', 'smart cities' and the 'internet of things' are already beginning to sound overused, these six articles make it clear that there are fundamental tools and concepts which have the potential to help urban designers to create well designed, inclusive, responsive and resilient places. We just need to be mindful of the implications of what we say, do and design out there in the worldwide technological datasphere.

● Polly Turton, Senior Consultant, Arup and *Urban Design* Editorial Board member

OPEN DATA

Tom Heath and Damien McCloud examine the opportunities for spatial planning and urban design



↑ Examples of OpenData sets used for spatial planning.
Source: Left to Right, OS Open Data VectorDistrict, ONS Census Population, OS OpenData Landform & Natural England Designations, OpenStreetMap, Aerial Photograph served through ESRI.

DATA, LOCATION AND SPACE

Spatial planning and urban design are inseparable from location at a multitude of scales, from regional strategic planning to individual developments in urban neighbourhoods. Each of these construes a different notion of space, and has its own data requirements.

Planners use data to understand space though its physical attributes, as well as its human, social and functional characteristics. How is the space currently used and experienced by those who inhabit it? What are the key externalities that govern how it may be developed, and what would be the effects of different actions?

In each of these cases, data can guide the planning and design process through more comprehensive and sophisticated analysis to produce actionable information, or more robust predictive modelling, or clearer visualisation and communication. However the overarching goal remains to produce better design, whether in policy-making or an individual public space.

The ability to apply data in these ways is dependent on its availability and suitability for the task. Current trends in open data and the so-called 'internet of things' are driving both more widespread availability of core reference data relevant to planning and design, and greater granularity (in both time and space) through the deployment of sensors within the urban environment. The cumulative effect is a far richer data backdrop against which decisions can be made. This paper explores open data in the context of spatial planning and urban design, and examines how data-intensive and data-centric processes may further transform practice.

In doing so, we should remain mindful of the broader context in which urban design currently operates, and the challenges inherent within that, such as: increasing urbanisation; population growth coupled with resource constraint, e.g. food, water and energy security; demographic change including an ageing population; and the potential for extreme weather events related to climate change. In each case, a data-driven approach can reduce uncertainty and lead to better solutions.

CONTEXT AND CASE STUDIES

In recent years, and driven by a multitude of actors, initiatives worldwide at national, regional, and city level (Heimstädt et al., 2014) have led to a wealth of open data becoming available. Open data is defined as data that can be 'freely used, reused and redistributed by anyone' (opendefinition.org/od) subject to minimal or no restrictions, for example attribution of the data source; with few exceptions it is distinct from personal data, which identifies individuals. These initiatives are driving not just the availability of data, such as open data releases from the British mapping agency Ordnance Survey, but also its breadth, resolution and granularity.

Despite the recent upsurge in open data initiatives and deployment, and standardisation efforts such as the open definition, open data in essence is not a new phenomenon. It is something that planners have relied on for many years. Core datasets that have been used to assist in spatial planning and urban design have historically been open to a certain extent.

UK CENSUS

Censuses of the population have been conducted in England and Wales since 1901, and once processed the data is released in a non-individually identifiable form for all to access. In the past this has been via CD/DVD and more recently via the Office for National Statistics website. This accessibility has made the census, in practical terms, one of the first open data sets, even if its availability pre-dates the term open data. Due to this ready availability, census data has become a long-established element of the planning process, serving as a standard dataset to reference and understand the socio-economic and demographic

characteristics of an area. It is widely regarded as reliable and robust, and is therefore well used, allowing temporal and spatial variations to be plotted.

UK FLOOD DATA

In June 2014, the UK Government announced further funding for a number of open data projects supporting data release. One of the key funding awards was to the Environment Agency to support the release as open data of the National Flood Risk Assessment (NaFRA) data set. This change in status for NaFRA represents a notable milestone, not least as it will loosen the dependence on paid-for data in the planning process. At the time of writing, the Environment Agency has made some flood risk data and other related data sets available. Metadata for these is not currently available, or is low quality, thereby limiting the use of the data for robust modelling and decision-making. Nevertheless, this represents a significant development from a spatial planning and urban design perspective.

In addressing any particular planning or design task, these core reference data sets are invariably combined with more localised or domain-specialised data, whether open or proprietary. In the case of open data sets, these will often be described in open data catalogues such as data.gov.uk or the London Data Store, and are being used to create publicly accessible tools and resources to give insights into characteristics of specific locations or areas. Two examples of how open data can be used are:

LONDON HEAT MAP

The London Heat Map was developed to promote the objective of significantly increasing the use of district heating in London. By combining data provided by local authorities and the Greater London Authority, the map provides an interactive tool for identifying new district heating opportunities. This enables planners and urban designers in London to understand the local heating and energy context of new developments, and therefore contribute to meeting local sustainability objectives.

MANCHESTER 3D CITY MODEL

This example exhibits the next step in adopting a full open data lifecycle for spatial planning. A 3D model of 30 square kilometres and over 3,000 buildings was originally created as a means of showcasing the city. This model is now maintained by providing access to all developers and planners, on the condition that they return the model with their proposals included, thereby ensuring ongoing updates. This approach enables designers to work immediately in context and to see what the physical consequence on the local area will be much faster than without the model. It also allows transport planners to put their models in context and have their inherent understanding and interactions in spaces seen almost immediately within the process. (See Stileman, Lesser & Mabey, 2012).

THE OPEN DATA ADVANTAGE IN URBAN DESIGN PRACTICE

In the cases described, open data offers a number of unique characteristics that are instrumental in enabling analysis to be performed, and corresponding applications to be built. These can be considered under four headings:

1. **Costs:** the application of an open licence and the adoption of best practices for open data publishing remove the initial barrier of gaining access to the data. There may be marginal distribution costs to bear, but open data carries no cost for the data itself. This therefore has the potential to dramatically increase adoption.
2. **Commons:** collectively, the existing pool of openly licensed data sets can be thought of as a 'data commons', where large volumes of diverse data can co-exist under open and often compatible licensing terms, increasing the overall pool of data available to consumers.
3. **Coverage:** 'data commons' can broaden the data

↑ Manchester City 3D Open Model developed by Arup used in different ways to inform decision-making

↑ OpenStreetMap example, central London, www.openstreetmap.org

coverage of applications and analyses that may otherwise omit data due to prohibitive costs.

4 **Clarity:** the prevalence of a limited number of open data licences can also simplify the process of data reuse and integration for consumers. This is achieved by replacing non-standard or proprietary terms and conditions for data reuse with simple, well defined, and broadly understood open data licences.

These characteristics raise the question of how the adoption of open data may alter practice in urban design. Certainly our experience is that open data sets have become increasingly reliable resources for planning. This can be seen in the increased use of OpenStreetMap or Transport for London open data sets during a project's design and communication phases. However, data from traditional providers is increasingly unable to answer more complex queries that arise at larger or more local scales. Richer data resources are therefore needed to fulfil more intricate spatial planning and urban design tasks. Many of these needs could be met by open data, which can deliver greater value at all stages of the planning and design process. For example:

- **Open data reveals the problem:** friction points in the urban environment can be identified by 'instrumenting' the city with sensors and conducting routine data analysis. For example, hidden traffic bottlenecks may be identified that could be resolved through future planning decisions. In this scenario, the design and functioning of the city becomes more explicitly data-driven.
- **Open data enables the solution:** in the traffic bottleneck example, more ready access to very granular data can support more sophisticated modelling in order to understand the problem better. This can guide the design of better solutions.
- **Open data provides the feedback loop:** by routinely collecting and publishing open data, a wealth of data assets can be created that enable multiple parties to evaluate the performance and impact of previous planning and design decisions. This supports further decision-making that is informed by data not conjecture.

It is also worth considering the impact of open data at different geographic scales. In addition to localised data informing developments, the ease of sharing and integration through open data may support analysis at regional and national levels. A data-centric approach can help to reveal interactions between different factors that only show up at the larger scale; for example, how does a large development on higher ground, upstream, some distance away, affect urban planning or design decisions in a particular location that may suffer flash floods as a result?

CONCLUSIONS, CHALLENGES AND APPROACHES NEEDED

With an abundance of open data comes new challenges – not least the potential for raised expectations of the value that it can deliver. Meeting these expectations in planning and urban design relies upon:

1 **More data:** greater variety of data, greater resolution (both spatial and temporal), and from a greater range of sources. At present, the government and public sector are the key sources of open data, but both the academic and corporate worlds could be opened up further.

2 **Greater data quality:** the nature of quality is defined by the intended use of the data. Perhaps more important than quality is clarity for downstream users of how the data has been produced and processed, and the extent to which it can be relied upon. Underlying these factors are clear and robust maintenance and governance procedures, and mechanisms for communicating data provenance.

3 **Incentives and business models:** whether data is published by the public or private sectors, there have to be models in place that sustain the data publication process. Compliance with statutory obligations is a strong incentive, but more are required to foster the richest possible data ecosystem.

4 **Training and education:** the move to a more data-intensive planning process means that planners need to know what data is available, and also what questions can be asked of it. Planners and designers must become aware of the most appropriate and highest quality data to use in decision-making.

One approach to addressing these challenges is to incrementally embed solutions in specific domains, such as planning. For example, as argued in the RIBA *Shaping our Future Cities* paper, 'As part of its Open Data initiative, the government should model and explore the potential benefits of a digital planning process. Digitising all information submitted for planning and making this data available to the public could unleash economic growth and help local authorities better inform their local planning strategies.' ●

● Tom Heath, Open Data Institute and Damien McCloud, Arup

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ONLINE NETWORKS AND COMMUNITIES OF INTEREST

Orsola de Marco explains their role in realising urban design projects

↑ A visualisation of the Liverpool Flyover

BACKGROUND

Crowdfunding, where individuals and businesses share the cost online of a common idea or cause, is now an established practice in many areas of modern day life. A whole host of ideas and inventions have been funded by hundreds, sometimes thousands, of pledgers providing just a few pounds here and there in support of a project they want.

Growing acceptance of crowdfunding, which has been driven by the mammoth success of Kickstarter in the US, has led to new variants of the theme taking shape. Civic crowdfunding – which focuses on raising money for local public-orientated projects – is the latest step in this funding revolution, and one that holds the power to change places and people's perceptions of spaces, across Britain.

Spacehive, the world's first civic crowdfunding platform, has already helped realise the potential civic crowdfunding can bring. Despite only being online for two years, it has already helped to transform communities with over £1.7m worth of projects successfully completed.

A COMMUNAL FOCUS

Where Kickstarter has enabled projects such as a new album and tour for singer Amanda Palmer (some $1.2 million were raised by 25,000 fans for these ventures), Spacehive is unashamedly communal in its focus. Admittedly, at the moment you cannot claim an equity stake in a community centre in the same way that you can receive a free download of an album you helped fund, but people still feel a reward from changing the area around them for the better. Civic crowdfunding exploits individuals' self-interest, but to the benefit of the wider community.

Civic crowdfunding can therefore be best understood as both a form of philanthropy and an investment – but not an investment in the strictly financial sense. Instead, contributing to a project on Spacehive, for example a new playground for children, can be seen as a social investment, helping not only your own children, but the children of nearby families too, and indirectly the whole area.

Obviously there is a limit to the size of projects that civic crowdfunded schemes can expect to realise right away. While there's no ceiling on what a Spacehive project can raise, the quickest and most successful ones raise between £10,000 and £20,000. Consequently, multi-million pound regeneration schemes are unlikely to be funded by civic crowdfunding anytime soon, and such large projects will remain the preserve of the government and big developers for the foreseeable future.

But developers are beginning to remember that the wider economic, environmental and social benefits of public space – and more importantly, community buy-in – are perhaps more important than purely commercial developments.

Spacehive has already begun changing the

↑ Glycoch Community Centre proposal
↓ Park and Slide in Bristol by Luke Jerram

> Crowdfunding is essentially a new market place and delivery mechanism for urban design projects

dynamics between government, businesses and citizens. It was born partly out of frustration with the UK planning system, which remains opaque and does not encourage or easily enable creativity and community-oriented ideas. Interaction between the planning system and affected residents is typically adversarial or negative, with most change enacted out of opposition.

In contrast, the kind of civic crowdfunding pioneered by Spacehive is transparent, with people able to follow the progress of projects and see who is supporting them. Spacehive also has an in-built independent verification system, to ensure permission has been granted and the relevant documentation provided to allow for projects to go ahead.

This is not to say Spacehive is directly challenging national and local government, rather it is helping government. In an age of austerity, Spacehive allows for cash-strapped authorities to contribute to projects without breaking the bank. Local government has been hit hard by austerity measures and the public sector cuts, so there is less money to go around than ever before. This is perhaps why politicians such as Boris Johnson, Mayor of London, and George Fergusson, Mayor of Bristol, have backed Spacehive's projects in these two cities, and why several local authorities now have their own pages for projects in their regions.

Yet while undeniably innovative as a means of raising money, there are striking similarities between the civic crowdfunding spearheaded by Spacehive and the funding methods for civic projects in Victorian Britain. Project promoters cannot simply set up a page and hope for money to start pouring in: they need ingenuity and clever campaigning – much like the Victorian philanthropists of the 19th century, a time when sculptures and other forms of public art were funded by public subscription.

The Victorian era was undoubtedly a golden age of civic works in Britain, and with the help of Spacehive, the 21st century can be another golden age of civic works, albeit this time one of locally-driven creative designs. Many people complain about the current swathe of new residential developments and office buildings being unsightly or mean spirited in terms of public space provision and their contribution to the public realm. There is a sense in the property industry that architecture, urban design and landscape architecture are just a range of consultants employed in order to deliver a commercial vision, rather than a creative processes with wider benefits. Spacehive on the other hand enables the creative process to flourish without those worries because people are essentially asking for and voting for the design, putting their ideas and money into the places and the projects that they want. It enables designers to take risks and be more creative because ultimately if people like a project, they are going to pay for it. From a design and architecture point of view, civic crowdfunding presents a new opportunity to showcase and realise ideas; it is essentially a new market place and delivery mechanism for urban design projects.

EARLY SUCCESSES

One example of a Spacehive project rethinking space creatively is the plan for the Liverpool Flyover, which is endorsed by Joe Anderson, the Mayor of Liverpool. Just under 350 supporters raised £41,000 to initiate a feasibility study into transforming the derelict flyover into an urban

← The Line, a 4 mile sculpture walk in London and selected sculpture: 'Vibrant sensation' by Damien Hirst, 'Hands on' by Piotr Uklanski, and 'Off your trolley' by Abigail Fallis.
↑ The view south towards Canary Wharf from Twelvetrees bridge over Bow Locks on The Line
↙ The Line at Excel Marina and the Royal Docks from the Emirates Air Line.
↓ The team behind the Line's success.

park, turning a symbol of industrial decay into a vibrant space shared by all.

A similar example of the transformative impact of Spacehive is the Glyncoch Community Centre. It was Spacehive's first project, aimed at uplifting the deprived ex-mining town of Glyncoch in South Wales, where unemployment is near 50 per cent. The campaign garnered support from Stephen Fry, Griff Rhys Jones and the Welsh rugby team. Spacehive unlocked a longstanding project to build a new community centre which was to become the hub for a deprived and downtrodden area full of social housing and unemployment. Glyncoch was the most unsuspecting civic crowdfunding victor possible, but perfectly showcases what is possible.

A more recent success has been a £142,000 project to create the first phase of a four mile sculpture walk between the Olympic Park and the O2 arena along the River Lea and a set of canals. Known as The Line, the art-piece received backing from film director Danny Boyle, photographer David Bailey and Suggs, front-man of the band Madness. Its creator Megan Piper could win an Olympic medal for networking – and it's one of the best traits a successful project promoter can have.

Perhaps the most famous venture of Spacehive is the Park and Slide, a community art project paid for by 544 people. Coming two years after Spacehive went live, Park and Slide created by Bristol artist Luke Jerram, is just one of dozens of successful projects that have helped transform places and people's perceptions of spaces across the UK. ●

● **Orsola de Marco, Placemaker and Social Innovator, Spacehive**

DIGITAL PLACE-MAKING: PLANNING IN THE REAL-TIME CITY

Dr Chris Luebkeman and Josef Hargrave report on the value of data to places

↑ Artist's impressions of Landsat 8 satellite currently in orbit over the US. © NASA. Data © USGS/NASA Landsat. Image © Satellite Applications Catapult

'We increasingly experience cities mediated by digital technology... We need a discipline that doesn't really exist yet, a merger of urban design and urban planning with urban informatics, with networked public space.'

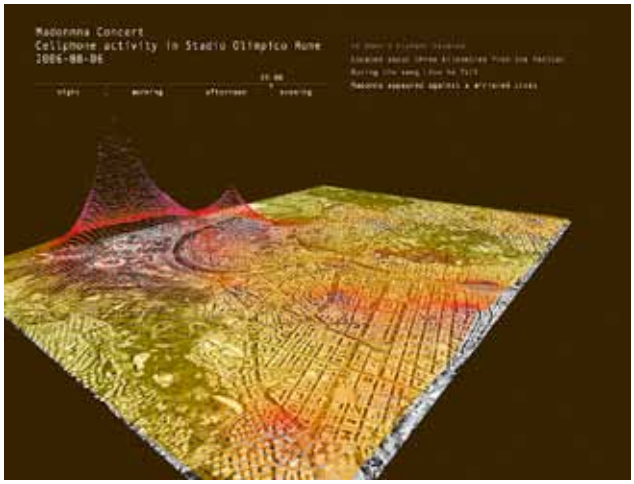
John Tolva, former chief technology officer for the City of Chicago

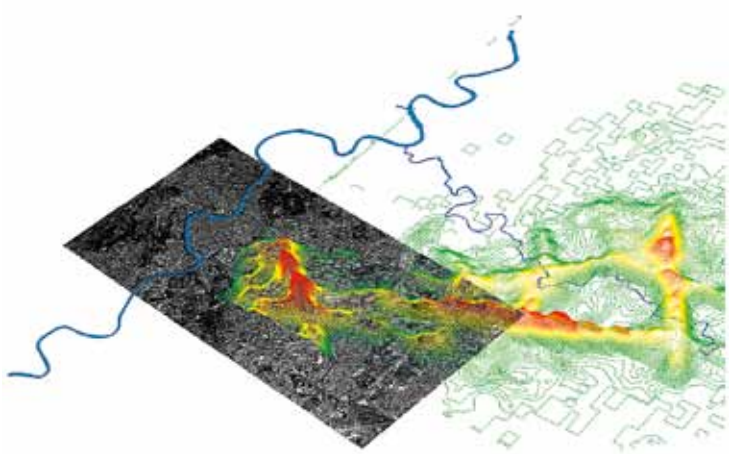
A NEW NORMAL FOR URBAN DATA

If you have ever used Google Earth to explore the surface of our planet, the satellite images you saw would have come from one of two commercial satellite imaging companies, DigitalGlobe or Airbus Defence and Space. Each company uses a small number of orbiting satellites to create and sell images of our planet. While the public availability of satellite data is impressive, images on services like Google Earth tend to be between one and three years old and do not provide a real-time image of the surface. This is about to change. A number of start-ups are working on creating a dense network of small and cheap satellites that can provide real-time images of the entire planet, at a resolution of up to 50cm per pixel. Having access to real-time images at this granularity would allow us to ask very specific questions about the past, current and future make-up of our cities. How many cars are parked in my neighbourhood on a Friday afternoon? Which parts of a city's parks do people spend the most time in during the week, or weekend? What is the current distribution of taxis across the city? What kind of social activities really take place in the city's public spaces?

Satellite imaging is only one example of how information technology is radically transforming our ability to understand the diverse set of patterns, structures and processes within our cities. Our assessment to date has been based on momentary data points and extrapolations. A digital urban revolution is happening at multiple scales and across multiples of components. At the macro-level, satellites, drones and sensor networks are providing information and data on anything from land-use patterns to traffic flow. At the other extreme, distributed sensors assess the levels of specific chemical compounds, free polymers or particulates in the atmosphere. Somewhere between the two, one can now find smartphones and sensors picking up localised data on the behaviour of individuals, their emotional state and the overall condition of the urban environment. Myriads of devices and systems are providing an ever expanding pool of data along the entire scalar spectrum and typology.

A project at the Bartlett Centre for Advanced Spatial Analysis (CASA) at University College London used mobile electroencephalography devices to map people's emotions in relation to their surroundings. The findings provide advanced insights into individuals' perception of their environment and how the built environment can influence emotions and behaviour (CASA, 2013). In another example, scientists at Delft University of Technology have developed a set of sensors that can be fixed to umbrellas to measure the vibrations caused by falling raindrops. A network of smart





umbrellas carried by individuals around the city could provide crowd-sourced data to improve our understanding of urban hydrology and to predict the risk of urban flooding at the street level (Amos, 2014).

The overarching trend is quite simply that there will be a steady increase of data from a more diverse range of sources. This will include an increase in unique as well as common data sets created and shared by individuals. In addition to growing in scale and diversity, data is also becoming more open and shareable. Organisations like the London-based Open Data Institute are working on platforms and protocols to share data, to access others' data and to collaborate to create new data-driven opportunities. These platforms will act as the integrators of previously isolated markets. By sharing data across urban systems such as wellness, energy, transport, water, food and waste, we can better identify previously hidden relationships and develop opportunities for more integrated approaches to planning and service delivery. These collaborative approaches are becoming more important as the problems of our urbanised society increase in complexity and are placing unprecedented demands for resource efficiency.

CHANGING PARADIGM

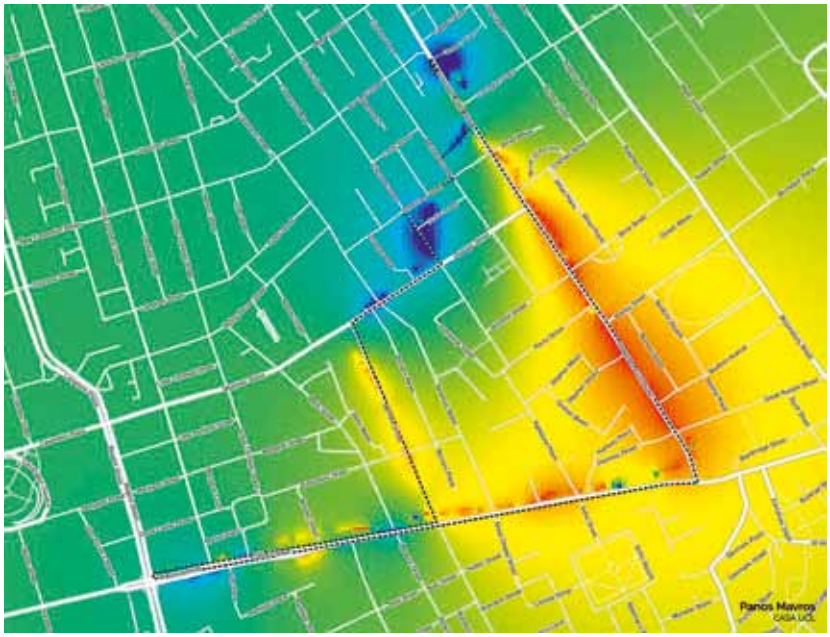
Ubiquitous data reshapes our ability to analyse and understand the urban environment. It enables a paradigm shift in how cities are planned, designed and managed. We expect the shift from understanding urban places as linear, segregated and static systems towards more adaptive, inter-related and flexible systems. If we accept that the volume, quality and accessibility of data are likely to increase, the key questions must be: How can we make meaningful use of this data? How can we utilise this data to make our cities more efficient, smarter and resilient? How can we design cities that respond to specific citizen needs?

In transport planning, access to a full data set of past and current traffic patterns would allow us to create assessments and predictions based on a complete understanding of how the system, its components and its actors actually behave. Where transport data includes – or is integrated and overlaid with – pedestrian data, a holistic approach to transport planning can be achieved. In Massachusetts Institute of Technology's Real Time Rome project, movement data provided insights on use of urban spaces, including social aspects and behaviours linked to events and activities (Real Time Rome, 2014). Dynamic data allows planners to design solutions that are context-sensitive to the cultures and behaviours associated with space. It brings disciplines like transport planning closer to urban design, broadening its quantitative focus on increasing transport efficiency and mobility to include place-making.

Another example of data-driven planning is the management of transport and air pollution. According to the Chinese Academy for Environmental Planning, environmental degradation and pollution costs the Chinese economy around 3.5 per cent of gross domestic product annually. In 2010 alone there were 1.2 million air-pollution triggered deaths in China. An analysis of Chinese real-time air pollution data has shown that most of the smog can be accredited to a few big polluters. Diesel trucks may only account for 5 per cent of vehicles on the road, but the data showed that they are responsible for 50 per cent of nitrogen oxide emissions (Bloomberg, 2014). This kind of understanding of the sources, geographic spread and impact of air pollution allows authorities to make better planning decisions and identify areas where interventions would lead to better management of risks or healthier urban environments. For example, data can be matched with knowledge on urban heat risk to develop more effective intervention strategies in high-risk parts of the city before and after a heatwave. Or it can allow people to make better travel decisions by sharing where and when pollution is highest.

Data allows planners and designers to become more capable of assessing specific urban contexts. Combining a multitude of different data sources allows us to reflect the complexities of urban life and identify anomalies that provide insight on how things really work. In the case of informal settlements, or slums, information about evolving demographics and geographies has been largely invisible and as a consequence often ignored. Approximately 60 per cent of the population of Nairobi lives in slums, and 77 per cent own phones. Residents of Nairobi's Kibera settlement now use their phones to access and contribute to OpenStreetMap, a platform to collect, consolidate and map geospatial data for Kibera. The resulting map of the settlement includes information on anything from pharmacy locations to water points, as well as locations of potential personal danger (Map Kibera, 2014).

↑ MIT Real Time Rome. Copyright of MIT Senseable City Lab.



↑ Exploring the Role of Emotions in Urban Behaviour. Copyright of Panos Mavros.

TOWARDS ADAPTIVE AND PREDICTIVE PLANNING

GPS surveying, satellite imagery, sensors and mobile phones all contribute to new opportunities to create detailed demographic and geographic profiles of spaces. These profiles will enable more inclusive and context-sensitive planning decisions, in particular when coupled with behavioural insights. Furthermore, a more granular understanding of the city and its functioning can enable a more efficient and tailored allocation of our increasingly limited resources. Real-time data of current usage patterns, weather conditions, current events and commodity prices will impact decisions by utilities to increase or decrease the provision of services and personnel. Waste collection could be matched to patterns of local footfall, water management systems could respond to real-time patterns of rainfall, and artificial shading could be increased in areas prone to risk during a heatwave. These kind of responsive systems have the potential to radically change the interaction between people, structures, the environment and the city. Cities can become more responsive to sudden or unexpected events and thereby be more resilient to risks and uncertainties.

These developments are already in motion. But as so often is the case, the future is here, but unevenly distributed. While open data and transparency may be the norm for some, restrictions, censorship and concerns about privacy are the reality for others. If we can overcome these disparities, open and real-time data has the potential to deliver planning processes that are based less on models and assumptions and more on assessment and facts. It can allow us to get a better informed understanding of the context and patterns that define a space, including geography, cultures and behaviours. Cities could be managed more effectively while simultaneously integrating collaborative planning principles that enable greater public participation. New technology can empower more citizens to comment on, and contribute to, the design of their cities — from specific design proposals or neighbourhood plans to reporting on roadside waste, potholes or noise.

We can imagine a greater focus on the recognition of patterns and the accurate prediction of future states as data becomes more ubiquitous, complete and integrated. Thus, smarter, more adaptive and user-focused systems and cities could be developed. This will enable planning, design and management processes that are much more focussed on creating spaces, structures and experiences that can respond and adapt to constantly changing requirements, and that can better deal with uncertainties about future user requirements and environmental conditions.

The first step is to understand the current state of our assets and the key challenges facing a particular city. The second step is to capture and utilise data and turn raw information into insights, providing a baseline for making better and more informed planning decisions. The final step is to utilise real-time data to create systems that can react to this data autonomously. We can then imagine a city that is constantly changing and adapting to varying economic, social and environmental conditions.

Certain aspects of having ubiquitous, real-time data may be too utopian. Restrictions and concerns about privacy and sharing may limit how much of this data individuals and organisations can have access to. Regardless of these possible limitations, we are moving into an age where data about our cities will be far more plentiful and accessible than it has been in the past. We must consider how our working practices and processes will change. How will we manage this huge flow of data and make sense of what it means? How can we use technology to create a pleasant environment, rather than a technological nightmare? How clever will we need to be in order to analyse the data becoming available to us? In a world facing uncertain futures, we need to create a space for collecting, analysing and using data in urban planning, design and management processes. Whatever path we take, our focus must be on finding applications that support the development of more resilient and liveable cities. ●

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FLOOD RISK DATA AND URBAN DESIGN

Peter van Veelen and Pia Kronberger-Nabielek show how technology and field work can help

INTRODUCTION

Delta cities like London, New York, Jakarta and Rotterdam are faced with increasing flood risks due to a changing climate (leading to more intense rainfall events, sea level rise and storm surges) and the ongoing urbanisation of waterfront areas. Therefore, many cities are currently developing urban design and architectural strategies to create flood-resilient urban waterfronts by incorporating flood mitigation measures in the design of outdoor areas and new buildings. In contrast to new developments, however, the adaptation of existing built-up areas currently mainly results from unplanned and reactive processes. Companies and property-owners tend to individually adapt or retrofit their assets in response to a flood disaster rather than as a planned damage precaution.

The question is how to proactively plan for existing urban waterfront areas, using available data and technologies, to anticipate slowly changing climate conditions as well as extreme weather events. Hereby, the difficulty lies and not so much in finding flood adaptive measures, as there is a large variety available, but in defining their requirements and selecting the most beneficial in a given context.

When adapting urban environments to the effects of climate change, it is necessary to understand when and where adaptation is needed and to what performance criteria measures should be designed. These criteria would typically relate to an anticipated extent and type of damage. Current GIS-based flood behaviour models are able to deliver information on flood levels, affected areas, velocities and durations of a flood with increasing precision. However, to effectively integrate flood adaptation in urban design and architecture this information is too inaccurate. The design of the urban realm and built environment requires information as precise as decimetres not just metres. In addition, local area characteristics such as slightly changing ground levels, the existence of local floodwalls, drainage systems and the flood entry thresholds of existing buildings, infrastructure and assets are not yet integrated into flood modelling. This could, in some cases, lead to an under or overestimation of the impacted areas and flood depths. Moreover, on a district and neighbourhood level, there is still little knowledge about the actual impact of a flood event and the relative vulnerabilities of urban assets and buildings to flooding. To develop suitable flood adaptation strategies for places, a better understanding of the nexus between flood risk modelling, assessment of urban vulnerabilities and adaptation performance criteria and goals is crucial. Adequate data and technology are key to this understanding.

To bridge the gap between large-scale flood modelling and local planning and design it is necessary to integrate field analysis data and research-by-design methods into GIS-based modelling. Recently, the concept of Adaptation Tipping Points (ATPs) has been introduced to link model-based risk assessment analysis with area-based empirical research and design. ATPs describe the boundary conditions under which a system has to adapt, or move to other strategies or policies, in order to remain functioning or to comply with predefined policy objectives. The advantage of ATPs is that they can be translated into area-specific threshold values: for example a maximum

↑ View of Katendrecht across Maashaven harbour. Photograph by Peter Schmidt

↑ Adaptation measures for Feijenoord. Images by Doepel Strijkers
↑↑ The Kop van Feijenoord/ Noordereiland area. Courtesy of Aeroview Rotterdam/ City of Rotterdam.

> For existing built-up areas there is no policy or regulation in place to minimise the effects of a potential flood

flood level or flood return period, which offers clear criteria for design. These threshold values are determined by the susceptibility of individual buildings, urban infrastructure and assets to a flood. Working with ATPs puts the vulnerabilities of the built environment centre stage in developing an adaptation strategy.

FLOOD RISKS IN UNEMBANKED ROTTERDAM

The city of Rotterdam, known for its good urban design practice, has recently tested this method in a research-by-design project. The aim was to develop flood-adaptive strategies for the city´s urbanised waterfront areas. After introducing flood risks and current flood policies, it will demonstrate how ATPs can be used to define performance and selection criteria for different flood adaptive measures and to draw out adaptation strategies in changing circumstances.

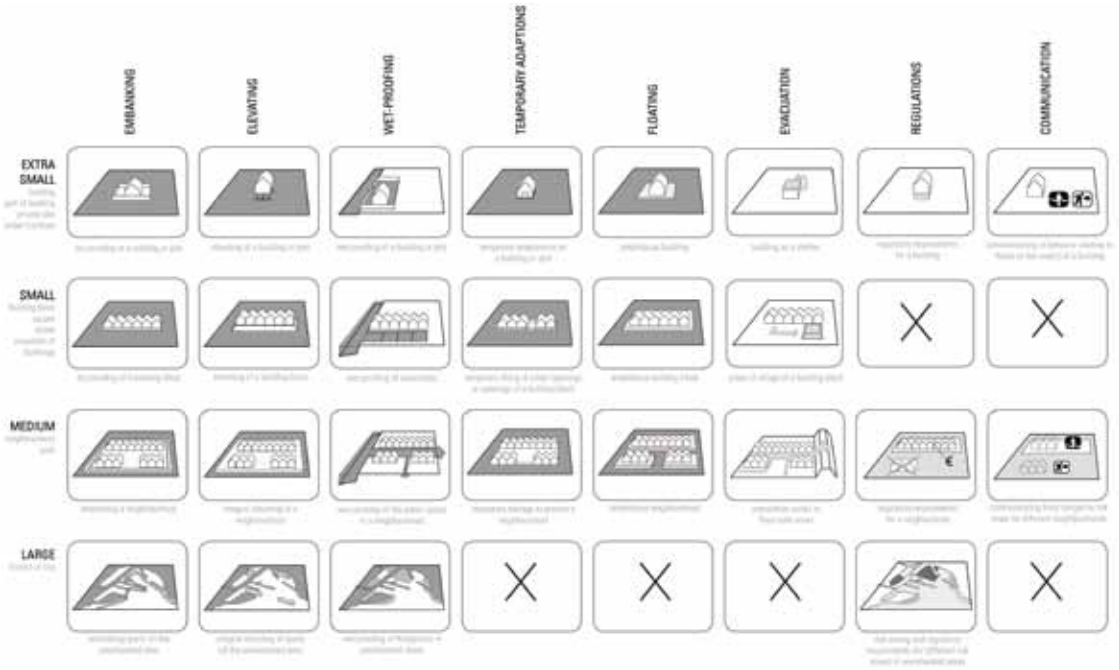
The Rotterdam waterfront is part of a large unembanked area that stretches between the open sea and the city of Dordrecht, and consists of alluvial areas that are almost entirely urbanised and not protected by the primary flood defence system. More than 60,000 people live in this area of around 200 ha (equivalent to a small provincial city), the biggest port-industrial cluster of Europe. Although a large part of the area is raised well above storm surge levels and benefits from the protection of the Maeslant barrier, the 19th century former port areas of Rotterdam in particular are most vulnerable to flooding. GIS-based flood behaviour models of these former harbour areas show that there are significant differences concerning flood frequency, water depth and flood duration. The majority consist of elevated flat areas where floods will only cause a shallow inundation of the public realm. Due to their shape as mounds, flood duration is limited to tidal fluctuations, since floodwater is drained directly back in the river. Some areas, however, are bathtub-shaped. Flooding in these areas is less easy to predict because of uncertainties about the permeability of quay construction and drainage systems. Also, floods occur more suddenly, with a relatively large vertical velocity and water depths up to one metre. These floods generally last longer, because water has to be pumped out.

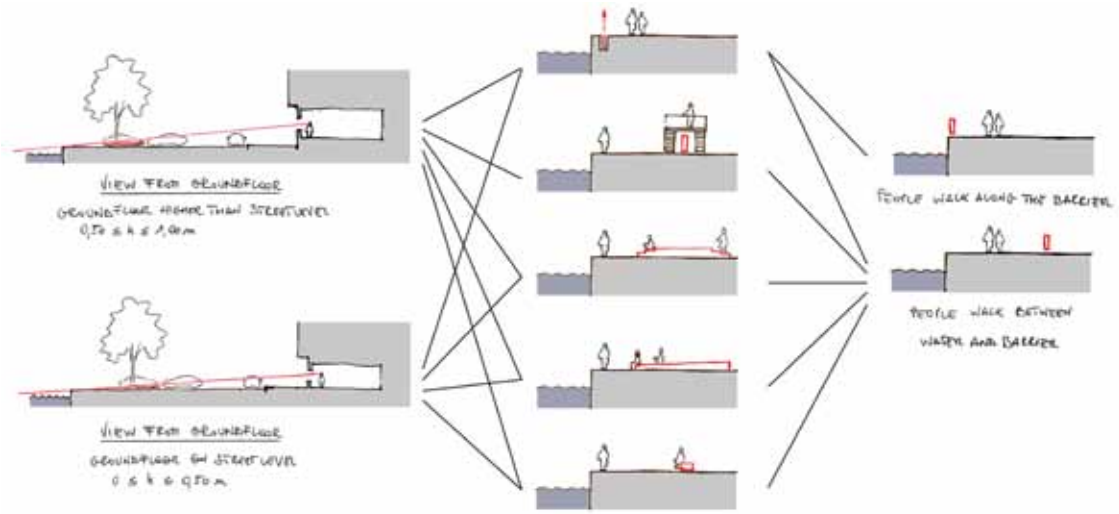
To gain detailed knowledge on the flood vulnerabilities of the existing urban waterfront, case study areas were selected that represented different typologies of waterfront development. The case study area Kop van Feijenoord is a low-lying residential area that comprises 90 per cent social housing with a high unemployment, poor housing stock and a lack of public realm maintenance. Due to its bathtub-shape the area runs a high risk (1 in 50 year) of flooding. The second case study area, Noordereiland, is the opposite: this artificial island is one of the oldest residential waterfront areas and comprises privately owned city mansions, many of which are listed monuments. Due to its mound shape, this area has only small inundation levels that are relatively well predictable and short-lived.

DEFINING ADAPTATION TIPPING POINTS

To define ATPs, it is necessary to understand when a flood exceeds the acceptance limits or reaches predefined policy objectives on possible damage. The Rotterdam research therefore suggests distinguishing between economic damage and social disruption. This is considerably different to the City of Rotterdam's flood risk policy, which has a legal obligation to raise building plots to a level above storm surge flood levels. The current storm surge flood level fluctuates between 3.90m and 4.10m above sea level, depending on local conditions such as wind direction and wave patterns. In low-lying areas, this policy has had huge effects on the design of streets and urban realm because new buildings and assets have to be raised to sometimes more than one metre above street level. For existing built-up areas there is no policy or regulation in place to minimise the effects of a potential flood. Property owners bear the full financial risk for possible damage caused by a flood event and are responsible for taking precautionary measures. Community disaster management is currently limited to closing-off quay sections and public areas. In addition, flood risk is not included in home insurance.

In the absence of clear adaptation performance criteria for existing areas, the internationally accepted flood management policy of not accepting economic damages to buildings at a probability of





more than 1 in 100 years, is used as a basis for the ATP. To minimise the risk of social disruption by the inundation of vital infrastructure and highly vulnerable buildings such as hospitals, care homes or nurseries, a flood-probability of more than 1 in 10,000 years was introduced.

To find out when the ATPs are reached in the case study areas, a detailed analysis of the thresholds (potential flood entry points) of buildings and other urban assets was undertaken. For example, by comparing potential flood levels with cross-sections of typical building blocks and local electricity substations, predictions could be made about flood levels that would enter buildings or cause power cuts. This analysis showed that the 19th century building stock generally has a higher level of flood resiliency, because the doorstep level is usually raised up to 50cm above street level. In Feijenoord, however, 19th century social housing blocks show a high sensitivity to flooding, because many of these buildings have their ground floors on or below street level. Their gardens have subsided considerably over time to significantly lower levels than the surrounding areas. Moreover, local electricity stations appear to be extremely vulnerable to flooding. A 30cm flood now can cause power cuts that last a considerable period of time and because of the knock-on effects, flooding will affect a much larger area. The local public transport infrastructure is easily able to cope with small floods, but with flood levels higher than 50cm, the area is not accessible for emergency services.

ADAPTATION MEASURES

A large variety of adaptation measures are available to create flood adaptive urban environments. Buildings or infrastructure can be wet-proofed (e.g. creating watertight structures), dry-proofed (e.g. using water-resistant materials), built on stilts, situated on elevated ground or temporarily protected by movable flood barriers. In addition, measures correspond to different scales, from the building level to a district or neighbourhood level. For example, a section of higher ground can be sufficient for several blocks. Small flood walls are usually used at the district level. As a first step during the research, an overview of the different categories of flood-adaptive measures and their effectiveness in terms of influencing the ATP was used. Based on this, a selection of measures that could potentially be applied in the case study areas of Noordereiland and Feijenord was shortlisted, according to the vulnerability analysis of existing buildings and infrastructures, cost-effectiveness, and opportunities to link up with urban development in the area.

↑ Overview of flood-adaptive measures
↑↑ Examining flood barrier options on Noordereiland

Using sketch designs, different measures were tested on existing buildings and public spaces. During a workshop with local stakeholders such as the social housing association, project developer and district representatives, the measures depicted delivered important new information on the technical, economical and qualitative limit value to which a flood-adaptation measure would be effective. For example, in addition to the doorstep level of individual buildings, the vertical position of plinths and window sills appeared to be important technical and visual boundaries for retrofitting dry-proofing measures, such as closing off windows. Measures in public space such as the construction of local flood barriers were tested for the extent to which they interfere with existing spatial qualities and functional relationships, for example the visual relationship towards the river or the accessibility of the quays as an urban promenade.

The final palette of flood adaptive measures differed substantially for each neighbourhood, making the ATP concept a tailor-made approach. On Noordereiland a combination of temporary flood barriers and dry-proofing measures for individual buildings proved to be promising. For Feijenoord, flood-adaptation at the building level is more difficult because of high water depths, the long duration of a flood event and the vital infrastructure located in the neighbourhood. In this area, a planned new development along the quay area has the potential to create a local embankment. A strip of elevated ground would offer sufficient safety – according to the predefined threshold value of a flood event 1 in 100 year. In addition, vital infrastructure would have to be protected to a higher level.

CONCLUSIONS

Developing resilience and adaptation strategies for existing flood-prone urban areas demands a relationship between flood risk assessment, adaptation performance criteria and goals, urban design and data. In Rotterdam, working with ATPs has proved to be a promising approach that bridges the gap and leads to specific solutions on a district and neighbourhood level. The results of this research are currently being applied through community-based adaptation planning processes. Their main added value is that the method contributes to a better understanding of vulnerabilities and delivers information on the usefulness of adaptation measures.

Yet the ATPs concept is highly dependent on the availability of relevant data, detailed information on the behaviour of the urban and natural system, and advanced modelling techniques. In combination with data-based GIS analysis, an empirical classic spatial analysis is crucial for understanding the flood vulnerability of an existing built-up area. It is a labour-intensive process to get the data and information, and therefore a considerable potential investment for authorities. When there is less detailed data and information available (which is the case in many developing countries) or when the effect of changing conditions is not well understood (e.g. risks relating to urban heat stress are less easy to quantify than flood risk), this may be less straightforward.

From a political and policy perspective, it is a complicated and sensitive process to define suitable threshold values on the basis of ATPs. For authorities, communicating various safety levels for different functions and implementing these in legal planning procedures might be a major challenge. An interesting exercise would be to develop ATPs in a participatory process with local residents and stakeholders. For planners and designers, the concept of ATPs demands specific technical knowledge of flood adaptive urban design and building methods, and their environmental impact, for example with regard to dry-proofing or regulating the use of ground floor areas. Finally, for local inhabitants and stakeholders in flood-prone urban areas it might be difficult to accept that some of the responsibility to implement flood adaptive strategies is theirs. ●

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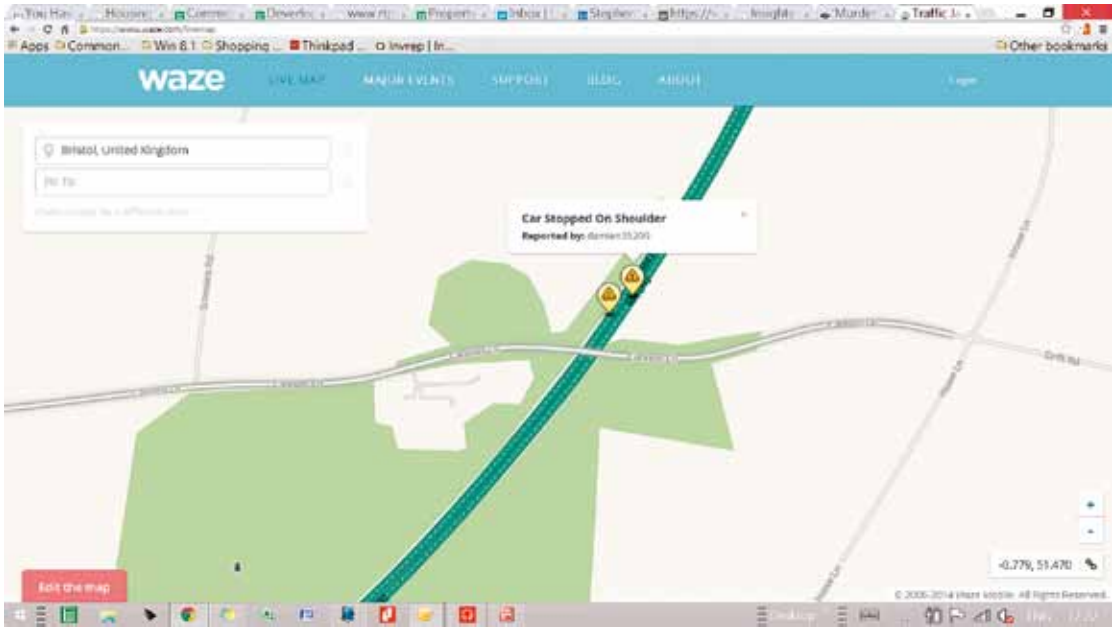
USER-CENTRED DESIGN FOR CITIES

Mike Saunders and David Janner-Klausner look at new ways to consult locally

If you are developing a product or service, it is widely agreed that user-centred design is the most effective way to produce something that people will want and use. Universities such as the Royal College of Art preach user-centred design, product designers live it, and even the US government encourages it. In this article, we explore the opportunities that web-based technology offers for extending user-centred design to the built environment. We look at some of the past difficulties in promoting this approach and, using our start-up Commonplace as an example, the way that new collaborative web technologies and ideas might enable a dramatic change in practice.

User-centred methodologies of design and co-design in the built environment are well established and documented. However, their lack of reach and interaction with political decision-making has not yet delivered their full potential.

Pioneers in modern architectural and urban design thinking such as Rem Koolhaas and Jan Gehl are strident about the importance of people



↑ Screen grab of Waze crowdsourced comment

in the design process. In particular, Rem Koolhaas is drawn to the potential of technology to offer transparency and public access to the output of his design. However, he famously pointed out that in architecture, a plausible relationship between the formal and the social (or in other words design and people) still needs to be established.

Koolhaas is an iconic example of a broader movement in Dutch architecture, which invites users into the design process. For example, custom build has been pioneered in the Netherlands, with examples such as Borneo Sporenburg by West8 architects, led by Adrian Geuze.

Jan Gehl has for several decades advocated a shift of focus to 'the space between buildings', which is the public realm where essential, discretionary and sometimes mundane activities take place. These spaces are often the unintended consequence of the development of buildings, yet are the key to a successful urban social environment and the happiness of its citizens.

In the 1980s, design charettes became popular as a co-designing process for a group of stakeholders, and this approach was developed in the UK into the influential *Planning for Real* methodology. Techniques for popular engagement in urban planning and design processes can make positive contributions to outcomes and help guide decision-makers. However, it is difficult to engage large numbers of people, and reach a representative sample. The model – usually limited to being advisory – pitches a manifestation of participatory democracy against the prevailing power structure of representative democracy. Participating citizens inevitably seem to come up against an old decision-making model that leaves them with a fundamental question unanswered: 'Is anyone listening?'

The spread of social media and web-based engagement, however, has blurred the boundaries between participatory and representative structures. The terms of office of elected politicians are continuously punctuated by social media interactions. Traditionally, the cost of user-centred approaches to designing the built environment was too high to put users at the heart of the design process.

Lowering the cost of engagement is something that technology may be able to solve, and the challenge shifts to developing appropriate platforms, ensuring that they reach beyond the traditionally engaged, and find political and professional routes to incorporate continuing local dialogue into wider decision-making.

THE POTENTIAL OF TECHNOLOGY

Over the last 20 years, the digital revolution has dramatically changed numerous aspects of our lives. Many of these changes have been liberating, for example access to knowledge, ease of communication and increase of choice for consumers. Four areas in which technology has excelled are:

- Peer-to-peer interactions, enabling people to co-produce with others like them. Examples include collaboration tools such as Google docs, social media channels like Facebook and campaign channels like change.org
- Opening up and finding new sources of information, from open data powered organisations such as MySociety to crowd-sourced approaches like OpenStreetMap, Ushahidi and Waze
- Creating new market places that bring together demand and supply, from Amazon's Mechanical Turk, to eBay and to crowd-funding platforms (where the commodity traded is money)
- Disrupting existing hierarchies of power.

Could technology bring these innovations to urban planning and design? If so, what would it look like? And why hasn't it already happened?

These were some of the questions we considered when starting Commonplace. Commonplace is a web-based tool enabling residents to use an app to comment on issues of local planning and development. Commonplace is commissioned by an organisation active in the built environment: this can be a private or public developer, housing association, local community group or planners and architects. Residents are asked to convey their sentiment about places and explain in more detail what they value or dislike about the place, and suggest ways to improve it. The body commissioning Commonplace gets immediate

access to all comments including the time and date they were posted. Participating residents are asked to include basic demographic information which is used to compare the social make-up of the locality to that of those commenting, and also to differentiate the needs and sentiment according to age, gender and ethnic background.

A driving principle in developing Commonplace has been to draw on this wealth of technological success and apply it to the context of urban design. In particular, technology should be good at enabling:

- Users' needs analysis (e.g. communities, residents)
- Collaboration and co-design between users (residents) and suppliers (e.g. urban designers, architects, developers and local authorities.)
- Better, more timely and accessible information for users
- Mobilisation of users to identify and meet their own needs.

↑ Commonplace is an engagement and insight tool for better places
↑↑ Screen grab from the West Hampstead Life commonplace forum

As we have seen, both the philosophical and methodological foundations have existed for some time, and the urban development and construction sector is large enough to attract investment. So the question remains as to why this kind of innovation has not already happened.

There are a number of possible explanations for this. Firstly, as there have been so many more obvious opportunities for digital technology pioneers, they have been busy; secondly, technical innovation in urban design and development has until recently been more focused on advanced design and modeling tools – producing for example, startling new parametric techniques – rather than engagement tools; thirdly, the combination of old school and institutionalised property development and planning regimes have between them provided a bastion of inertia.

What has changed is that social media has become so pervasive that whether wanted or not by cities, developers or local authorities, citizens have plenty of options to express their disquiet or objection to developments if they feel that their views have not been sufficiently well heard. The unintended and positive consequence is that cities are now starting to take the needs and views of citizens seriously again.

UNDERSTANDING NEEDS

Data is a good starting point in understanding citizens' needs. But there is so much data that it is often described as a deluge. And data is not the same as useful information. As Tim Berners Lee famously said 'Any enterprise CEO really ought to be able to ask a question that involves connecting data across the organisation... many organisations are missing this ability to connect all the data together. There's lot of data disconnect and companies are unable to make informed decisions'.

In the context of the city, there is for example open data produced by the authorities (e.g. indices of deprivation, census data), data produced by operators (e.g. travel data), social media data, event data, weather data... and the list goes on.

So we need strategies to make data easier to ground and interpret. In order to be really effective, the data needs to be interpretable by both authorities and citizens, so it becomes useful. One of our approaches has been to make the data gathering, analysis and interpretation hyper-local. A city-wide approach is often too complex for even data analysts, let alone residents.

But at a neighbourhood level, illustrated for example by Commonplace's installation in West Hampstead (see westhampstead.commonplace.is/comments) with perhaps hundreds or low thousands of residents, the data volume is manageable, and local people already have a good understanding. If you position data on a map of the local area, this adds to the local context and ease of interpretation. And when we map people's feelings, known as sentiment mapping, we have found not only a common understanding of the data, but also a provocation to express their own feelings. Sentiment mapping has therefore become a central tenet of Commonplace's approach to the challenge of needs analysis.

We have also been experimenting with the combination of different sentiment data sets. The Commonplace app provides a smallish local

dataset, but one which is rich and highly accurate. Social media channels such as Twitter provide the opportunity to data-mine much more abundant sentiment data, but with diminished accuracy and representativeness. Triangulating between these explicit and implicit datasets may allow quality control, and therefore help the usability of larger datasets.

This is particularly interesting for example in the transport sector, where a large amount of social media data is produced about people's journeys, much of which is spurious. But within the chaff there is abundant and very cheap data, which can be extremely valuable for operators and passengers alike. We recently experimented with this approach for the Transport Systems Catapult (see commonroute.commonplace.is/twitterVisualisation).

↑ Shane Whelehan of Ardoyne Youth Providers Forum, in front of St Gemma's School. Photograph by Chris Huston.

CONSULTATION OR COLLABORATION

We have so far avoided the 'c' word consultation in this article. Whilst in many ways Commonplace aims to disrupt consultation, our business model is very much about what many might call community consultation. Finding out what people's needs are, and how well proposed developments would meet them, in the cheapest and most accurate way possible.

Our proposition with Commonplace is that by dedicating our platform to openness and transparency, we can get better data from people, because they trust the process of collation, interpretation and participation.

The more collaborative approach that technology enables reduces planning risks and increases the return on investment made in public engagement and consultation. A collaborative approach is therefore showing signs of being more constructive, more valuable and more profitable for our customers developing in the built environment. You could say our proposal is that collaboration is the new consultation.

COMMONPLACE IN ACTION – WEST HAMPSTEAD, BELFAST, POPLAR

In the nine months since Commonplace's launch, we have begun to address the challenges of this domain of participatory democracy. The first is to accept the basic premise that the world has changed.

Developers, local authorities and other initiators and enablers in the built environment know that social media is all around them – they participate in conversations themselves – but are not yet ready to grasp the more profound potential impacts on their operating model. The private sector may be quicker to act – having planning applications expensively thwarted is a good incentive to engage. But for a platform to succeed it needs to have institutional adopters ready to launch it and promote its use on the one hand, and on the other hand it must be easy for the citizen to use. This combination can offer a positive answer to the 'Is anyone listening?' question at the heart of the representative/participatory democracy shift.

In Belfast, Commonplace is about to be launched as a tool for assessing local needs as part of a bid for transfer of local assets to the community (under provisions of the 2011 Localism Act). The initiator is a local community group planning to bid for the asset, and their aim is to highlight local perceptions of the needs of young people and their families. The empowerment is addressed through the Localism Act and the credibility of the local organisation using Commonplace in their community. Here Commonplace is being used by Ardoyne Youth Providers Forum, which is bidding to transfer St Gemma's School into Community ownership.

In West Hampstead, London, Commonplace was embedded in a popular local blog, with the result that the platform was accessed through this live widget over 100 times in three days, bringing new commentators to the planning process.

Compared to traditional engagement techniques of public meetings and surveys, we found that Commonplace achieved much greater proportion of participation from young people. The under 40 age-group, which was barely represented in the traditional approach had the largest representation through Commonplace.

In Poplar, East London, a facility was created for key local activists to disseminate Commonplace through their networks. The activists supply email addresses and the contacts are automatically sent messages recruiting them to participate, mobilising local networks of trust.

Taken together, these examples show how internet based platforms can make inroads into local engagement in planning and community issues. The platform is open (a map with comments from all participants is on an open URL), builds confidence in the platform and encourages participation.

THE FUTURE

As more and more of us move into cities (70 per cent of the world's population will live in one by 2050), it becomes ever more essential that these places can respond effectively to the needs of their residents and businesses.

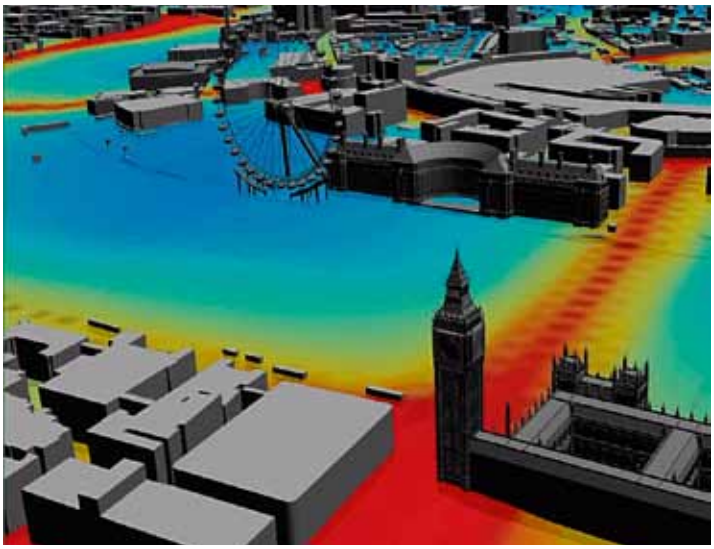
Existing and evolving data and technology offers the opportunity to forge connections, bring more people into an ongoing urban planning and design dialogue, and provide real-time analytics on use, sentiment and need.

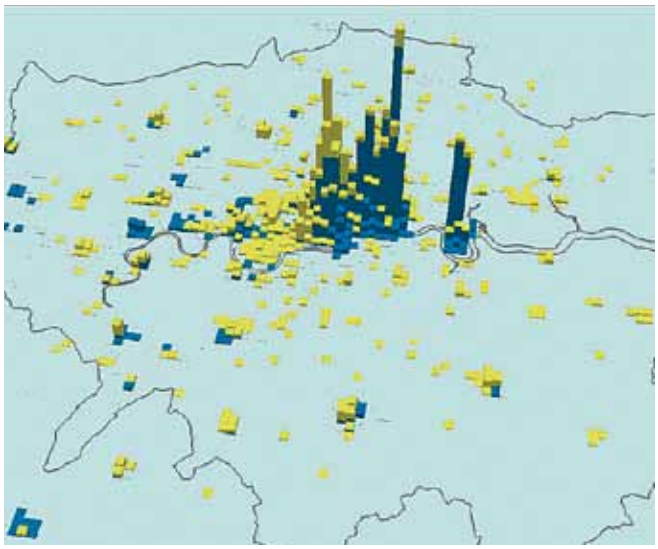
Smart cities will only ever be as smart as their citizens, but technology can help to harness the smartness of individual citizens and aggregate data into information, knowledge, understanding and new processes that will help cities to retain their fitness for purpose. ●

● Mike Saunders and David Janner-Klausner, COMMONPLACE

VISUAL ANALYTICS FOR URBAN DESIGN

Michael Batty and Andrew Hudson-Smith describe the wealth of tools available





↑ The Virtual London model built from vector land parcel, streetline and 3D LIDAR data and visualised in ArcGIS with a pollution layer in colour.
↗ London's office (blue) and retail (yellow) space as 3D histograms.

DEFINING VISUAL ANALYTICS

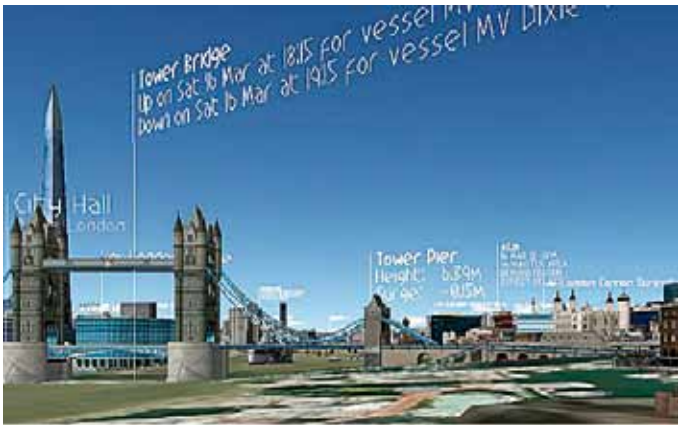
The dominant medium in urban design has and continues to be visual. Maps and physical models provide the lens through which design is developed and communicated, and pictures of the resultant designs, which largely focus on views of how buildings and people relate functionally and aesthetically to one another, are key to the definition of design. In a world that is now quickly moving to represent virtually every type of media from sound to sight, smell to hearing and touch in digital terms, the most obvious applications in urban design are based on digital representations of what traditionally was produced by hand: maps, layouts and perspectives. But the power of the digital world for urban design is much wider than mere pictorial visualisation, although this can be as effective if not more so than traditional media. Digital visualisation provides a powerful medium in which to abstract and analyse, and it is 'visual analytics' that is fast becoming the cutting edge of how urban design might be progressed.

Visual analytics goes beyond pictorial representations in that it associates the functions that define how for example, neighbourhoods work, with ways of making sense of them visually. It requires a model which we define as a set of abstractions embracing the functions that are central to design. The best way to describe this kind of analytics is to consider urban design to be composed of elements that vary over space and time, as well as over spatial scales, although here we will very much focus on localities or neighbourhoods. Such designs reflect a mix of goals relating to the aesthetic quality of design, reflecting the efficiencies with which people use the environment, as well as equitable principles that might be embodied and achieved by the design.

URBAN DESIGN FEATURES

Without going into theories about the neighbourhood, there are five core features of urban design around which we can illustrate visual analytics. First, there is the physical representation of the design as 2D maps and 3D visualisations of urban form that are captured and manipulated visually, and can be cast into various virtual environments to allow designers and users of the design to explore and experience the design in advance. In the last 20 years, the software to do this has evolved from geographic information systems (GIS for maps and some networks) to computer-aided design (CAD) software, and latterly to various kinds of immersive environments and animation. These kinds of systems are now scaling down to Building Information Systems (BIMs) that represent much the same idea but with a stronger emphasis on the function and materials of buildings.

The second feature involves networks. Clearly interaction and movement are key to urban design, and layouts of buildings are often complemented by these. There are many new ideas about networks, ranging from their morphology to their visualisation, that are being deployed to articulate designs. The third feature is new media. When most of us are connected to the internet using smart phones, then the kinds of interactions that can take place on virtual social networks are often reflected in quite complex ways in the physical environment; everything from Twitter feeds to email traffic serve to illustrate new ways in which social structures are intimately tied up with physical building structures. Our fourth feature involves new and more abstract methods of visualisation based on infographics. As we have implied, visual analytics is not simply about pictures of urban scenes or even about maps, but we can abstract aspects of a design problem and its potential solutions into forms that can be visualised



in powerful and effective new ways. The fifth feature is about the online world where much of our access to it is graphical and pictorial. Planning processes are now being dramatically restructured based on online information with new ways of generating participation, using stakeholders to generate data, and enabling much larger audiences to shape designs over the internet. All of this is critically dependent on visual analytics.

MOVING INTO 3D

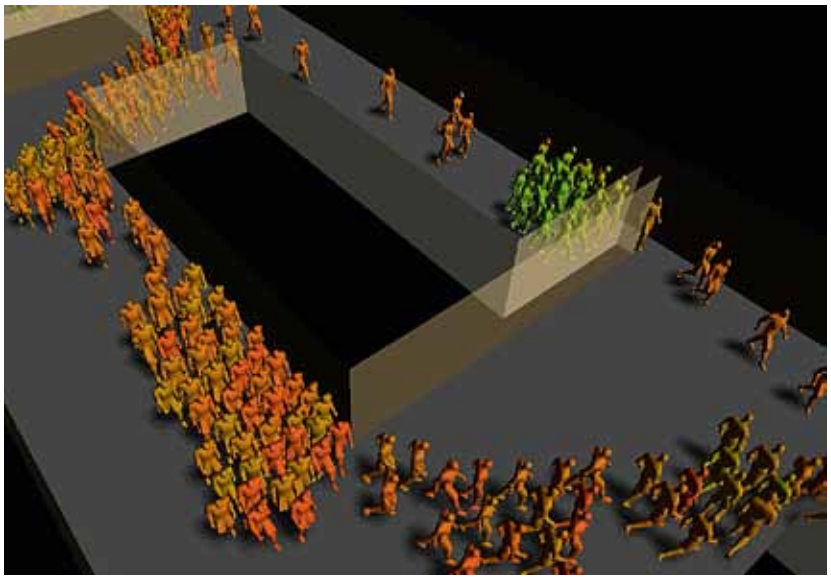
The core of digital visualisation in urban design resides in 2D and 3D representation, which was first illustrated for neighbourhoods and building complexes almost as soon as computers became graphical in the early 1980s. A whole panoply of GIS techniques in terms of treating the attributes of buildings as layers of data is now widely used. Taking this into the third dimension and tagging 3D representations to data layers enables new forms of analysis to be accomplished. We have a collage of 3D content from our Virtual London model, which enables users to tag these blocks with content and render them in much greater detail if required.

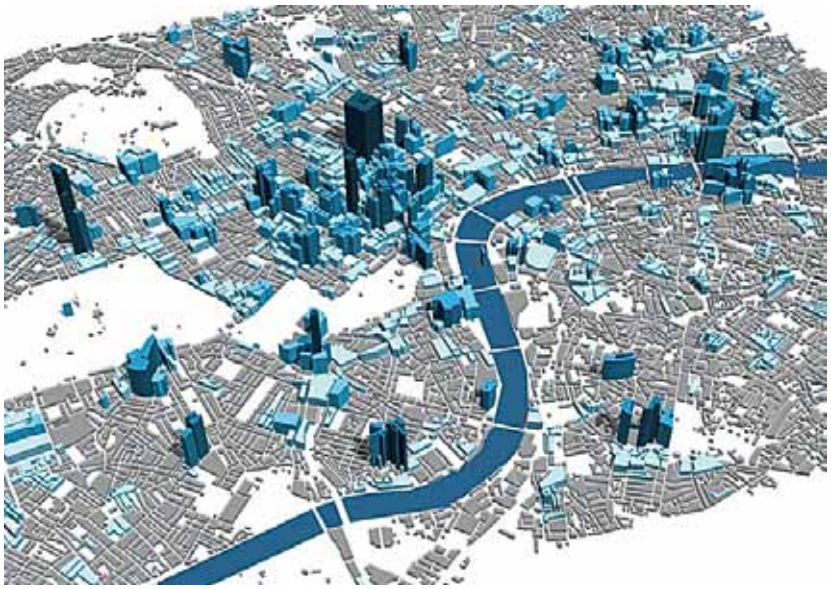
Besides the usual fly-throughs that are possible and going down to street level, these 3D models can be associated with layers of pollution or water, which can be manipulated to simulate flooding, or any attributes that are relevant to good urban design. Once the content of the model has been built in digital form, the 3D analysis is straightforward. Importing a 3D scene into a virtual world that can be accessed online is now almost routine.

THE VIRTUAL AND THE REAL

We can also show how a portion of the Virtual London model can be entered into a virtual world with actors logging on from remote locations, appearing as avatars, and engaging in discussions on various aspects of the 3D scene to be manipulated (Batty and Hudson-Smith, 2005). In short, developments in 3D visualisation have spurred on the notion of the online studio; the idea that many people can work together on the same design at the same time, no matter how geographically remote they are, is the way of the future and that is beginning to be exploited in all kinds of collective work and design through structured crowdsourcing.

↑ The virtual and the real: creating a virtual exhibition space where users can interact, and with easier navigation using gaming media
↖↑ Flows in the city: public bikes in central London and key passenger flows on the underground





↑ and ↑↑ Modelling and visualising pedestrian movement in neighbourhoods and large buildings for congestion and speed of evacuation
↑↑↑ New media: the spatial distribution of 3500 tweets over 15 hours

There are many other ways of visualising buildings and neighbourhoods using augmented reality, in which digital content is central. We can still go back to reality by projecting digital analysis on conventional physical media – using a map like the London Data Table – and improve this by enabling users to interact with the design in holographic space or by flying through space.

LINES OF SIGHT

A key element in the design of any system is the way that the parts are assembled to produce the whole, and urban designers spend a great deal of time experimenting with fitting elements into restricted spaces to optimise human interactions and contacts. In the last decade, there has been a revolution in thinking about how to represent and manipulate networks, and many new visual tools are being developed to portray the strength of connections between buildings and areas within a design. Rudimentary network tools have been developed for examining lines of sight and view-sheds in urban design, and very early in this development the idea of calculating proximity based on the quality of how spaces connected to each other was developed as Space Syntax. There have been rapid developments recently in this area, and we can show the kinds of analytics about connectivity and accessibility by lines of sight and their intersections – the essence of space syntax – for the French village of Gassin, originally used by Hillier and Hanson (1984) and extended by Batty (2013).

> As the digital revolution has always suggested, what is possible today will become routine tomorrow

CITY FLOWS

Urban systems based solely on simple links between spaces and routes are simplistic as these links are always weighted by flows. Flows are significant because they illustrate how energy flows in an urban system: car traffic, people walking, goods moving, email, web use, high frequency trading and so on. The flow of public bikes on streets in central London and the dominant links associated with the tube system at key transport hubs are examples of this. There are many such visualisations and if they are animated, these illustrate how energy pulses through the fabric of the city in diurnal cycles, like peak hour concentrations. Flow systems tend to be more implicit at the urban design scale and only really come into their own when traffic flow patterns are identified which define the city at a more coarse grain.

PEDESTRIAN MOVEMENT

At finer scales, the focus is much more on how people walk and interact locally using slower modes of transport. Flow systems can be visualised at a very fine scale, simulating people moving in a building complex, how they crowd, flock, diffuse and cluster as they interact with others and with the buildings. We can also model evacuation from a large building complex using the Legion software (Zachariadis 2014). This begins to suggest that

some of our work in urban design relates to much shorter term issues about the smart city, where we are concerned with how design is affected by rapid movement, security and safety issues.

SPATIAL DISTRIBUTION

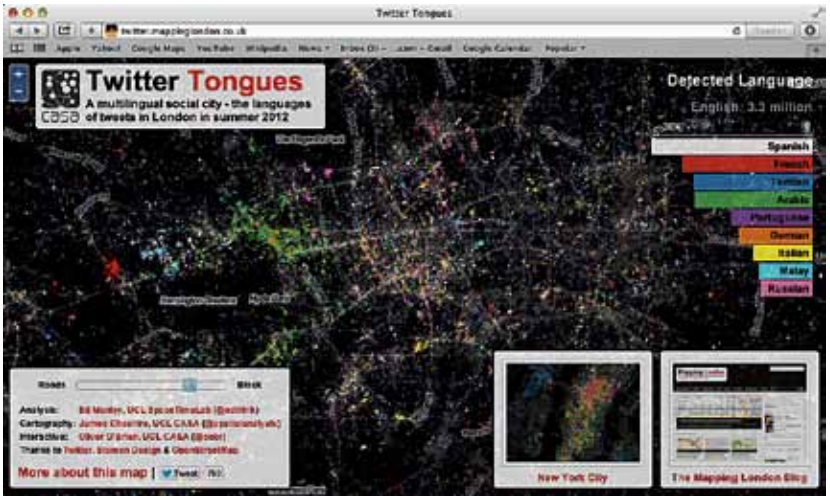
Data that streams in real time is now beginning to be captured and mapped at a very fine spatial scale. We have detailed transport flows second by second from smart payment cards as well as mobile devices used on social media. From this, we are able to explore the impact of social networks and interactions in small spaces and we can bring 2D maps and 3D visualisations together to locate and visualise social media, in this case Tweets, which illustrate how data can be associated with buildings and places. From this, social networks can be constructed which indicate how places are related to each another, complementing the other flow and network data that we have mapped and explored earlier.

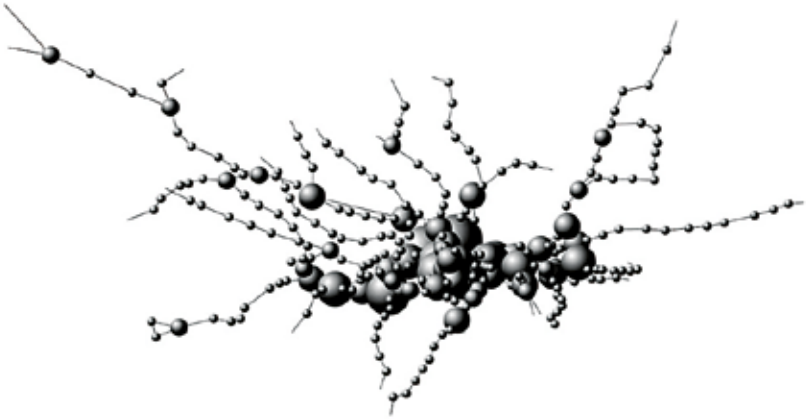
ABSTRACTING DESIGN PROBLEMS

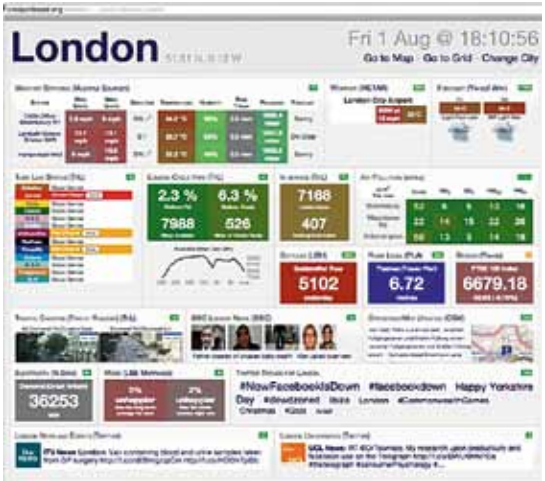
The beginnings of digital visualisation in the 1980s, which occurred on micro as well as supercomputers, were different to the examples illustrated here. Scientific visualisation essentially abstracts properties and visualises their structure using networks and statistical charts. There have been many advances, particularly involving networks and relationship diagrams. We can also show two very different examples: for flows based on the journey to work between places on the circular route network in London boroughs as a circular flow map, and for connectivity between subway stations in the London tube system. The real power of these visualisations is in abstracting the key points, so that in the circular flow map the dominant flows are within places, but the map also shows the key flows which represent major commuting into the centre of London. Visualising internal flows within places is very hard using conventional mapping in 2D. The connectivity of the tube stations enables the spheres to be positioned to make the graph intelligible while retaining its planar characteristics. Although we cannot show it here, the software makes it possible to animate and reposition the graphics showing its value in exploring urban design problems continuously.

This new world of visual analytics is exploding almost in front of our eyes because the internet enables all of us to become involved in these visualisations. In fact, data about urban problems is increasingly being delivered to our desktops and mobile devices through the web as shown in our Citydashboard, which collects data from live feeds and displays it in real time for particular places. We can scale this kind of visualisation to very local places, and improve them to be interactive so that designers and users can generate data using crowdsourcing. We can extend this to a variety of devices such as physical data tables and digital touch screens for extensive interaction by a range of stakeholders involved in the process of urban design.

In this paper, we have sketched out the possibilities that are currently being explored and as the digital revolution has always suggested, what is possible today will become routine tomorrow.







↑ The ethnic groups tweeting based on the languages used
↑↑ Infographics: abstracting spatial design problems to visualise the connectivity of tube stations
← Community design: disseminating real-time urban data using visual dashboards

Many of the new technologies described here reflect this and the time is ripe for a more considered exploration and integration of the array of visual technologies that are fast becoming central to urban design and planning. ●

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SOUTH ACTON MASTERPLAN

HTA's masterplan enables the delivery of fast paced regeneration in Ealing, London

BACKGROUND

Developer Countryside and L&Q housing association with HTA Design LLP and Alison Brooks Architects (ABA) won a competition in 2010 to deliver the regeneration of the South Acton Estate for Ealing Council. HTA's masterplan provided a framework for the redevelopment of the estate, covering an area of approximately 21 hectares. The 15-year regeneration programme includes 2,350 homes, half of which will be affordable and over a quarter will be family housing, as well as retail and community facilities, along with new and improved areas of public open space. A strategically important scheme for Ealing Council, the key objective was to help to deliver transformative change to the area, to attract a diverse range of new residents whilst fulfilling the needs of existing ones.

Phase 1 of the new regeneration scheme, designed by HTA, was granted planning permission in 2011 and is now complete on site. Following eleven months of work, the team went on to submit a dual planning application in February 2012, consisting of an Outline Planning Application with a Design Code, prepared by HTA, and a detailed application for Phase 2, prepared by ABA. The process involved extensive community consultation and working in close partnership with officers from Ealing Council, the GLA and TfL. Permission for both applications was granted in September 2012 and ABA's Phase 2 is currently under construction. Phase 3, consisting of two sites that have been designed by Stitch and Maccreanor Lavington, has been granted detailed planning permission, with work on site due to commence this autumn. HTA's masterplan and Design Code created a sound platform from which each phase could be designed with differing but complementary architectural styles by separate practices, to create a new environment that exudes a sense of place and architectural quality.

Prior to the regeneration, the estate's 2000 homes in medium to high rise blocks were characterised by a feeling of isolation and suffered from a lack of connections with the surrounding residential areas. Randomly arranged large blocks sited in a poorly defined landscape contributed to an unclear street structure and an incoherent public realm with poor natural surveillance.

The objective of the masterplan was to provide a holistic redevelopment of the estate, whilst retaining and enhancing the strong sense of community within the area. The principles of the masterplan were:

- Stitching the site back into the wider Acton area
- Improving north-south connections through the estate
- Re-establishing a well connected street grid
- Creating a network of open spaces
- Responding to context and scale
- Reinforcing character.

The townscape strategy was to provide a framework, sensitive to location, integrating the neighbourhood back into the surrounding residential areas, and that could also still evolve. This aspiration has been achieved through:

- The block structure that creates new or improved connections to the surrounding streets
- The building heights that respond to adjacent existing buildings, create continuity and variety where necessary, and announce the development with two taller buildings at key gateways into the new development in the north and west
- Buildings that frame the street and create strong frontages along key routes
- Existing trees and new tree planting aiding legibility through the masterplan, creating landmarks and site features with a strong sense of identity.

FAST PACED ESTATE REGENERATION

A multi-disciplinary team including

urban designers, architects, landscape architects, planners, arborculturalists, transport and infrastructure consultants, and the client worked closely together to produce a deliverable masterplan. During the design process the masterplan team reviewed and tested various options, consulted with the local community and met with the local planning authority.

The role of the local authority within this process cannot be overemphasised. From the outset, officers from the Planning Department within Ealing attended regular meetings and workshops, effectively becoming an equal voice within the design team. This relationship meant that issues could be discussed and dealt with in a timely and pragmatic fashion as they arose, thus reducing risk and curtailing what can become protracted months of negotiation if a sense of trust is not shared.

The in-depth and comprehensive stakeholder engagement programme that was established also played a very significant role in the success of the process. Regular sessions were held with a core group of residents, throughout the development of the masterplan, and the team made every effort to identify and meet all the major local stakeholders, often making changes to the proposals to reflect issues of concern for them. These efforts minimised the level of local objections at planning committee and helped to ensure a unanimous positive decision by members.

← HTA Masterplan
↖ Urban design diagrams showing: Character Areas; Context/Scale; Green Network; Formation of a central space; North and south routes
↗ Cheltenham Gardens – to the north of the site
↑ Completed Phase 1
→ Townscape

CONTRIBUTION TO URBAN DESIGN PRACTICE

The project is at the forefront of estate regeneration. Tackling the pertinent and in some cases controversial issues involved in the regeneration of estates and buildings which are often less than fifty years old. The nature of housing development in the UK today necessitates significantly increasing the number of homes to fund the regeneration. This presents challenges in terms of designing for higher density development within a lower rise suburban context, redeveloping the estate as a perimeter block development in place of 'buildings in space'. The masterplan demonstrates how the phased delivery of redevelopment can reinstate a more coherent block structure, with careful and sensitive massing, whilst increasing the density of development overall. This was achieved while ensuring that existing residents could be decanted directly into new phases without the need to move away and return.

LESSONS LEARNED

Each phase of the masterplan delivered so far has benefitted from a complementary but different architectural style, designed within guidelines and parameters established by HTA's masterplan. This diversity is delivering interest and variety within the area, whilst providing best practice design solutions for urban environments such as front doors onto the street, good overlooking, plenty of public and private amenity space, a range of unit types and tenures and homes that enjoy great views. The masterplan demonstrates a model approach for delivering long term regeneration in difficult and challenging market conditions and delivers exemplary community and stakeholder engagement. Where possible, mature existing trees have been maintained within the streetscape. Buildings have been designed around them to maintain a green and established feel to the neighbourhood. These can be perceived as new buildings, set within a mature, attractive, existing environment, rather than a new estate. A strong ownership and commitment to the project by the client and the team has helped to drive it forward. The masterplan is delivering much needed new homes to London at a phenomenal pace. ●

ST CLEMENT'S HOSPITAL, BOW

John Thompson and Partners design London's first Community Land Trust for a new community

St Clement's Hospital is a former workhouse infirmary in East London. The 4.5 acre site, with 19 buildings of varying age and quality, has been derelict for nearly ten years. In 2012, the Mayor of London decided to establish London's first ever Community Land Trust (CLT) at St Clement's. The CLT will oversee the management of the site on completion, ensuring that 35 per cent of the housing will be affordable for posterity. Linden Homes, with John Thompson and Partners (JTP) as architect and masterplanner, were selected as the GLAs Development Partner for the project.

COMMUNITY PLANNING

Community planning workshops were held over two days, attracting 350 local people who were given the opportunity to help develop design solutions. The workshops revealed that the local area not only suffers from poor community integration, but also lacks a focus and a meeting point for people to come together. The main aspiration was to see improved connectivity into and through the site. The visioning workshops also revealed the strong emotional connection to St Clement's Hospital as a local landmark. The workshops were an important first step and opened up a continuous dialogue with the local community.

OUR APPROACH

Our approach to this unique site has been to respond to the community's desire to see it become a vibrant, active and accessible environment. The resulting masterplan proposes to open up the former walled hospital to the local community for the first time. The listed buildings on the site will be refurbished to a high standard, and further enhancements will be made to create new spaces. The development will provide 252 new residential dwellings, of which 73 are in the restored historic buildings.

THE MASTERPLAN

The masterplan proposals are guided by a number of key principles which were developed through workshops, then tested and refined in the design development period that followed. The masterplan can be seen as a series of linked and interconnected character areas.

A NEW FRONT DOOR

A new public frontage to the development which addresses Mile End Road opens up the site to the public. A rich mix of commercial and community uses within the John Denham and Bungalow Buildings provide an active entrance to the site. Two arches in the Bungalow are cut open giving pedestrian access to the residential development beyond. The boundary walls are lowered at key points to improve visual connections between the site and its immediate context.

THE PAVEMENT

The Pavement is a key north-south route through the development which connects Mile End Road with Cemetery Park. It is a shared surface route that provides a direct physical and visual connection through the entire length of the site. A series of 'play along the way' natural spaces adjacent to the route provide points of interest and amenity. These include opportunites for public art, seating and gathering.

COURTYARD GARDENS

Courtyard gardens, and a new residential building, reinforce the central axis of the original workhouse. This provides an active frontage onto The Pavement and a boundary frontage onto British Street and the Eastern border. In form, this building has contextual resonances of the historic North Block and Administration Building.

SOUTHERN QUARTER

The existing walled therapeutic garden is retained and enhanced. A new southern entrance provides natural surveillance of Hamlets Way and Cemetery Gardens by opening up the southern boundary and lowering the boundary walls. A new taller residential building set back from the wall provides a strong visual focus at the new southern entry.

The heritage of the site has played a significant role at St Clement's with ten conservation principles informing the masterplan. These include: respecting the orthogonal symmetrical plan and site's central spine; accessing the site in ways that minimise impact on the listed boundary wall; maintaining existing circulation patterns; and recognising the essential organising principles of the original hospital layout.

OPEN AND PUBLIC SPACE

The landscape strategy for St. Clement's responds to the tight urban nature of the site. The Pavement will be reinforced with a line of trees, hedging and shrub planting.

↙ View south along new shared surface connecting Mile End Road to Cemetery Park.

A series of open spaces divides the north-south route. A new south facing square is located behind the John Denham building. It will be animated with two water features either side of the steps, designed to create a simple and attractive focal point at the square's edge.

Private communal areas of open space are located off this green spine in an east-west direction and set amongst the buildings. The character of these spaces is varied to create diversity and interest. A series of play areas have been dispersed across the public open space. Pocket community allotments and kitchen gardens with espalier fruit trees and hedging will encourage food production and community cohesion. A SUDs strategy incorporates large cellular underground storage tanks within the areas of open space for the disposal of surface water. Around 2,295 sqm of green roofs on the new buildings will also provide a natural drainage strategy to reduce the water run off and encourage biodiversity.

DELIVERY

The project has received detailed planning consent with unanimous approval by the London Borough of Tower Hamlets. Prior to the commencement of construction the site has hosted some memorable events, including the extremely popular Shuffle Summer and Winter Festivals, with art installations, outdoor cinema including Q&A with Danny Boyle, pop-up bar, cafe and shops.

The project is now on site. Asbestos removal from the existing buildings is a first priority to prepare them for refurbishment. The construction will in a single stage, provide housing for sale by Linden Homes, homes for rent for Peabody and affordable housing for shared ownership for East London Community Land Trust.

LESSONS LEARNED

There have been three key drivers for the masterplan: the aspirations of the political organisations involved in the project; the development partner; and the local community. The challenge has been to carefully understand what these aspirations are, and to work with all three in unison to come to a mutual understanding and agreement for a way forward. It is a very sensitive site, and proposals have had a strong emotional resonance for different reasons. This meant that there were considerable benefits in engaging fully and openly at all stages. JTP's role has been to facilitate this process and deliver a scheme that has gained wide approval. ●

↑ View of Market Square
↗ View through site entrance at Mile End Road through Bungalow building
→ 3D sketch perspective
↓ Proposed masterplan – ground floor
↓ Section through site along The Pavement

KEY

Public Realm & Access

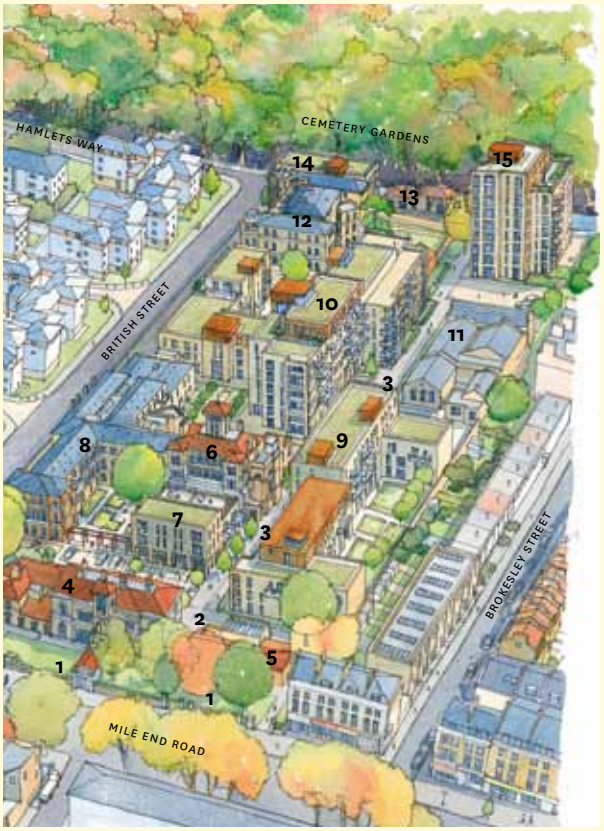
1 New public realm with existing gates opened to provide access
2 New South-facing square with terrace and water features
3 The Pavement

Mixed Uses

4 John Denham Building becomes business hub and café
5 Bungalow Building retained and converted for commercial use

Residential Uses

6 Administration Building retained and converted to residential use
7 Block A: new residential building on footprint of former Chapel
8 North Block retained and converted to residential use
9 New residential building with family duplex dwellings
10 Courtyard Gardens: residential building encloses private garden
11 South Block: residential
12 Occupational therapy building and Laundry: residential
13 Generator/mortuary to be converted for residential use
14 Block H: residential building on South East boundary
15 New taller residential building creates landmark to South.



OCEAN ESTATE REGENERATION, TOWER HAMLETS

Levitt Bernstein Associates create a public realm-led development framework

URBAN DESIGN OBJECTIVES AND ANALYSIS

Levitt Bernstein's Urban Design team led the design team that developed the framework for the East Thames Consortium to regenerate the Ocean Estate in Tower Hamlets, London. The £200m transformation programme involved the refurbishment of 1,200 existing council homes, 1044 new homes built for affordable rent, shared ownership and market sale, estate-wide environmental improvements and the enhancement of the local neighbourhood centre. The wider spatial framework looks at improving the streets and the public spaces through improved lighting, tree planting and street furniture. The identified infill sites were developed to fit in closely with their immediate context through clear linkages and sensitive treatment to buildings in terms of their scale and massing.

The high public transport acccessibilty level (PTAL) of the area was always a key driver in the development of the density but was secondary in terms of the place-making principles. Building heights range from 2 to 13 storeys, with an average density of 236 dph (450 hr/ha).

The Urban Design Framework set out to create:

- A neighbourhood that is unique yet integrated with Mile End Park, Mile End Road and Stepney Green tube station
- A clear urban structure that can be developed and redeveloped over time while benefitting from the established physical infrastructure of the surrounding street network, as well as providing a sympathetic response to the Stepney Green conservation area and the Grade 1 listed St Dunstan's Church
- An adequate provision of social infrastructure that encourages residents to settle in and grow their families in the neighbourhood
- A safe environment where streets and open spaces benefit from natural surveillance, and pedestrians and cyclists take priority. This is in line with the Council's stated aim to reduce traffic on borough roads and to encourage the use of sustainable means of travel.

The site was reviewed carefully with regards to the relationship with the adjacent open spaces, conservation areas, transport, commercial areas, educational areas, leisure and amenity. This analysis was undertaken for an area up to 1.5km from the site.

The estate is located between two major train routes into Liverpool Street and Fenchurch Street. There are high levels of connectivity from the site: bus routes, underground lines, railway and DLR stations are within relatively short walking distance, and public open spaces, with ecological value (Mile End Park and the Grand Union Canal) are easily accessible. The spatial framework looks at strengthening these connections, providing easy east-west and north-south access to make the area more accessible. The strategic links into the wider East London Green Grid Network to the east of the site led to the formulation of a strong landscape infrastructure proposal that sought to increase the access to adjacent green amenity space as well as the creation of 'eco-ducts'.

DELIVERY PROCESS

The outline and detail planning applications were made within a 12-week period. Within the planning authority there was a complex pattern reflecting the different concerns of key departments and their officers. The local authority was both

← The wider spatial strategy/ masterplan (inset) looks at environmental improvements to key public spaces and routes through the area, with strategic infill sites identified for redevelopment
↓ The overarching spatial plan looks at improving linkages to the wider area, with key gateways and hubs at important junctions

responsible for tendering the project and securing the best possible standards whilst planners and technical officers had clear policy guidelines to meet. To achieve clear decisions for the authority, key officers came together to weekly coordinated meetings with the design team and the client team, to develop both the detail of the brief and the design solutions.

CONTRIBUTION TO URBAN DESIGN PRACTICE

The height and massing of the perimeter blocks have been carefully articulated in accordance to context. The relationship with adjacent non-community uses, as well as adjacent schools, the microclimatic conditions, as well as long and short range views of the buildings, have all played a part in the development of the built form. Reviewing sunlight and daylight issues in communal courtyard spaces has led to breaks in the southwest-southeast corners of the perimeter block form. Respecting adjacent users and looking far beyond the red line boundary was important, so that the scheme did not impact negatively upon the adjacent uses, such as the Regents Canal Conservation Area. Reviewing the needs of neighbours like the primary school led to careful analysis of ground floor uses to help generate an active streetscape environment and dealing with waste and refuse was a major design consideration in the layout.

LESSONS LEARNED

1 **Understanding the context:** A thorough analysis of the surrounding physical, social and economic context by the design team was key to understanding the design parameters.
2 **Emerging framework:** The strong over-arching vision document addressed all of the key masterplan issues at a strategic level, leading to the delivery of a high quality development.
3 **Placemaking principles:** The spatial strategy focused on the creation of place and looked at a long term vision for the wider area. This involved a thorough analysis of the local and wider context, understanding the history of the site and the social, physical and economic characteristics of the area.
4 **Working with the community:** The ambition to make the Ocean Estate an exemplar model of high density development emerged through a collaborative design process involving many stakeholders. Resident involvement was an important part of the regeneration and we ensured comprehensive engagement with existing residents throughout the design process. We ran a monthly resident forum, held annual fun days and ran local consultation events.
5 **Character areas:** The various character areas have transformed the Ocean Estate into an attractive, green and fully-integrated part of East London. The perimeter block strategy has formed new and safer streets that link into the wider street network and promote pedestrian and cycle permeability. ●

TRENT BASIN

URBED develop a new neighbourhood for Nottingham, not quite urban, not quite suburban

A good masterplan needs a really good brief. The following is an extract from URBED's brief from Blueprint for the Trent Basin site. We were told to develop a plan that created...

> *'A new type of neighbourhood. Not quite urban. Not quite suburban. Close to the city, but not in it. A place where the countryside sprawls in to the city, not vice versa. Growing and productive. Trees and bees. Blue water. Fresh air. Salubrious. Calm. An oasis. Not dominated by cars.*
> *Not an anonymous, cloned estate. Not about bars, European bottled lager and pizza. Nor pushing the pram to Costa. More about cycling, dog walking, jogging, fishing, boating, reading, chatting.*
> *Living, resting, exercising. Working? for some. At home, and on the water. A place to stroll. To walk along the river. To soak up tranquillity. Intimate. Public spaces, small but intense, not large and barren. A place to be healthy. A place to be happy.'*

It is rare to get such a poetic brief but also incredibly liberating. It leaves no doubt about the sort of place that Blueprint wants – on a site that only a few years ago was to have been developed with large apartment blocks. It is a vision that has been supported by Nottingham City Council to such an extent that URBED were subsequently appointed to develop a masterplan for the whole waterside area. This article covers both of these plans.

Located on the northern bank of the River Trent, 20 minutes' walk from Nottingham city centre, the Trent Basin site is being developed by Blueprint in a joint venture between igloo and the HCA. Formerly a light industrial area, the 3.5ha site has recently been cleared and prepared for development by the HCA.

URBED together with Marsh Grochowski Architects and Landscape Projects have prepared a hybrid planning application seeking outline consent for 160 homes and detailed consent for a first phase of 41 homes. Planning consent was granted earlier this year and a contractor has been appointed for Phase 1 with works expected to commence later in 2014.

As the brief made quite clear, the aim is to create a new type of neighbourhood that is neither entirely urban nor entirely suburban. To do this we have drawn heavily on Dutch precedents for the way that the scheme relates to the water. The design creates a strong 3 and 4 storey waterside terrace punctuated by narrow streets leading to more informal detached housing to the rear. The waterfront terrace undulates along the water's edge, creating a variety of public spaces within which stand three freestanding point blocks.

In many senses the scheme is a reinvention of the suburb rather than a lively urban neighbourhood. The idea is that the blocks, set back from the waterfront, feel calm and relaxed and not dominated by cars. In collaboration with Nottingham-based architects, Marsh Grochowski who have developed the house types for phase 1, and with landscape architects Landscape Projects based in Manchester, we have set out to create a neighbourhood based around cycling, dog walking, jogging, fishing, reading, chatting, exercising and working. For this to be successful, the quality of the public and communal realm is key. In the early phases the urban blocks are designed around central communal gardens where small children will be free to play, and communal barbecues and food growing can take place.

The scheme also makes use of the basin which has 3m high dock walls. The plan includes a floating platform at water level. This rises and falls with the river level thereby satisfying the Environment

↙ Aerial View of Trent Basin
↙↙ View of floating garden

↓ Plan of Trent Basin
↓↓ Wider strategy for Waterfront Area commissioned by Nottingham City Council

Agency which wanted to retain the basin for flood capacity. The floating deck gives access to the water and allows for floating gardens and moorings.

The scheme builds on Blueprint's experience of developing the nearby Green Street low-energy housing scheme (short listed for the inaugural UDG Developer Award 2014). Green Street successfully appealed to groups not normally attracted to new housing. Rather than families with children, the buyers were couples downsizing from larger properties when their children leave home, young adults cohabiting and parents living with grown-up offspring. The Trent Basin scheme is designed to appeal to groups who are seeking somewhere that does not feel like a housing estate, but which is a sustainable neighbourhood with a strong sense of community and shared values. This has implications for the public realm suggesting informal, intimate gathering points and places to stroll, rather than playgrounds and public squares.

LESSONS LEARNED

The wider plan for Nottingham Waterside developed in the mid 2000s had a very different vision for the area. The masterplan was dominated by large apartment blocks and the fact that it was not developed is probably a lucky escape.

The Trent Basin scheme represents a fragment of this wider area and the URBED plan is designed so that it can be integrated into the neighbouring sites when they come forward for development, but still makes sense if they do not. This is a common problem with waterside areas, where fragmented land ownerships make comprehensive planning difficult, so that there is a danger that sites are developed in a piecemeal, disconnected fashion.

URBED's new wider plan prepared for the Council provides an alternative to the apartment block based masterplan, following the spirit of the Trent Basin brief. The intention is that this can be used to coordinate development in the area. It includes a framework for up to 1650 new homes, a school and community facilities. It creates a framework for the creation of an entirely new neighbourhood in Nottingham that provides an alternative to both the high density urban development of the city centre and the low density suburbia around the periphery of the city. ●

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Neither the Urban Design Group nor the editors are responsible for views expressed or statements made by individuals writing in *Urban Design*

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Putting your man in the picture

Is it permissible to make changes to someone else's work of art? In 1919 Marcel Duchamp notoriously modified the Mona Lisa by adding a moustache and a goatee beard. But he added them only to a postcard reproduction of the painting: Leonardo da Vinci's painting itself remained beardless in the Louvre. Outside the protected gallery environment, on the street, is public art more susceptible to change and modification? The artist having departed, perhaps the work of art is now part of the public realm and, like a building, can legitimately evolve and be adapted. Who does it belong to? Banksy's work regularly provokes this question. A case in Digbeth last year did too, and caused a public row.

In 1966 the Irish community in Birmingham raised money to commission the artist Kenneth Budd to design and make a memorial to the assassinated US President John Kennedy. It took the form of a large mosaic panel, with a pyramid of faces, including brother Teddy, US policemen and Martin Luther King, looking admiringly up to Kennedy's at its apex. The tone was heroic, it was – dare one say? – almost Soviet in its mythologizing iconography. It was installed in a pedestrian precinct inside a big traffic island, appropriately next to Pugin's Roman Catholic Cathedral on the Inner Ring Road: a very strange place which I described in *UD*123.

When that junction was demolished in 2007, some parts of the memorial were removed with difficulty, with the intention of rebuilding it in the city's Irish Quarter in Digbeth. In the event, it had to be totally remade from the original drawings by the artist's son Oliver. 300,000 new pieces of mosaic in 200 colours were bought from Angelo Orsoni's factory in Venice. It was intended to go into the new Connaught Square development on High Street Deritend, but when the developer went bankrupt a new location was found for it on the other side of the street, on the corner with Floodgate Street.

Changes were made. Firstly, on the street corner the memorial became convex, not concave like the original. Secondly, the limitations of the location led to the design being shortened in length, with the less descriptive ends of the mosaic being edited out. Thirdly, and controversially, a new face was added to the composition. I don't know how the decision to do this came to be taken inside the City Council, and who took it. But now, in the bottom right-hand corner of the picture, is the face of Birmingham Labour Councillor Mike Nangle, who became the first Irish Lord Mayor of the city in 2004, and who died in 2010.

Mike Nangle had an honourable place in the history of the Irish community in Birmingham. He was credited with achieving the restoration of the St Patrick's Day Parade through Digbeth, after the Birmingham pub bombings of 1974 had thrown the whole Irish community under a shadow of suspicion for years. Yet the complaints against his addition to the mural came most strongly from the Irish Centre across the High Street. Despite Councillor Nangle's popularity, the community's representatives there felt that their 1966 gift to the city had been traduced by a political gesture. Opposition parties in the City Council also objected to what they saw as an act of political opportunism. A different objection came from someone who considered that shame had been unfairly cast on Mike Nangle, a man of spotless integrity, by associating him with the immoral Kennedy family.

What are we to think? Setting aside party political issues, and the absurdity of the idea of the ward councillor for Hodge Hill schmoozing with the Kennedys under the Stars and Stripes, I can't see anything fundamentally wrong with the change. I actually like the idea that a public work of art can adapt and change, especially when it is rebuilt and relocated. But the question of who has the authority to decide is more difficult. The decision should be transparent and democratic: in the case of the JFK Memorial it wasn't.

● **Joe Holyoak**

↑ The JFK Memorial in Birmingham
↑↑ The new portrait of Councillor Mike Nangle added to the bottom right side

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